## Calories Burnt Prediction Project By: PRASAD JADHAV

```
import pandas as pd
In [73]:
         import numpy as np
         import matplotlib.pyplot as plt
         import seaborn as sns
         from sklearn.model_selection import train_test_split
         from sklearn.preprocessing import StandardScaler
         from sklearn.preprocessing import OrdinalEncoder
         from sklearn.metrics import r2 score
         from sklearn.model_selection import cross_val_score
         from sklearn.metrics import mean_absolute_error
         from sklearn.model_selection import KFold
         from sklearn.pipeline import Pipeline
         from sklearn.compose import ColumnTransformer
         from sklearn.model_selection import KFold
         from sklearn.linear_model import LinearRegression
         from sklearn.svm import SVR
         from sklearn.ensemble import RandomForestRegressor
         from sklearn.ensemble import GradientBoostingRegressor
         from xgboost import XGBRFRegressor
         from catboost import CatBoostRegressor
         from lightgbm import LGBMRegressor
         import warnings
         warnings.filterwarnings('ignore')
         import pickle
 In [2]: calories = pd.read_csv('calories.csv')
         exercise = pd.read_csv('exercise.csv')
```

In [3]: calories.head()

```
User_ID Calories
 Out[3]:
            0 14733363
                           231.0
            1 14861698
                           66.0
               11179863
                           26.0
            2
               16180408
                           71.0
            4 17771927
                           35.0
            exercise.head()
 In [4]:
 Out[4]:
               User_ID Gender Age
                                   Height Weight Duration Heart-Rate Body-Temp
            0 14733363
                                68
                                     190.0
                                             94.0
                                                      29.0
                                                                  105.0
                                                                             40.8
                         male
            1 14861698 female
                                     166.0
                                             60.0
                                                       14.0
                                                                  94.0
                                                                             40.3
                                20
               11179863
                                69
                                     179.0
                                             79.0
                                                       5.0
                                                                  0.88
                                                                             38.7
            2
                         male
                                      179.0
               16180408
                                34
                                              71.0
                                                       13.0
                                                                  100.0
                                                                             40.5
                        female
            4 17771927 female
                                27
                                     154.0
                                             58.0
                                                       10.0
                                                                   81.0
                                                                             39.8
            dataset = pd.merge(calories, exercise, on='User_ID')
 In [5]:
 In [6]:
            dataset.head()
 Out[6]:
              User_ID Calories Gender Age Height Weight Duration Heart_Rate Body_Temp
            0 14733363
                           231.0
                                              190.0
                                                      94.0
                                                               29.0
                                                                           105.0
                                                                                      40.8
                                  male
                                         68
            1 14861698
                           66.0 female
                                              166.0
                                                      60.0
                                                               14.0
                                                                           94.0
                                                                                      40.3
                                         20
            2
               11179863
                           26.0
                                  male
                                         69
                                              179.0
                                                      79.0
                                                                5.0
                                                                           0.88
                                                                                      38.7
            3 16180408
                           71.0 female
                                              179.0
                                                      71.0
                                                                13.0
                                                                           0.001
                                                                                      40.5
               17771927
                           35.0 female
                                         27
                                              154.0
                                                      58.0
                                                                10.0
                                                                           81.0
                                                                                      39.8
            dataset.shape
 In [7]:
            (15000, 9)
 Out[7]:
            print('Number of Rows:',dataset.shape[0])
In [33]:
            print('Number of Columns:',dataset.shape[1])
            Number of Rows: 15000
            Number of Columns: 9
            dataset = dataset.drop(columns=['User_ID'])
In [36]:
In [37]:
            dataset.info()
```

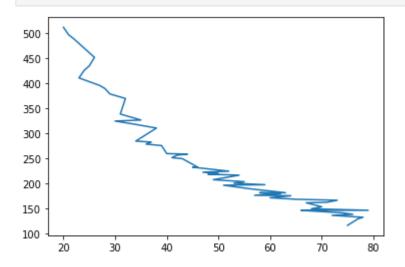
```
<class 'pandas.core.frame.DataFrame'>
            Int64Index: 15000 entries, 0 to 14999
            Data columns (total 8 columns):
                                 Non-Null Count Dtype
             #
                  Column
            ---
                  ----
             0
                  Calories
                                 15000 non-null float64
                                 15000 non-null
                                                     object
             1
                  Gender
             2
                                 15000 non-null
                                                      int64
                  Age
             3
                  Height
                                 15000 non-null
                                                     float64
             4
                  Weight
                                 15000 non-null float64
             5
                                 15000 non-null float64
                  Duration
                  Heart_Rate 15000 non-null float64
             6
                                 15000 non-null float64
             7
                  Body_Temp
            dtypes: float64(6), int64(1), object(1)
            memory usage: 1.5+ MB
            dataset.isnull().sum()
In [10]:
                             0
            User_ID
Out[10]:
            Calories
                             0
            Gender
                             0
                             0
            Age
                              0
            Height
            Weight
                              0
            Duration
                              0
            Heart_Rate
                             0
            Body_Temp
                              0
            dtype: int64
            dataset.duplicated().sum()
In [11]:
Out[11]:
            dataset.describe()
In [12]:
Out[12]:
                     User_ID
                                 Calories
                                                         Height
                                                                    Weight
                                                                                       Heart-Rate
                                                Age
                                                                              Duration
                                                                                                   Body_Temp
            count 1.500000e+04 15000.000000
                                         15000.000000
                                                    15000.000000
                                                                15000.000000
                                                                           15000.000000
                                                                                                  15000.000000
                                                                                       15000.000000
                  1.497736e+07
                                89.539533
                                            42.789800
                                                       174.465133
                                                                  74.966867
                                                                              15.530600
                                                                                          95.518533
                                                                                                     40.025453
                  2.87285le+06
                                62.456978
                                            16.980264
                                                                               8.319203
                                                                                                      0.779230
                                                        14.258114
                                                                   15.035657
                                                                                          9.583328
              std
                   1.000116e+07
                                 1.000000
                                           20.000000
                                                                  36.000000
                                                                               1.000000
                                                                                         67.000000
                                                                                                     37.100000
                                                      123.000000
                  1.247419e+07
             25%
                                35.000000
                                           28.000000
                                                      164.000000
                                                                  63.000000
                                                                              8.000000
                                                                                         88.000000
                                                                                                     39.600000
                  1.499728e+07
             50%
                                79.000000
                                           39.000000
                                                      175.000000
                                                                  74.000000
                                                                              16.000000
                                                                                         96.000000
                                                                                                    40.200000
             75%
                  1.744928e+07
                                138.000000
                                           56.000000
                                                      185.000000
                                                                  87.000000
                                                                              23.000000
                                                                                         103.000000
                                                                                                    40.600000
                  1.999965e+07
                               314.000000
                                           79.000000
                                                      222.000000
                                                                  132.000000
                                                                              30.000000
                                                                                         128.000000
                                                                                                     41.500000
```

dataset.corr()

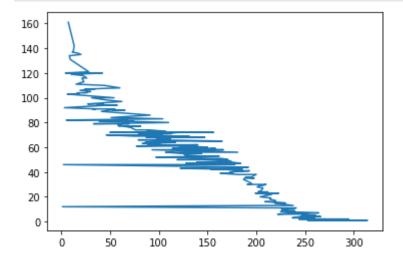
In [13]:

| Out[13]: |            | User_ID   | Calories  | Age       | Height    | Weight    | Duration  | Heart_Rate | Body_Temp |
|----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|
|          | User_ID    | 1.000000  | -0.001661 | -0.001827 | -0.013520 | -0.011603 | -0.002751 | -0.000457  | 0.000923  |
|          | Calories   | -0.001661 | 1.000000  | 0.154395  | 0.017537  | 0.035481  | 0.955421  | 0.897882   | 0.824558  |
|          | Age        | -0.001827 | 0.154395  | 1.000000  | 0.009554  | 0.090094  | 0.013247  | 0.010482   | 0.013175  |
|          | Height     | -0.013520 | 0.017537  | 0.009554  | 1.000000  | 0.958451  | -0.004625 | 0.000528   | 0.001200  |
|          | Weight     | -0.011603 | 0.035481  | 0.090094  | 0.958451  | 1.000000  | -0.001884 | 0.004311   | 0.004095  |
|          | Duration   | -0.002751 | 0.955421  | 0.013247  | -0.004625 | -0.001884 | 1.000000  | 0.852869   | 0.903167  |
|          | Heart-Rate | -0.000457 | 0.897882  | 0.010482  | 0.000528  | 0.004311  | 0.852869  | 1.000000   | 0.771529  |
|          | Body_Temp  | 0.000923  | 0.824558  | 0.013175  | 0.001200  | 0.004095  | 0.903167  | 0.771529   | 1.000000  |

In [14]: dataset['Age'].value\_counts().plot(kind='line')
 plt.show()

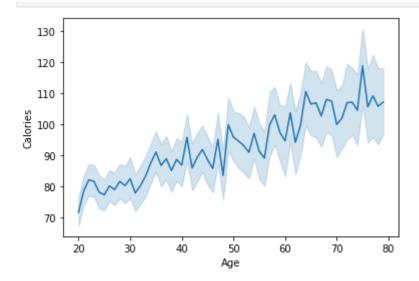


In [15]: dataset['Calories'].value\_counts().plot(kind='line')
 plt.show()



```
In [16]: # dataset['Calories'] = dataset['Calories'].astype('int64')
```

```
In [17]: sns.lineplot(dataset['Age'], dataset['Calories'])
   plt.show()
```



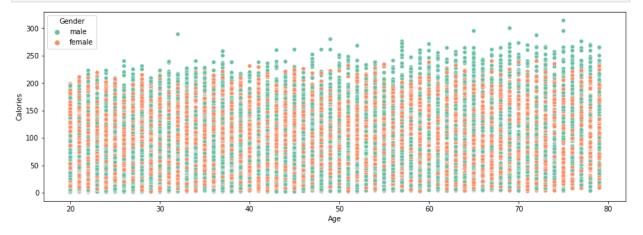
```
In [18]: dataset['Gender'].value_counts()
```

Out[18]: female 7553 male 7447

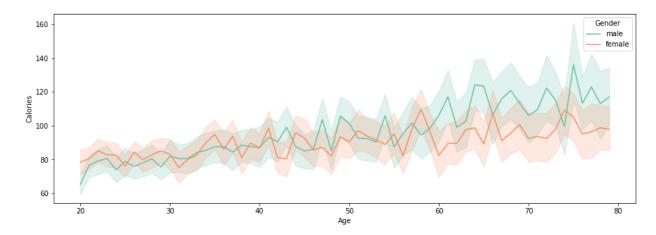
Name: Gender, dtype: int64

In [19]: plt.figure(figsize=(15,5))

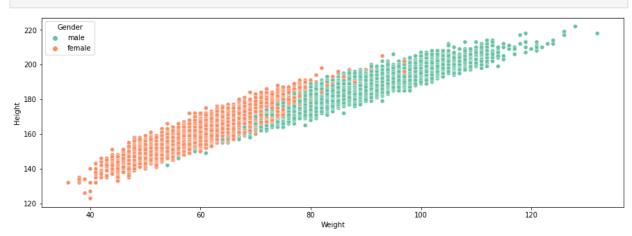
sns.scatterplot(dataset['Age'], dataset['Calories'], hue=dataset['Gender'], pal
plt.show()



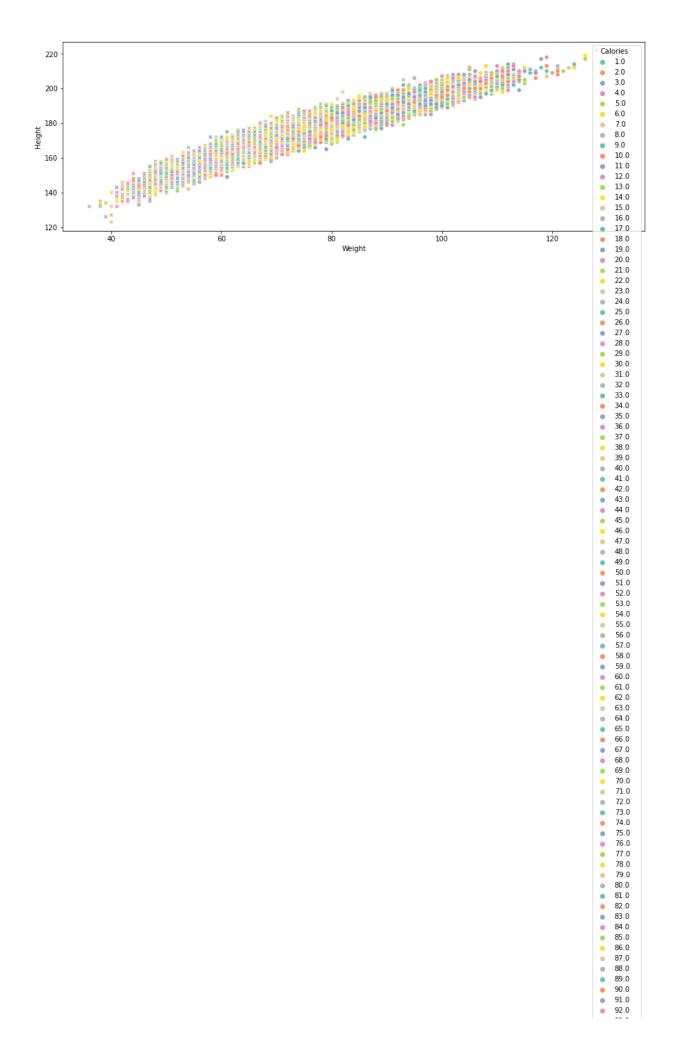
```
In [20]: plt.figure(figsize=(15,5))
sns.lineplot(dataset['Age'], dataset['Calories'], hue=dataset['Gender'], paleti
plt.show()
```



In [21]: plt.figure(figsize=(15,5))
 sns.scatterplot(dataset['Weight'], dataset['Height'], hue=dataset['Gender'], paplt.show()



```
In [22]: plt.figure(figsize=(15,5))
    sns.scatterplot(dataset['Weight'], dataset['Height'], hue=dataset['Calories'],
    plt.show()
```



93.0 • • • • • • • 94.0 95.0 96.0 97.0 98.0 99.0 100.0 101.0 102.0 103.0 104.0 105.0 106.0 107.0 108.0 109.0 110.0 111.0 112.0 113.0 114.0 • • 115.0 116.0 117.0 118.0 119.0 120.0 121.0 122.0 123.0 124.0 125.0 126.0 127.0 128.0 129.0 130.0 131.0 132.0 • 133.0 134.0 135.0 136.0 137.0 138.0 139.0 140.0 141.0 • • • • • • • • • 142.0 143.0 144.0 145.0 146.0 147.0 148.0 149.0 150.0 151.0 152.0 153.0 154.0 155.0 156.0 157.0 158.0 159.0 160.0 161.0 162.0 163.0 164.0 165.0 166.0 167.0 • • • • • • 168.0 169.0 170.0 • 171.0 172.0 173.0 174.0 175.0 176.0 177.0 178.0 179.0 180.0 181.0 182.0 183.0 184.0 185.0 186.0

```
plt.figure(figsize=(15,5))
In [23]:
           sns.lineplot(dataset['Age'], dataset['Heart_Rate'], hue=dataset['Gender'], pale
           plt.show()
                                                                                                 196.0
                                                                                                Gender
                                                                                                 male
            100
                                                                                                 female
             98
          Heart Rate
             94
             92
                  20
                                                                                                 21800
                                                         Age
                                                                                                 217.0
                                                                                                 218.0
           plt.figure(figsize=(15,5))
In [24]:
           sns.scatterplot(dataset['Body_Temp'], dataset['Heart_Rate'], hue=dataset['Gende
           plt.show()
                                                                                               227.0
            130
                 Gender
                   male
            120
                  female
            110
          Heart_Rate
             90
             80
             70
                37
                                  38
                                                                      40
                                                                                        41
                                                                                                 246.0
                                                       Body_Temp
                                                                                                 247.0
                                                                                                 248.0
                                                                                                 249.0
In [38]:
           X = dataset.drop('Calories',axis=1)
           y = dataset['Calories']
                                                                                               9 254.0
           X_train,X_test, y_train,y_test = train_test_split(X,y,test_size=0.20,random_statest)
In [39]:
                                                                                               9 258.0
           preprocessor = ColumnTransformer(transformers=[
In [48]:
                ('ordinal',OrdinalEncoder(),['Gender']),
                ('num', StandardScaler(), ['Age',
                                            'Height',
                                            'Weight',
                                            'Duration',
                                            'Heart_Rate',
                                            'Body_Temp']),
           ],remainder='passthrough')
                                                                                                 289.0
           pipeline = Pipeline([('preprocessor', preprocessor),
In [64]:
                                    ('model',LinearRegression())
                                  ])
```

187.U 188.0

```
# pipeline = Pipeline([('preprocessor', preprocessor),
In [65]:
                                 ('lr',LinearRegression(),
          #
                                  'svr', SVR(),
                                  'rf', RandomForestRegressor(),
          #
                                  'gr', GradientBoostingRegressor(),
          #
          #
                                  'xg',XGBRFRegressor(),
          #
                                  'ct', CatBoostRegressor(),
          #
                                  'lgm',LGBMRegressor())
         pipeline.fit(X_train,y_train)
In [66]:
                                 Pipeline
Out[66]:
                     preprocessor: ColumnTransformer
                 ordinal
                                      num
                                                   remainder
            ▶ OrdinalEncoder
                               StandardScaler
                                                 passthrough
                            LinearRegression
         y_pred = pipeline.predict(X_test)
In [67]:
In [68]:
         r2_score(y_test,y_pred)
         0.9672937151257295
Out[68]:
         kfold = KFold(n_splits=5, shuffle=True, random_state=42)
In [70]:
         cv_results = cross_val_score(pipeline, X, y, cv=kfold, scoring='r2')
In [71]:
In [72]:
         cv_results.mean()
         0.9671402283675841
Out[72]:
In [74]:
         mean_absolute_error(y_test,y_pred)
         8.441513553849704
Out[74]:
         def model_scorer(model_name, model):
In [75]:
              output=[]
             output.append(model_name)
              pipeline = Pipeline([
              ('preprocessor', preprocessor),
              ('model', model)])
             X_train,X_test,y_train,y_test = train_test_split(X,y,test_size=0.20,random)
              pipeline.fit(X_train,y_train)
```

```
y_pred = pipeline.predict(X_test)
             output.append(r2_score(y_test,y_pred))
             output.append(mean_absolute_error(y_test,y_pred))
             kfold = KFold(n_splits=5, shuffle=True, random_state=42)
             cv_results = cross_val_score(pipeline, X, y, cv=kfold, scoring='r2')
             output.append(cv_results.mean())
             return output
         model_dict={
In [76]:
             'lr':LinearRegression(),
             'svr':SVR(),
             'rf':RandomForestRegressor(),
             'gr':GradientBoostingRegressor(),
             'xg':XGBRFRegressor(),
             'ct':CatBoostRegressor(),
             'lgm':LGBMRegressor(),
In [77]:
         model_output=[]
         for model_name,model in model_dict.items():
             model_output.append(model_scorer(model_name,model))
```

```
Learning rate set to 0.06063
0:
        learn: 58.7160134
                                  total: 223ms
                                                   remaining: 3m 42s
        learn: 55.5512682
                                  total: 233ms
                                                   remaining: 1m 56s
1:
2:
        learn: 52.4990118
                                  total: 246ms
                                                   remaining: 1m 21s
3:
        learn: 49.6636889
                                  total: 255ms
                                                   remaining: 1m 3s
4:
        learn: 47.0242496
                                  total: 264ms
                                                   remaining: 52.6s
5:
        learn: 44.4686805
                                  total: 273ms
                                                   remaining: 45.2s
        learn: 42.0643212
6:
                                  total: 283ms
                                                   remaining: 40.1s
7:
        learn: 39.9446197
                                  total: 291ms
                                                   remaining: 36.1s
8:
        learn: 37.8569921
                                  total: 298ms
                                                   remaining: 32.8s
9:
        learn: 35.9135831
                                  total: 305ms
                                                   remaining: 30.2s
10:
        learn: 34.0833212
                                  total: 312ms
                                                   remaining: 28s
11:
        learn: 32.3347110
                                  total: 319ms
                                                   remaining: 26.3s
12:
        learn: 30.6783354
                                  total: 324ms
                                                   remaining: 24.6s
        learn: 29.1079668
13:
                                  total: 330ms
                                                   remaining: 23.2s
        learn: 27.6000000
                                  total: 337ms
14:
                                                   remaining: 22.2s
15:
        learn: 26.2237454
                                  total: 345ms
                                                   remaining: 21.2s
16:
        learn: 24.8886477
                                  total: 352ms
                                                   remaining: 20.4s
17:
        learn: 23.6798067
                                  total: 360ms
                                                   remaining: 19.7s
        learn: 22.5333171
18:
                                  total: 369ms
                                                   remaining: 19s
19:
        learn: 21.4789344
                                  total: 377ms
                                                   remaining: 18.4s
20:
        learn: 20.4281328
                                  total: 385ms
                                                   remaining: 17.9s
21:
        learn: 19.4390787
                                  total: 392ms
                                                   remaining: 17.4s
22:
        learn: 18.5411294
                                  total: 399ms
                                                   remaining: 16.9s
23:
        learn: 17.6651622
                                  total: 406ms
                                                   remaining: 16.5s
24:
        learn: 16.8727163
                                  total: 413ms
                                                   remaining: 16.1s
25:
        learn: 16.0752787
                                                   remaining: 15.8s
                                  total: 421ms
        learn: 15.3666499
26:
                                  total: 425ms
                                                   remaining: 15.3s
27:
        learn: 14.6654703
                                  total: 430ms
                                                   remaining: 14.9s
28:
        learn: 14.0213740
                                  total: 434ms
                                                   remaining: 14.5s
29:
        learn: 13.3919967
                                  total: 440ms
                                                   remaining: 14.2s
30:
        learn: 12.8400804
                                  total: 447ms
                                                   remaining: 14s
        learn: 12.2869378
31:
                                  total: 453ms
                                                   remaining: 13.7s
32:
        learn: 11.7650529
                                  total: 460ms
                                                   remaining: 13.5s
33:
        learn: 11.2907702
                                  total: 465ms
                                                   remaining: 13.2s
34:
        learn: 10.8183661
                                  total: 472ms
                                                   remaining: 13s
35:
        learn: 10.3804941
                                  total: 479ms
                                                   remaining: 12.8s
36:
        learn: 9.9746750
                                  total: 486ms
                                                   remaining: 12.6s
37:
        learn: 9.6051686
                                  total: 493ms
                                                   remaining: 12.5s
        learn: 9.2629062
                                  total: 500ms
38:
                                                   remaining: 12.3s
        learn: 8.9177946
39:
                                  total: 508ms
                                                   remaining: 12.2s
40:
        learn: 8.6141650
                                  total: 515ms
                                                   remaining: 12.1s
        learn: 8.3163797
41:
                                  total: 523ms
                                                   remaining: 11.9s
42:
        learn: 8.0537288
                                  total: 530ms
                                                   remaining: 11.8s
43:
        learn: 7.7828145
                                  total: 536ms
                                                   remaining: 11.6s
        learn: 7.5181207
44:
                                  total: 542ms
                                                   remaining: 11.5s
45:
        learn: 7.2632270
                                  total: 550ms
                                                   remaining: 11.4s
        learn: 7.0412195
                                  total: 556ms
46:
                                                   remaining: 11.3s
47:
        learn: 6.8235280
                                  total: 564ms
                                                   remaining: 11.2s
48:
        learn: 6.6113787
                                  total: 570ms
                                                   remaining: 11.1s
49:
        learn: 6.4232399
                                  total: 577ms
                                                   remaining: 11s
50:
        learn: 6.2634301
                                  total: 585ms
                                                   remaining: 10.9s
51:
        learn: 6.0921439
                                  total: 591ms
                                                   remaining: 10.8s
52:
        learn: 5.9421554
                                  total: 595ms
                                                   remaining: 10.6s
53:
        learn: 5.7846508
                                  total: 598ms
                                                   remaining: 10.5s
54:
        learn: 5.6344877
                                  total: 603ms
                                                   remaining: 10.4s
55:
        learn: 5.4976774
                                  total: 608ms
                                                   remaining: 10.2s
56:
        learn: 5.3558488
                                  total: 615ms
                                                   remaining: 10.2s
57:
        learn: 5.2467678
                                  total: 620ms
                                                   remaining: 10.1s
58:
        learn: 5.1284644
                                  total: 628ms
                                                   remaining: 10s
```

```
59:
        learn: 5.0106032
                                  total: 633ms
                                                   remaining: 9.92s
60:
        learn: 4.9048539
                                  total: 641ms
                                                   remaining: 9.86s
61:
        learn: 4.8166938
                                  total: 644ms
                                                   remaining: 9.75s
62:
        learn: 4.7278247
                                  total: 652ms
                                                   remaining: 9.7s
63:
        learn: 4.6310864
                                  total: 659ms
                                                   remaining: 9.64s
64:
        learn: 4.5506103
                                  total: 667ms
                                                   remaining: 9.6s
65:
        learn: 4.4767666
                                  total: 674ms
                                                   remaining: 9.54s
66:
        learn: 4.3917352
                                  total: 682ms
                                                   remaining: 9.49s
67:
        learn: 4.3130800
                                  total: 690ms
                                                   remaining: 9.45s
68:
        learn: 4.2510798
                                  total: 696ms
                                                   remaining: 9.39s
69:
        learn: 4.1749868
                                  total: 704ms
                                                   remaining: 9.35s
70:
        learn: 4.1054392
                                  total: 711ms
                                                   remaining: 9.3s
                                  total: 717ms
71:
        learn: 4.0369585
                                                   remaining: 9.24s
72:
        learn: 3.9687027
                                  total: 724ms
                                                   remaining: 9.2s
73:
        learn: 3.9149146
                                  total: 730ms
                                                   remaining: 9.14s
        learn: 3.8577456
                                  total: 737ms
74:
                                                   remaining: 9.1s
75:
        learn: 3.8071554
                                  total: 745ms
                                                   remaining: 9.06s
76:
        learn: 3.7517522
                                  total: 752ms
                                                   remaining: 9.02s
77:
        learn: 3.7024358
                                  total: 760ms
                                                   remaining: 8.98s
        learn: 3.6616262
78:
                                  total: 767ms
                                                   remaining: 8.94s
79:
        learn: 3.6188559
                                  total: 774ms
                                                   remaining: 8.9s
:08
        learn: 3.5831971
                                  total: 781ms
                                                   remaining: 8.86s
81:
        learn: 3.5442688
                                  total: 788ms
                                                   remaining: 8.82s
82:
        learn: 3.5121364
                                  total: 794ms
                                                   remaining: 8.77s
83:
        learn: 3.4777052
                                  total: 798ms
                                                   remaining: 8.7s
84:
        learn: 3.4342460
                                  total: 801ms
                                                   remaining: 8.63s
85:
        learn: 3.3995614
                                  total: 807ms
                                                   remaining: 8.57s
        learn: 3.3662335
86:
                                  total: 811ms
                                                   remaining: 8.51s
87:
        learn: 3.3425012
                                  total: 818ms
                                                   remaining: 8.47s
88:
        learn: 3.3059212
                                  total: 824ms
                                                   remaining: 8.43s
89:
        learn: 3.2754672
                                  total: 830ms
                                                   remaining: 8.39s
90:
        learn: 3.2406037
                                  total: 837ms
                                                   remaining: 8.36s
91:
        learn: 3.2206531
                                  total: 843ms
                                                   remaining: 8.32s
92:
        learn: 3.1900832
                                  total: 852ms
                                                   remaining: 8.31s
93:
        learn: 3.1586921
                                  total: 861ms
                                                   remaining: 8.3s
94:
        learn: 3.1420182
                                  total: 870ms
                                                   remaining: 8.29s
95:
        learn: 3.1170000
                                  total: 877ms
                                                   remaining: 8.25s
96:
        learn: 3.0892299
                                  total: 882ms
                                                   remaining: 8.21s
        learn: 3.0620017
97:
                                  total: 886ms
                                                   remaining: 8.15s
98:
        learn: 3.0402843
                                  total: 890ms
                                                   remaining: 8.1s
99:
        learn: 3.0135876
                                  total: 896ms
                                                   remaining: 8.06s
100:
        learn: 2.9963856
                                  total: 905ms
                                                   remaining: 8.05s
101:
        learn: 2.9716650
                                  total: 912ms
                                                   remaining: 8.03s
102:
        learn: 2.9521722
                                  total: 922ms
                                                   remaining: 8.03s
103:
        learn: 2.9305211
                                  total: 928ms
                                                   remaining: 7.99s
104:
        learn: 2.9104734
                                  total: 936ms
                                                   remaining: 7.98s
105:
        learn: 2.8901674
                                  total: 944ms
                                                   remaining: 7.96s
        learn: 2.8739339
                                  total: 948ms
106:
                                                   remaining: 7.92s
107:
        learn: 2.8514659
                                  total: 956ms
                                                   remaining: 7.9s
                                  total: 962ms
108:
        learn: 2.8253571
                                                   remaining: 7.87s
109:
        learn: 2.8010766
                                  total: 971ms
                                                   remaining: 7.86s
110:
        learn: 2.7723885
                                  total: 979ms
                                                   remaining: 7.84s
111:
        learn: 2.7598871
                                  total: 988ms
                                                   remaining: 7.84s
112:
        learn: 2.7483395
                                  total: 999ms
                                                   remaining: 7.84s
113:
        learn: 2.7249489
                                  total: 1s
                                                   remaining: 7.8s
114:
        learn: 2.7049220
                                  total: 1.01s
                                                   remaining: 7.75s
115:
        learn: 2.6874606
                                  total: 1.01s
                                                   remaining: 7.72s
116:
        learn: 2.6646008
                                  total: 1.02s
                                                   remaining: 7.68s
117:
        learn: 2.6519026
                                  total: 1.02s
                                                   remaining: 7.65s
118:
        learn: 2.6310250
                                  total: 1.03s
                                                   remaining: 7.61s
```

```
119:
        learn: 2.6083258
                                  total: 1.03s
                                                   remaining: 7.58s
120:
        learn: 2.5928930
                                  total: 1.04s
                                                   remaining: 7.54s
121:
        learn: 2.5765415
                                  total: 1.04s
                                                   remaining: 7.51s
                                  total: 1.05s
122:
        learn: 2.5598801
                                                   remaining: 7.48s
123:
        learn: 2.5500112
                                  total: 1.06s
                                                   remaining: 7.46s
124:
        learn: 2.5307362
                                  total: 1.06s
                                                   remaining: 7.45s
125:
        learn: 2.5180833
                                  total: 1.07s
                                                   remaining: 7.43s
126:
        learn: 2.5008783
                                  total: 1.07s
                                                   remaining: 7.39s
127:
        learn: 2.4926866
                                  total: 1.08s
                                                   remaining: 7.38s
128:
        learn: 2.4729014
                                  total: 1.09s
                                                   remaining: 7.37s
129:
        learn: 2.4575206
                                  total: 1.1s
                                                   remaining: 7.36s
130:
        learn: 2.4431671
                                  total: 1.11s
                                                   remaining: 7.34s
131:
        learn: 2.4245323
                                  total: 1.12s
                                                   remaining: 7.34s
132:
        learn: 2.4076634
                                  total: 1.12s
                                                   remaining: 7.32s
        learn: 2.3944522
133:
                                  total: 1.13s
                                                   remaining: 7.32s
        learn: 2.3776395
134:
                                  total: 1.14s
                                                   remaining: 7.31s
135:
        learn: 2.3617656
                                  total: 1.15s
                                                   remaining: 7.31s
136:
        learn: 2.3522887
                                  total: 1.16s
                                                   remaining: 7.3s
137:
        learn: 2.3360299
                                  total: 1.17s
                                                   remaining: 7.29s
138:
        learn: 2.3223736
                                  total: 1.18s
                                                   remaining: 7.28s
139:
        learn: 2.3066175
                                  total: 1.18s
                                                   remaining: 7.27s
140:
        learn: 2.2937362
                                  total: 1.19s
                                                   remaining: 7.25s
141:
        learn: 2.2843168
                                  total: 1.2s
                                                   remaining: 7.24s
142:
        learn: 2.2716098
                                  total: 1.21s
                                                   remaining: 7.24s
143:
        learn: 2.2583706
                                  total: 1.21s
                                                   remaining: 7.22s
        learn: 2.2427068
                                  total: 1.22s
144:
                                                   remaining: 7.2s
        learn: 2.2304341
145:
                                  total: 1.22s
                                                   remaining: 7.16s
        learn: 2.2159654
146:
                                  total: 1.23s
                                                   remaining: 7.13s
147:
        learn: 2.2015343
                                  total: 1.23s
                                                   remaining: 7.11s
148:
        learn: 2.1921993
                                  total: 1.24s
                                                   remaining: 7.09s
        learn: 2.1800927
149:
                                  total: 1.25s
                                                   remaining: 7.07s
150:
        learn: 2.1689359
                                  total: 1.25s
                                                   remaining: 7.05s
151:
        learn: 2.1558460
                                  total: 1.26s
                                                   remaining: 7.03s
152:
        learn: 2.1408001
                                  total: 1.27s
                                                   remaining: 7.01s
        learn: 2.1304395
                                  total: 1.27s
153:
                                                   remaining: 7s
154:
        learn: 2.1197216
                                  total: 1.28s
                                                   remaining: 6.99s
155:
        learn: 2.1103714
                                  total: 1.29s
                                                   remaining: 6.96s
156:
        learn: 2.0959990
                                  total: 1.29s
                                                   remaining: 6.95s
157:
        learn: 2.0882711
                                  total: 1.3s
                                                   remaining: 6.93s
158:
        learn: 2.0763861
                                  total: 1.3s
                                                   remaining: 6.9s
159:
        learn: 2.0618360
                                  total: 1.31s
                                                   remaining: 6.89s
160:
        learn: 2.0542501
                                  total: 1.32s
                                                   remaining: 6.87s
161:
        learn: 2.0450804
                                  total: 1.33s
                                                   remaining: 6.86s
162:
        learn: 2.0348069
                                  total: 1.33s
                                                   remaining: 6.85s
163:
        learn: 2.0263228
                                  total: 1.34s
                                                   remaining: 6.82s
164:
        learn: 2.0169779
                                  total: 1.34s
                                                   remaining: 6.81s
165:
        learn: 2.0056530
                                  total: 1.35s
                                                   remaining: 6.8s
                                  total: 1.36s
                                                   remaining: 6.79s
166:
        learn: 1.9977477
        learn: 1.9899212
167:
                                  total: 1.37s
                                                   remaining: 6.77s
168:
        learn: 1.9829062
                                  total: 1.38s
                                                   remaining: 6.76s
169:
        learn: 1.9754362
                                  total: 1.38s
                                                   remaining: 6.75s
170:
        learn: 1.9661142
                                  total: 1.39s
                                                   remaining: 6.72s
171:
        learn: 1.9557492
                                  total: 1.4s
                                                   remaining: 6.72s
172:
        learn: 1.9499227
                                  total: 1.41s
                                                   remaining: 6.72s
173:
        learn: 1.9404723
                                  total: 1.41s
                                                   remaining: 6.69s
174:
        learn: 1.9283404
                                  total: 1.41s
                                                   remaining: 6.66s
175:
        learn: 1.9209172
                                  total: 1.42s
                                                   remaining: 6.63s
176:
        learn: 1.9124647
                                  total: 1.42s
                                                   remaining: 6.6s
177:
        learn: 1.9035818
                                  total: 1.42s
                                                   remaining: 6.57s
178:
        learn: 1.8973120
                                  total: 1.43s
                                                   remaining: 6.55s
```

```
179:
        learn: 1.8804128
                                  total: 1.43s
                                                   remaining: 6.53s
180:
        learn: 1.8705787
                                  total: 1.44s
                                                   remaining: 6.53s
181:
        learn: 1.8618748
                                  total: 1.45s
                                                   remaining: 6.51s
182:
        learn: 1.8548254
                                  total: 1.45s
                                                   remaining: 6.49s
183:
        learn: 1.8457603
                                  total: 1.46s
                                                   remaining: 6.48s
184:
        learn: 1.8398968
                                  total: 1.47s
                                                   remaining: 6.47s
185:
        learn: 1.8314351
                                  total: 1.47s
                                                   remaining: 6.45s
186:
        learn: 1.8268203
                                  total: 1.48s
                                                   remaining: 6.43s
187:
        learn: 1.8167918
                                  total: 1.49s
                                                   remaining: 6.42s
188:
        learn: 1.8085787
                                  total: 1.49s
                                                   remaining: 6.4s
        learn: 1.8026340
189:
                                  total: 1.5s
                                                   remaining: 6.38s
190:
        learn: 1.7959334
                                  total: 1.5s
                                                   remaining: 6.37s
191:
        learn: 1.7896767
                                  total: 1.51s
                                                   remaining: 6.36s
192:
        learn: 1.7824880
                                  total: 1.51s
                                                   remaining: 6.34s
193:
        learn: 1.7776852
                                  total: 1.52s
                                                   remaining: 6.33s
        learn: 1.7711510
194:
                                  total: 1.53s
                                                   remaining: 6.32s
195:
        learn: 1.7646976
                                  total: 1.53s
                                                   remaining: 6.29s
196:
        learn: 1.7580513
                                  total: 1.54s
                                                   remaining: 6.28s
197:
        learn: 1.7508152
                                  total: 1.55s
                                                   remaining: 6.27s
198:
        learn: 1.7448998
                                  total: 1.55s
                                                   remaining: 6.25s
199:
        learn: 1.7354638
                                  total: 1.56s
                                                   remaining: 6.24s
200:
        learn: 1.7290903
                                  total: 1.57s
                                                   remaining: 6.23s
201:
        learn: 1.7241090
                                  total: 1.57s
                                                   remaining: 6.21s
202:
        learn: 1.7170743
                                  total: 1.58s
                                                   remaining: 6.2s
203:
        learn: 1.7049277
                                  total: 1.59s
                                                   remaining: 6.19s
                                  total: 1.59s
204:
        learn: 1.6920267
                                                   remaining: 6.18s
205:
        learn: 1.6877788
                                  total: 1.6s
                                                   remaining: 6.17s
206:
        learn: 1.6820254
                                  total: 1.61s
                                                   remaining: 6.16s
        learn: 1.6767318
207:
                                  total: 1.61s
                                                   remaining: 6.15s
208:
        learn: 1.6700683
                                  total: 1.62s
                                                   remaining: 6.13s
209:
        learn: 1.6638757
                                  total: 1.62s
                                                   remaining: 6.1s
210:
        learn: 1.6588745
                                  total: 1.63s
                                                   remaining: 6.08s
211:
        learn: 1.6513747
                                  total: 1.63s
                                                   remaining: 6.07s
212:
        learn: 1.6470131
                                  total: 1.64s
                                                   remaining: 6.05s
        learn: 1.6385030
                                  total: 1.64s
                                                   remaining: 6.03s
213:
214:
        learn: 1.6331022
                                  total: 1.65s
                                                   remaining: 6.02s
215:
        learn: 1.6236699
                                  total: 1.66s
                                                   remaining: 6.01s
216:
        learn: 1.6171013
                                  total: 1.66s
                                                   remaining: 6s
217:
        learn: 1.6120413
                                  total: 1.67s
                                                   remaining: 5.98s
218:
        learn: 1.6058425
                                  total: 1.67s
                                                   remaining: 5.97s
219:
        learn: 1.5995349
                                  total: 1.68s
                                                   remaining: 5.96s
220:
        learn: 1.5940801
                                  total: 1.69s
                                                   remaining: 5.95s
221:
        learn: 1.5854471
                                  total: 1.69s
                                                   remaining: 5.93s
222:
        learn: 1.5799571
                                  total: 1.7s
                                                   remaining: 5.92s
223:
        learn: 1.5756328
                                  total: 1.71s
                                                   remaining: 5.91s
224:
        learn: 1.5721884
                                  total: 1.71s
                                                   remaining: 5.9s
225:
        learn: 1.5624310
                                  total: 1.72s
                                                   remaining: 5.89s
        learn: 1.5568504
                                  total: 1.73s
                                                   remaining: 5.88s
226:
                                  total: 1.73s
227:
        learn: 1.5503967
                                                   remaining: 5.87s
228:
        learn: 1.5422120
                                  total: 1.74s
                                                   remaining: 5.86s
229:
        learn: 1.5373900
                                  total: 1.75s
                                                   remaining: 5.86s
230:
        learn: 1.5323328
                                  total: 1.75s
                                                   remaining: 5.84s
231:
        learn: 1.5285817
                                  total: 1.76s
                                                   remaining: 5.83s
232:
        learn: 1.5205164
                                  total: 1.77s
                                                   remaining: 5.83s
233:
        learn: 1.5133751
                                  total: 1.78s
                                                   remaining: 5.82s
234:
        learn: 1.5087417
                                  total: 1.78s
                                                   remaining: 5.81s
235:
        learn: 1.5036425
                                  total: 1.79s
                                                   remaining: 5.8s
236:
        learn: 1.5003469
                                  total: 1.8s
                                                   remaining: 5.79s
237:
        learn: 1.4957166
                                  total: 1.81s
                                                   remaining: 5.78s
238:
        learn: 1.4911895
                                  total: 1.81s
                                                   remaining: 5.78s
```

```
239:
        learn: 1.4849834
                                  total: 1.82s
                                                   remaining: 5.76s
240:
        learn: 1.4794109
                                  total: 1.82s
                                                   remaining: 5.74s
241:
        learn: 1.4697021
                                  total: 1.83s
                                                   remaining: 5.72s
242:
        learn: 1.4657085
                                  total: 1.83s
                                                   remaining: 5.7s
243:
        learn: 1.4620202
                                  total: 1.84s
                                                   remaining: 5.69s
244:
        learn: 1.4558305
                                  total: 1.84s
                                                   remaining: 5.68s
245:
        learn: 1.4521698
                                  total: 1.85s
                                                   remaining: 5.66s
246:
        learn: 1.4456220
                                  total: 1.85s
                                                   remaining: 5.65s
247:
        learn: 1.4404818
                                  total: 1.86s
                                                   remaining: 5.64s
248:
        learn: 1.4365325
                                  total: 1.86s
                                                   remaining: 5.63s
249:
        learn: 1.4300972
                                  total: 1.87s
                                                   remaining: 5.62s
250:
        learn: 1.4269114
                                  total: 1.88s
                                                   remaining: 5.61s
251:
        learn: 1.4228442
                                  total: 1.89s
                                                   remaining: 5.6s
252:
        learn: 1.4185719
                                  total: 1.89s
                                                   remaining: 5.59s
253:
        learn: 1.4120856
                                  total: 1.9s
                                                   remaining: 5.58s
        learn: 1.4059249
254:
                                  total: 1.91s
                                                   remaining: 5.57s
255:
        learn: 1.4033176
                                  total: 1.92s
                                                   remaining: 5.57s
256:
        learn: 1.3975330
                                  total: 1.92s
                                                   remaining: 5.56s
257:
        learn: 1.3922250
                                  total: 1.93s
                                                   remaining: 5.55s
258:
        learn: 1.3863204
                                  total: 1.94s
                                                   remaining: 5.54s
259:
        learn: 1.3820111
                                  total: 1.94s
                                                   remaining: 5.53s
260:
        learn: 1.3782210
                                  total: 1.95s
                                                   remaining: 5.52s
                                  total: 1.96s
261:
        learn: 1.3758489
                                                   remaining: 5.52s
262:
        learn: 1.3721183
                                  total: 1.97s
                                                   remaining: 5.51s
263:
        learn: 1.3678959
                                  total: 1.97s
                                                   remaining: 5.5s
264:
        learn: 1.3637629
                                  total: 1.98s
                                                   remaining: 5.49s
265:
                                  total: 1.99s
        learn: 1.3605049
                                                   remaining: 5.48s
266:
        learn: 1.3578666
                                  total: 1.99s
                                                   remaining: 5.47s
        learn: 1.3536671
267:
                                  total: 2s
                                                   remaining: 5.46s
268:
        learn: 1.3499068
                                  total: 2.01s
                                                   remaining: 5.46s
269:
        learn: 1.3452997
                                  total: 2.02s
                                                   remaining: 5.45s
270:
        learn: 1.3419421
                                  total: 2.02s
                                                   remaining: 5.44s
271:
        learn: 1.3351838
                                  total: 2.02s
                                                   remaining: 5.42s
272:
        learn: 1.3317986
                                  total: 2.03s
                                                   remaining: 5.4s
273:
        learn: 1.3292102
                                  total: 2.03s
                                                   remaining: 5.38s
274:
        learn: 1.3227034
                                  total: 2.04s
                                                   remaining: 5.37s
275:
        learn: 1.3192455
                                  total: 2.04s
                                                   remaining: 5.37s
276:
        learn: 1.3159019
                                  total: 2.05s
                                                   remaining: 5.35s
277:
        learn: 1.3143033
                                  total: 2.06s
                                                   remaining: 5.34s
278:
        learn: 1.3083247
                                  total: 2.06s
                                                   remaining: 5.34s
279:
        learn: 1.3031081
                                  total: 2.07s
                                                   remaining: 5.33s
280:
        learn: 1.2971920
                                  total: 2.08s
                                                   remaining: 5.32s
281:
        learn: 1.2943686
                                  total: 2.08s
                                                   remaining: 5.31s
282:
        learn: 1.2903429
                                  total: 2.09s
                                                   remaining: 5.3s
283:
        learn: 1.2875994
                                  total: 2.1s
                                                   remaining: 5.29s
284:
        learn: 1.2844539
                                  total: 2.1s
                                                   remaining: 5.28s
285:
        learn: 1.2817440
                                  total: 2.11s
                                                   remaining: 5.27s
        learn: 1.2777277
                                                   remaining: 5.26s
286:
                                  total: 2.12s
287:
        learn: 1.2749407
                                  total: 2.13s
                                                   remaining: 5.26s
288:
        learn: 1.2711173
                                  total: 2.13s
                                                   remaining: 5.25s
289:
        learn: 1.2676340
                                  total: 2.14s
                                                   remaining: 5.24s
290:
        learn: 1.2628646
                                  total: 2.15s
                                                   remaining: 5.23s
291:
        learn: 1.2579327
                                  total: 2.15s
                                                   remaining: 5.22s
292:
        learn: 1.2533410
                                  total: 2.16s
                                                   remaining: 5.21s
293:
        learn: 1.2503872
                                  total: 2.17s
                                                   remaining: 5.21s
294:
        learn: 1.2464108
                                  total: 2.18s
                                                   remaining: 5.2s
        learn: 1.2409326
295:
                                  total: 2.19s
                                                   remaining: 5.2s
296:
        learn: 1.2348389
                                  total: 2.19s
                                                   remaining: 5.19s
                                  total: 2.2s
297:
        learn: 1.2325920
                                                   remaining: 5.18s
298:
        learn: 1.2297919
                                  total: 2.21s
                                                   remaining: 5.17s
```

```
299:
        learn: 1.2269277
                                  total: 2.21s
                                                   remaining: 5.16s
300:
        learn: 1.2242416
                                  total: 2.22s
                                                   remaining: 5.16s
301:
        learn: 1.2206190
                                  total: 2.23s
                                                   remaining: 5.15s
302:
        learn: 1.2173792
                                  total: 2.23s
                                                   remaining: 5.13s
303:
        learn: 1.2154222
                                  total: 2.23s
                                                   remaining: 5.12s
304:
        learn: 1.2135161
                                  total: 2.24s
                                                   remaining: 5.1s
305:
        learn: 1.2100318
                                  total: 2.24s
                                                   remaining: 5.09s
306:
        learn: 1.2055390
                                  total: 2.25s
                                                   remaining: 5.08s
307:
        learn: 1.2025866
                                  total: 2.25s
                                                   remaining: 5.07s
308:
        learn: 1.1990095
                                  total: 2.26s
                                                   remaining: 5.06s
                                  total: 2.27s
309:
        learn: 1.1961976
                                                   remaining: 5.05s
310:
        learn: 1.1911452
                                  total: 2.27s
                                                   remaining: 5.04s
311:
        learn: 1.1887877
                                  total: 2.28s
                                                   remaining: 5.03s
312:
        learn: 1.1871821
                                  total: 2.29s
                                                   remaining: 5.02s
313:
        learn: 1.1848719
                                  total: 2.29s
                                                   remaining: 5.01s
        learn: 1.1825926
                                  total: 2.3s
314:
                                                   remaining: 5s
315:
        learn: 1.1800186
                                  total: 2.31s
                                                   remaining: 4.99s
316:
        learn: 1.1771353
                                  total: 2.31s
                                                   remaining: 4.99s
        learn: 1.1747760
                                  total: 2.32s
317:
                                                   remaining: 4.97s
318:
        learn: 1.1727086
                                  total: 2.33s
                                                   remaining: 4.97s
319:
        learn: 1.1698045
                                  total: 2.33s
                                                   remaining: 4.96s
320:
        learn: 1.1664242
                                  total: 2.34s
                                                   remaining: 4.95s
321:
        learn: 1.1636904
                                  total: 2.35s
                                                   remaining: 4.94s
322:
        learn: 1.1610694
                                  total: 2.35s
                                                   remaining: 4.93s
323:
        learn: 1.1575526
                                  total: 2.36s
                                                   remaining: 4.93s
        learn: 1.1548931
                                  total: 2.37s
324:
                                                   remaining: 4.92s
325:
        learn: 1.1512546
                                  total: 2.38s
                                                   remaining: 4.91s
326:
        learn: 1.1481857
                                  total: 2.38s
                                                   remaining: 4.91s
        learn: 1.1456069
                                  total: 2.39s
327:
                                                   remaining: 4.9s
328:
        learn: 1.1421777
                                  total: 2.4s
                                                   remaining: 4.89s
                                  total: 2.4s
329:
        learn: 1.1399786
                                                   remaining: 4.88s
330:
        learn: 1.1380141
                                  total: 2.41s
                                                   remaining: 4.88s
331:
        learn: 1.1357206
                                  total: 2.42s
                                                   remaining: 4.86s
332:
        learn: 1.1320908
                                  total: 2.42s
                                                   remaining: 4.85s
        learn: 1.1282086
                                  total: 2.42s
333:
                                                   remaining: 4.83s
334:
        learn: 1.1254022
                                  total: 2.43s
                                                   remaining: 4.82s
335:
        learn: 1.1215592
                                  total: 2.43s
                                                   remaining: 4.81s
336:
        learn: 1.1189794
                                  total: 2.44s
                                                   remaining: 4.8s
337:
        learn: 1.1167413
                                  total: 2.44s
                                                   remaining: 4.79s
338:
        learn: 1.1132016
                                  total: 2.45s
                                                   remaining: 4.78s
339:
        learn: 1.1113297
                                  total: 2.46s
                                                   remaining: 4.77s
340:
        learn: 1.1077582
                                  total: 2.46s
                                                   remaining: 4.76s
        learn: 1.1059763
341:
                                  total: 2.47s
                                                   remaining: 4.75s
342:
        learn: 1.1028891
                                  total: 2.48s
                                                   remaining: 4.75s
343:
        learn: 1.0986959
                                  total: 2.48s
                                                   remaining: 4.74s
344:
        learn: 1.0965308
                                  total: 2.49s
                                                   remaining: 4.73s
345:
        learn: 1.0940507
                                  total: 2.5s
                                                   remaining: 4.72s
        learn: 1.0903155
                                  total: 2.51s
346:
                                                   remaining: 4.72s
347:
        learn: 1.0883584
                                  total: 2.51s
                                                   remaining: 4.71s
        learn: 1.0872559
                                  total: 2.52s
348:
                                                   remaining: 4.7s
349:
        learn: 1.0851927
                                  total: 2.53s
                                                   remaining: 4.69s
350:
        learn: 1.0836803
                                  total: 2.53s
                                                   remaining: 4.68s
351:
        learn: 1.0821751
                                  total: 2.54s
                                                   remaining: 4.67s
352:
                                  total: 2.55s
        learn: 1.0781489
                                                   remaining: 4.67s
353:
        learn: 1.0758500
                                  total: 2.55s
                                                   remaining: 4.66s
354:
        learn: 1.0737878
                                  total: 2.56s
                                                   remaining: 4.65s
355:
        learn: 1.0708764
                                  total: 2.57s
                                                   remaining: 4.64s
356:
        learn: 1.0671657
                                  total: 2.57s
                                                   remaining: 4.64s
                                  total: 2.58s
357:
        learn: 1.0638675
                                                   remaining: 4.63s
358:
        learn: 1.0610911
                                  total: 2.59s
                                                   remaining: 4.62s
```

```
359:
        learn: 1.0594841
                                  total: 2.6s
                                                   remaining: 4.61s
360:
        learn: 1.0580371
                                  total: 2.6s
                                                   remaining: 4.61s
361:
        learn: 1.0562979
                                  total: 2.61s
                                                   remaining: 4.6s
        learn: 1.0544779
362:
                                  total: 2.61s
                                                   remaining: 4.58s
363:
        learn: 1.0514192
                                  total: 2.62s
                                                   remaining: 4.57s
364:
        learn: 1.0481245
                                  total: 2.62s
                                                   remaining: 4.55s
365:
        learn: 1.0468033
                                  total: 2.62s
                                                   remaining: 4.54s
366:
        learn: 1.0450603
                                  total: 2.63s
                                                   remaining: 4.53s
367:
        learn: 1.0433764
                                  total: 2.63s
                                                   remaining: 4.52s
368:
        learn: 1.0418094
                                  total: 2.64s
                                                   remaining: 4.51s
                                  total: 2.65s
369:
        learn: 1.0401161
                                                   remaining: 4.51s
370:
        learn: 1.0377286
                                  total: 2.65s
                                                   remaining: 4.5s
371:
        learn: 1.0357861
                                  total: 2.66s
                                                   remaining: 4.5s
372:
        learn: 1.0344354
                                  total: 2.67s
                                                   remaining: 4.49s
373:
        learn: 1.0314240
                                  total: 2.68s
                                                   remaining: 4.48s
374:
        learn: 1.0298366
                                  total: 2.69s
                                                   remaining: 4.48s
375:
        learn: 1.0277772
                                  total: 2.69s
                                                   remaining: 4.47s
376:
        learn: 1.0253598
                                  total: 2.7s
                                                   remaining: 4.46s
377:
        learn: 1.0232980
                                  total: 2.71s
                                                   remaining: 4.46s
378:
        learn: 1.0209431
                                  total: 2.71s
                                                   remaining: 4.45s
379:
        learn: 1.0193238
                                  total: 2.72s
                                                   remaining: 4.44s
380:
        learn: 1.0172076
                                  total: 2.73s
                                                   remaining: 4.43s
381:
        learn: 1.0153372
                                  total: 2.73s
                                                   remaining: 4.42s
382:
        learn: 1.0137591
                                  total: 2.74s
                                                   remaining: 4.42s
383:
        learn: 1.0126174
                                  total: 2.75s
                                                   remaining: 4.41s
        learn: 1.0096850
                                  total: 2.75s
384:
                                                   remaining: 4.4s
                                  total: 2.76s
385:
        learn: 1.0071668
                                                   remaining: 4.39s
386:
        learn: 1.0056726
                                  total: 2.77s
                                                   remaining: 4.38s
        learn: 1.0046975
                                  total: 2.77s
387:
                                                   remaining: 4.38s
388:
        learn: 1.0021565
                                  total: 2.78s
                                                   remaining: 4.37s
389:
        learn: 0.9985263
                                  total: 2.79s
                                                   remaining: 4.36s
390:
        learn: 0.9964170
                                  total: 2.79s
                                                   remaining: 4.35s
391:
        learn: 0.9941345
                                  total: 2.8s
                                                   remaining: 4.34s
392:
        learn: 0.9906131
                                  total: 2.81s
                                                   remaining: 4.33s
        learn: 0.9877792
393:
                                  total: 2.81s
                                                   remaining: 4.32s
394:
        learn: 0.9853297
                                  total: 2.81s
                                                   remaining: 4.31s
395:
        learn: 0.9833100
                                  total: 2.82s
                                                   remaining: 4.3s
396:
        learn: 0.9802127
                                  total: 2.83s
                                                   remaining: 4.29s
397:
        learn: 0.9786386
                                  total: 2.83s
                                                   remaining: 4.29s
398:
        learn: 0.9771595
                                  total: 2.84s
                                                   remaining: 4.28s
399:
        learn: 0.9748534
                                  total: 2.85s
                                                   remaining: 4.27s
400:
        learn: 0.9722440
                                  total: 2.85s
                                                   remaining: 4.26s
        learn: 0.9690153
401:
                                  total: 2.86s
                                                   remaining: 4.25s
402:
        learn: 0.9665526
                                  total: 2.87s
                                                   remaining: 4.25s
403:
        learn: 0.9645127
                                  total: 2.87s
                                                   remaining: 4.24s
404:
        learn: 0.9634782
                                  total: 2.88s
                                                   remaining: 4.23s
405:
        learn: 0.9628647
                                  total: 2.88s
                                                   remaining: 4.22s
        learn: 0.9597144
                                  total: 2.89s
406:
                                                   remaining: 4.21s
407:
        learn: 0.9583319
                                  total: 2.9s
                                                   remaining: 4.21s
                                  total: 2.9s
408:
        learn: 0.9568775
                                                   remaining: 4.2s
409:
        learn: 0.9540730
                                  total: 2.91s
                                                   remaining: 4.19s
410:
        learn: 0.9524053
                                  total: 2.92s
                                                   remaining: 4.18s
411:
        learn: 0.9500002
                                  total: 2.92s
                                                   remaining: 4.17s
412:
        learn: 0.9486574
                                  total: 2.93s
                                                   remaining: 4.17s
413:
        learn: 0.9476387
                                  total: 2.94s
                                                   remaining: 4.16s
        learn: 0.9451927
414:
                                  total: 2.94s
                                                   remaining: 4.15s
415:
        learn: 0.9426702
                                  total: 2.95s
                                                   remaining: 4.14s
416:
                                  total: 2.96s
        learn: 0.9406503
                                                   remaining: 4.14s
                                  total: 2.97s
417:
        learn: 0.9393431
                                                   remaining: 4.13s
418:
        learn: 0.9380169
                                  total: 2.97s
                                                   remaining: 4.12s
```

```
419:
        learn: 0.9365147
                                  total: 2.98s
                                                   remaining: 4.12s
420:
        learn: 0.9349507
                                  total: 2.99s
                                                   remaining: 4.11s
421:
        learn: 0.9340249
                                  total: 3s
                                                   remaining: 4.1s
422:
        learn: 0.9331414
                                  total: 3s
                                                   remaining: 4.09s
423:
        learn: 0.9320748
                                  total: 3s
                                                   remaining: 4.08s
424:
        learn: 0.9294413
                                  total: 3.01s
                                                   remaining: 4.07s
425:
        learn: 0.9274650
                                  total: 3.02s
                                                   remaining: 4.06s
426:
        learn: 0.9254381
                                  total: 3.02s
                                                   remaining: 4.05s
427:
        learn: 0.9231147
                                  total: 3.02s
                                                   remaining: 4.04s
428:
        learn: 0.9216994
                                  total: 3.03s
                                                   remaining: 4.03s
429:
        learn: 0.9194737
                                  total: 3.03s
                                                   remaining: 4.02s
430:
        learn: 0.9180949
                                  total: 3.04s
                                                   remaining: 4.01s
431:
        learn: 0.9166622
                                  total: 3.04s
                                                   remaining: 3.99s
432:
        learn: 0.9154766
                                  total: 3.04s
                                                   remaining: 3.98s
433:
        learn: 0.9147882
                                  total: 3.04s
                                                   remaining: 3.97s
434:
        learn: 0.9116089
                                  total: 3.05s
                                                   remaining: 3.96s
                                  total: 3.05s
435:
        learn: 0.9093179
                                                   remaining: 3.95s
436:
        learn: 0.9080685
                                  total: 3.06s
                                                   remaining: 3.94s
437:
        learn: 0.9066622
                                  total: 3.06s
                                                   remaining: 3.93s
438:
        learn: 0.9045172
                                  total: 3.07s
                                                   remaining: 3.92s
439:
        learn: 0.9033495
                                  total: 3.08s
                                                   remaining: 3.92s
440:
        learn: 0.9023419
                                  total: 3.08s
                                                   remaining: 3.91s
441:
        learn: 0.9010688
                                  total: 3.09s
                                                   remaining: 3.9s
        learn: 0.8999685
442:
                                  total: 3.1s
                                                   remaining: 3.89s
443:
        learn: 0.8977538
                                  total: 3.1s
                                                   remaining: 3.89s
444:
        learn: 0.8964439
                                  total: 3.11s
                                                   remaining: 3.88s
445:
        learn: 0.8942863
                                  total: 3.12s
                                                   remaining: 3.87s
446:
        learn: 0.8923759
                                  total: 3.13s
                                                   remaining: 3.87s
447:
        learn: 0.8899832
                                  total: 3.13s
                                                   remaining: 3.86s
448:
        learn: 0.8880290
                                  total: 3.14s
                                                   remaining: 3.85s
449:
        learn: 0.8866916
                                  total: 3.15s
                                                   remaining: 3.85s
450:
        learn: 0.8855099
                                  total: 3.15s
                                                   remaining: 3.84s
451:
        learn: 0.8847194
                                  total: 3.16s
                                                   remaining: 3.83s
452:
        learn: 0.8834620
                                  total: 3.17s
                                                   remaining: 3.83s
        learn: 0.8811815
453:
                                  total: 3.18s
                                                   remaining: 3.82s
        learn: 0.8797161
454:
                                  total: 3.18s
                                                   remaining: 3.81s
455:
        learn: 0.8784802
                                  total: 3.19s
                                                   remaining: 3.81s
456:
        learn: 0.8764144
                                  total: 3.2s
                                                   remaining: 3.8s
457:
        learn: 0.8745051
                                  total: 3.2s
                                                   remaining: 3.79s
458:
        learn: 0.8718212
                                  total: 3.21s
                                                   remaining: 3.78s
459:
        learn: 0.8705121
                                  total: 3.21s
                                                   remaining: 3.77s
460:
        learn: 0.8687602
                                  total: 3.21s
                                                   remaining: 3.76s
        learn: 0.8666769
461:
                                  total: 3.22s
                                                   remaining: 3.75s
462:
        learn: 0.8655104
                                  total: 3.23s
                                                   remaining: 3.74s
463:
        learn: 0.8641861
                                  total: 3.23s
                                                   remaining: 3.73s
464:
        learn: 0.8626902
                                  total: 3.24s
                                                   remaining: 3.73s
465:
        learn: 0.8606114
                                  total: 3.25s
                                                   remaining: 3.72s
        learn: 0.8593595
                                  total: 3.25s
466:
                                                   remaining: 3.71s
                                  total: 3.26s
467:
        learn: 0.8576762
                                                   remaining: 3.71s
468:
        learn: 0.8564431
                                  total: 3.27s
                                                   remaining: 3.7s
469:
        learn: 0.8545901
                                  total: 3.27s
                                                   remaining: 3.69s
470:
        learn: 0.8537817
                                  total: 3.28s
                                                   remaining: 3.68s
471:
        learn: 0.8520258
                                  total: 3.29s
                                                   remaining: 3.68s
472:
        learn: 0.8506273
                                  total: 3.29s
                                                   remaining: 3.67s
473:
        learn: 0.8493037
                                  total: 3.3s
                                                   remaining: 3.67s
        learn: 0.8481494
474:
                                  total: 3.31s
                                                   remaining: 3.66s
475:
        learn: 0.8463889
                                  total: 3.32s
                                                   remaining: 3.65s
476:
                                  total: 3.32s
        learn: 0.8452845
                                                   remaining: 3.65s
                                  total: 3.33s
477:
        learn: 0.8437142
                                                   remaining: 3.64s
478:
        learn: 0.8423659
                                  total: 3.34s
                                                   remaining: 3.63s
```

```
479:
        learn: 0.8409305
                                  total: 3.35s
                                                   remaining: 3.63s
480:
        learn: 0.8397469
                                  total: 3.35s
                                                   remaining: 3.62s
481:
        learn: 0.8384179
                                  total: 3.36s
                                                   remaining: 3.61s
                                  total: 3.37s
482:
        learn: 0.8369821
                                                   remaining: 3.6s
483:
        learn: 0.8355742
                                  total: 3.37s
                                                   remaining: 3.6s
484:
        learn: 0.8337752
                                  total: 3.38s
                                                   remaining: 3.59s
485:
        learn: 0.8331652
                                  total: 3.38s
                                                   remaining: 3.58s
486:
        learn: 0.8320517
                                  total: 3.39s
                                                   remaining: 3.57s
487:
        learn: 0.8313232
                                  total: 3.4s
                                                   remaining: 3.56s
488:
        learn: 0.8299321
                                  total: 3.4s
                                                   remaining: 3.56s
489:
        learn: 0.8285365
                                  total: 3.4s
                                                   remaining: 3.54s
490:
        learn: 0.8267322
                                  total: 3.41s
                                                   remaining: 3.53s
491:
        learn: 0.8252752
                                  total: 3.41s
                                                   remaining: 3.52s
492:
        learn: 0.8230028
                                  total: 3.42s
                                                   remaining: 3.51s
493:
        learn: 0.8217754
                                  total: 3.42s
                                                   remaining: 3.51s
494:
        learn: 0.8209221
                                  total: 3.43s
                                                   remaining: 3.5s
                                  total: 3.44s
495:
        learn: 0.8195601
                                                   remaining: 3.49s
496:
        learn: 0.8187965
                                  total: 3.44s
                                                   remaining: 3.48s
497:
        learn: 0.8168305
                                  total: 3.45s
                                                   remaining: 3.48s
498:
        learn: 0.8154036
                                  total: 3.46s
                                                   remaining: 3.47s
499:
        learn: 0.8138777
                                  total: 3.46s
                                                   remaining: 3.46s
500:
        learn: 0.8124259
                                  total: 3.47s
                                                   remaining: 3.46s
                                  total: 3.48s
501:
        learn: 0.8109936
                                                   remaining: 3.45s
502:
        learn: 0.8099051
                                  total: 3.48s
                                                   remaining: 3.44s
503:
        learn: 0.8080996
                                  total: 3.49s
                                                   remaining: 3.44s
        learn: 0.8067378
                                  total: 3.5s
504:
                                                   remaining: 3.43s
505:
        learn: 0.8051643
                                  total: 3.5s
                                                   remaining: 3.42s
        learn: 0.8036183
506:
                                  total: 3.51s
                                                   remaining: 3.41s
        learn: 0.8027637
507:
                                  total: 3.52s
                                                   remaining: 3.41s
508:
        learn: 0.8016492
                                  total: 3.52s
                                                   remaining: 3.4s
509:
        learn: 0.8008428
                                  total: 3.53s
                                                   remaining: 3.39s
510:
        learn: 0.7996904
                                  total: 3.54s
                                                   remaining: 3.39s
511:
        learn: 0.7983801
                                  total: 3.54s
                                                   remaining: 3.38s
512:
        learn: 0.7976378
                                  total: 3.55s
                                                   remaining: 3.37s
        learn: 0.7964973
                                  total: 3.56s
513:
                                                   remaining: 3.37s
                                  total: 3.56s
514:
        learn: 0.7955357
                                                   remaining: 3.36s
515:
        learn: 0.7943973
                                  total: 3.57s
                                                   remaining: 3.35s
516:
        learn: 0.7934307
                                  total: 3.58s
                                                   remaining: 3.34s
517:
        learn: 0.7925230
                                  total: 3.58s
                                                   remaining: 3.34s
        learn: 0.7911235
518:
                                  total: 3.59s
                                                   remaining: 3.33s
519:
        learn: 0.7901826
                                  total: 3.6s
                                                   remaining: 3.32s
520:
        learn: 0.7890727
                                  total: 3.6s
                                                   remaining: 3.31s
521:
        learn: 0.7881712
                                  total: 3.61s
                                                   remaining: 3.3s
522:
        learn: 0.7870881
                                  total: 3.61s
                                                   remaining: 3.29s
523:
        learn: 0.7861895
                                  total: 3.61s
                                                   remaining: 3.28s
524:
        learn: 0.7845325
                                  total: 3.62s
                                                   remaining: 3.27s
525:
        learn: 0.7838249
                                  total: 3.62s
                                                   remaining: 3.26s
        learn: 0.7822690
                                  total: 3.63s
526:
                                                   remaining: 3.25s
527:
        learn: 0.7811838
                                  total: 3.63s
                                                   remaining: 3.25s
528:
        learn: 0.7796258
                                  total: 3.64s
                                                   remaining: 3.24s
529:
        learn: 0.7784803
                                  total: 3.65s
                                                   remaining: 3.23s
530:
        learn: 0.7775068
                                  total: 3.65s
                                                   remaining: 3.23s
531:
        learn: 0.7766629
                                  total: 3.66s
                                                   remaining: 3.22s
532:
        learn: 0.7756333
                                  total: 3.66s
                                                   remaining: 3.21s
533:
        learn: 0.7748206
                                  total: 3.67s
                                                   remaining: 3.2s
        learn: 0.7737883
534:
                                  total: 3.68s
                                                   remaining: 3.2s
535:
        learn: 0.7728549
                                  total: 3.69s
                                                   remaining: 3.19s
536:
        learn: 0.7721277
                                  total: 3.69s
                                                   remaining: 3.18s
537:
        learn: 0.7708704
                                  total: 3.7s
                                                   remaining: 3.18s
538:
        learn: 0.7700981
                                  total: 3.71s
                                                   remaining: 3.17s
```

```
539:
        learn: 0.7686506
                                  total: 3.71s
                                                   remaining: 3.16s
540:
        learn: 0.7673300
                                  total: 3.72s
                                                   remaining: 3.16s
541:
        learn: 0.7661766
                                  total: 3.73s
                                                   remaining: 3.15s
542:
        learn: 0.7650132
                                  total: 3.73s
                                                   remaining: 3.14s
543:
        learn: 0.7638340
                                  total: 3.74s
                                                   remaining: 3.14s
544:
        learn: 0.7625382
                                  total: 3.75s
                                                   remaining: 3.13s
545:
        learn: 0.7615052
                                  total: 3.76s
                                                   remaining: 3.12s
546:
        learn: 0.7602400
                                  total: 3.76s
                                                   remaining: 3.12s
547:
        learn: 0.7592941
                                  total: 3.77s
                                                   remaining: 3.11s
548:
        learn: 0.7585077
                                  total: 3.78s
                                                   remaining: 3.1s
549:
        learn: 0.7574435
                                  total: 3.78s
                                                   remaining: 3.1s
550:
        learn: 0.7561314
                                  total: 3.79s
                                                   remaining: 3.09s
551:
        learn: 0.7557103
                                  total: 3.8s
                                                   remaining: 3.08s
552:
        learn: 0.7549321
                                  total: 3.8s
                                                   remaining: 3.07s
553:
        learn: 0.7540646
                                  total: 3.8s
                                                   remaining: 3.06s
554:
        learn: 0.7534458
                                  total: 3.81s
                                                   remaining: 3.05s
                                  total: 3.81s
555:
        learn: 0.7522987
                                                   remaining: 3.04s
556:
        learn: 0.7512730
                                  total: 3.82s
                                                   remaining: 3.04s
557:
        learn: 0.7505845
                                  total: 3.82s
                                                   remaining: 3.03s
558:
        learn: 0.7494180
                                  total: 3.83s
                                                   remaining: 3.02s
559:
        learn: 0.7485540
                                  total: 3.84s
                                                   remaining: 3.01s
560:
        learn: 0.7477064
                                  total: 3.84s
                                                   remaining: 3.01s
                                                   remaining: 3s
561:
        learn: 0.7462158
                                  total: 3.85s
562:
        learn: 0.7450462
                                  total: 3.86s
                                                   remaining: 2.99s
563:
        learn: 0.7442366
                                  total: 3.86s
                                                   remaining: 2.98s
        learn: 0.7435532
                                  total: 3.87s
564:
                                                   remaining: 2.98s
565:
        learn: 0.7425018
                                                   remaining: 2.97s
                                  total: 3.88s
566:
        learn: 0.7417594
                                  total: 3.88s
                                                   remaining: 2.96s
567:
        learn: 0.7412057
                                  total: 3.89s
                                                   remaining: 2.96s
568:
        learn: 0.7404236
                                  total: 3.9s
                                                   remaining: 2.95s
569:
        learn: 0.7395770
                                  total: 3.9s
                                                   remaining: 2.94s
570:
        learn: 0.7386748
                                  total: 3.91s
                                                   remaining: 2.94s
571:
        learn: 0.7377607
                                  total: 3.92s
                                                   remaining: 2.93s
572:
        learn: 0.7363704
                                  total: 3.93s
                                                   remaining: 2.92s
573:
        learn: 0.7349222
                                  total: 3.93s
                                                   remaining: 2.92s
                                  total: 3.94s
574:
        learn: 0.7334530
                                                   remaining: 2.91s
575:
        learn: 0.7324386
                                  total: 3.95s
                                                   remaining: 2.9s
576:
        learn: 0.7315582
                                  total: 3.95s
                                                   remaining: 2.9s
577:
        learn: 0.7310434
                                  total: 3.96s
                                                   remaining: 2.89s
578:
        learn: 0.7301211
                                  total: 3.97s
                                                   remaining: 2.88s
579:
        learn: 0.7289343
                                  total: 3.98s
                                                   remaining: 2.88s
580:
        learn: 0.7280178
                                  total: 3.98s
                                                   remaining: 2.87s
        learn: 0.7275723
581:
                                  total: 3.99s
                                                   remaining: 2.87s
582:
        learn: 0.7270028
                                  total: 4s
                                                   remaining: 2.86s
583:
        learn: 0.7260520
                                  total: 4s
                                                   remaining: 2.85s
584:
        learn: 0.7248866
                                  total: 4.01s
                                                   remaining: 2.84s
585:
        learn: 0.7235288
                                  total: 4.01s
                                                   remaining: 2.83s
        learn: 0.7229759
586:
                                  total: 4.01s
                                                   remaining: 2.82s
587:
        learn: 0.7215026
                                  total: 4.02s
                                                   remaining: 2.82s
                                  total: 4.03s
588:
        learn: 0.7200926
                                                   remaining: 2.81s
589:
        learn: 0.7189784
                                  total: 4.03s
                                                   remaining: 2.8s
590:
        learn: 0.7180173
                                  total: 4.04s
                                                   remaining: 2.79s
591:
        learn: 0.7166311
                                  total: 4.04s
                                                   remaining: 2.79s
592:
        learn: 0.7154314
                                  total: 4.05s
                                                   remaining: 2.78s
593:
        learn: 0.7146473
                                  total: 4.06s
                                                   remaining: 2.77s
        learn: 0.7140382
594:
                                  total: 4.06s
                                                   remaining: 2.77s
595:
        learn: 0.7134601
                                  total: 4.07s
                                                   remaining: 2.76s
596:
        learn: 0.7123854
                                  total: 4.08s
                                                   remaining: 2.75s
597:
        learn: 0.7116528
                                  total: 4.09s
                                                   remaining: 2.75s
598:
        learn: 0.7108946
                                  total: 4.09s
                                                   remaining: 2.74s
```

```
599:
        learn: 0.7103643
                                  total: 4.1s
                                                   remaining: 2.73s
600:
        learn: 0.7093793
                                  total: 4.11s
                                                   remaining: 2.73s
601:
        learn: 0.7088971
                                  total: 4.12s
                                                   remaining: 2.72s
602:
        learn: 0.7080465
                                  total: 4.12s
                                                   remaining: 2.71s
603:
        learn: 0.7073366
                                  total: 4.13s
                                                   remaining: 2.71s
604:
        learn: 0.7060541
                                  total: 4.14s
                                                   remaining: 2.7s
605:
        learn: 0.7054685
                                  total: 4.15s
                                                   remaining: 2.7s
606:
        learn: 0.7045853
                                  total: 4.16s
                                                   remaining: 2.69s
607:
        learn: 0.7035041
                                  total: 4.16s
                                                   remaining: 2.68s
608:
        learn: 0.7023854
                                  total: 4.17s
                                                   remaining: 2.68s
609:
        learn: 0.7018078
                                  total: 4.18s
                                                   remaining: 2.67s
                                  total: 4.18s
610:
        learn: 0.7012112
                                                   remaining: 2.66s
611:
        learn: 0.7008526
                                  total: 4.19s
                                                   remaining: 2.66s
612:
        learn: 0.7002792
                                  total: 4.2s
                                                   remaining: 2.65s
613:
        learn: 0.6996143
                                  total: 4.21s
                                                   remaining: 2.64s
        learn: 0.6988841
                                  total: 4.21s
614:
                                                   remaining: 2.64s
615:
        learn: 0.6979603
                                  total: 4.22s
                                                   remaining: 2.63s
616:
        learn: 0.6975099
                                  total: 4.22s
                                                   remaining: 2.62s
617:
        learn: 0.6968753
                                  total: 4.22s
                                                   remaining: 2.61s
618:
        learn: 0.6959026
                                  total: 4.23s
                                                   remaining: 2.6s
619:
        learn: 0.6954430
                                  total: 4.24s
                                                   remaining: 2.6s
620:
        learn: 0.6945267
                                  total: 4.24s
                                                   remaining: 2.59s
                                  total: 4.25s
621:
        learn: 0.6936259
                                                   remaining: 2.58s
622:
        learn: 0.6929828
                                  total: 4.25s
                                                   remaining: 2.57s
623:
        learn: 0.6921114
                                  total: 4.26s
                                                   remaining: 2.57s
624:
        learn: 0.6914387
                                  total: 4.27s
                                                   remaining: 2.56s
625:
        learn: 0.6911443
                                  total: 4.27s
                                                   remaining: 2.55s
626:
        learn: 0.6906245
                                  total: 4.28s
                                                   remaining: 2.55s
627:
        learn: 0.6898682
                                  total: 4.29s
                                                   remaining: 2.54s
628:
        learn: 0.6890613
                                  total: 4.29s
                                                   remaining: 2.53s
629:
        learn: 0.6885438
                                  total: 4.3s
                                                   remaining: 2.53s
630:
        learn: 0.6875962
                                  total: 4.31s
                                                   remaining: 2.52s
631:
        learn: 0.6868858
                                  total: 4.32s
                                                   remaining: 2.51s
632:
        learn: 0.6854855
                                  total: 4.32s
                                                   remaining: 2.51s
        learn: 0.6848719
633:
                                  total: 4.33s
                                                   remaining: 2.5s
634:
        learn: 0.6841228
                                  total: 4.33s
                                                   remaining: 2.49s
635:
        learn: 0.6833064
                                  total: 4.34s
                                                   remaining: 2.48s
636:
        learn: 0.6826935
                                  total: 4.35s
                                                   remaining: 2.48s
637:
        learn: 0.6819003
                                  total: 4.35s
                                                   remaining: 2.47s
638:
        learn: 0.6806054
                                  total: 4.36s
                                                   remaining: 2.46s
639:
        learn: 0.6795897
                                  total: 4.37s
                                                   remaining: 2.46s
640:
        learn: 0.6790039
                                  total: 4.38s
                                                   remaining: 2.45s
641:
        learn: 0.6782863
                                  total: 4.38s
                                                   remaining: 2.44s
        learn: 0.6777212
642:
                                  total: 4.39s
                                                   remaining: 2.44s
643:
        learn: 0.6765526
                                  total: 4.4s
                                                   remaining: 2.43s
644:
        learn: 0.6757234
                                  total: 4.4s
                                                   remaining: 2.42s
645:
        learn: 0.6750677
                                  total: 4.41s
                                                   remaining: 2.42s
        learn: 0.6743947
646:
                                  total: 4.42s
                                                   remaining: 2.41s
647:
        learn: 0.6738690
                                  total: 4.42s
                                                   remaining: 2.4s
                                  total: 4.42s
648:
        learn: 0.6731951
                                                   remaining: 2.39s
649:
        learn: 0.6727369
                                  total: 4.43s
                                                   remaining: 2.38s
650:
        learn: 0.6721008
                                  total: 4.43s
                                                   remaining: 2.38s
651:
        learn: 0.6712385
                                  total: 4.44s
                                                   remaining: 2.37s
652:
        learn: 0.6705003
                                  total: 4.44s
                                                   remaining: 2.36s
653:
        learn: 0.6701098
                                  total: 4.45s
                                                   remaining: 2.35s
        learn: 0.6694339
654:
                                  total: 4.46s
                                                   remaining: 2.35s
655:
        learn: 0.6689068
                                  total: 4.46s
                                                   remaining: 2.34s
656:
        learn: 0.6685568
                                  total: 4.47s
                                                   remaining: 2.33s
                                  total: 4.47s
657:
        learn: 0.6677677
                                                   remaining: 2.33s
658:
        learn: 0.6671020
                                  total: 4.48s
                                                   remaining: 2.32s
```

```
659:
        learn: 0.6667929
                                  total: 4.49s
                                                   remaining: 2.31s
660:
        learn: 0.6661909
                                  total: 4.5s
                                                   remaining: 2.31s
661:
        learn: 0.6654596
                                  total: 4.5s
                                                   remaining: 2.3s
                                  total: 4.51s
        learn: 0.6645216
662:
                                                   remaining: 2.29s
663:
        learn: 0.6639043
                                  total: 4.52s
                                                   remaining: 2.29s
664:
        learn: 0.6630667
                                  total: 4.52s
                                                   remaining: 2.28s
665:
        learn: 0.6622997
                                  total: 4.53s
                                                   remaining: 2.27s
666:
        learn: 0.6615211
                                  total: 4.54s
                                                   remaining: 2.27s
                                                   remaining: 2.26s
667:
        learn: 0.6611437
                                  total: 4.54s
668:
        learn: 0.6603656
                                  total: 4.55s
                                                   remaining: 2.25s
669:
        learn: 0.6594038
                                  total: 4.56s
                                                   remaining: 2.24s
670:
        learn: 0.6588876
                                  total: 4.56s
                                                   remaining: 2.24s
671:
        learn: 0.6581030
                                  total: 4.57s
                                                   remaining: 2.23s
672:
        learn: 0.6573530
                                  total: 4.58s
                                                   remaining: 2.22s
673:
        learn: 0.6565632
                                  total: 4.58s
                                                   remaining: 2.22s
674:
        learn: 0.6560569
                                  total: 4.59s
                                                   remaining: 2.21s
675:
        learn: 0.6557140
                                  total: 4.6s
                                                   remaining: 2.2s
676:
        learn: 0.6552456
                                  total: 4.6s
                                                   remaining: 2.19s
677:
        learn: 0.6547172
                                  total: 4.61s
                                                   remaining: 2.19s
678:
        learn: 0.6540404
                                  total: 4.62s
                                                   remaining: 2.18s
679:
        learn: 0.6531051
                                  total: 4.62s
                                                   remaining: 2.17s
680:
        learn: 0.6523317
                                  total: 4.63s
                                                   remaining: 2.17s
681:
        learn: 0.6519651
                                  total: 4.63s
                                                   remaining: 2.16s
682:
        learn: 0.6517538
                                  total: 4.63s
                                                   remaining: 2.15s
683:
        learn: 0.6512165
                                  total: 4.64s
                                                   remaining: 2.14s
684:
        learn: 0.6506843
                                  total: 4.64s
                                                   remaining: 2.13s
685:
                                  total: 4.65s
        learn: 0.6501316
                                                   remaining: 2.13s
686:
        learn: 0.6493859
                                  total: 4.66s
                                                   remaining: 2.12s
687:
        learn: 0.6488956
                                  total: 4.66s
                                                   remaining: 2.11s
688:
        learn: 0.6483735
                                  total: 4.67s
                                                   remaining: 2.11s
689:
        learn: 0.6477651
                                  total: 4.68s
                                                   remaining: 2.1s
690:
        learn: 0.6467599
                                  total: 4.68s
                                                   remaining: 2.09s
691:
        learn: 0.6460176
                                  total: 4.69s
                                                   remaining: 2.09s
692:
        learn: 0.6451808
                                  total: 4.7s
                                                   remaining: 2.08s
        learn: 0.6444583
693:
                                  total: 4.71s
                                                   remaining: 2.08s
694:
        learn: 0.6437109
                                  total: 4.71s
                                                   remaining: 2.07s
695:
        learn: 0.6431605
                                  total: 4.72s
                                                   remaining: 2.06s
696:
        learn: 0.6426422
                                  total: 4.73s
                                                   remaining: 2.06s
697:
        learn: 0.6421408
                                  total: 4.74s
                                                   remaining: 2.05s
        learn: 0.6412992
698:
                                  total: 4.74s
                                                   remaining: 2.04s
699:
        learn: 0.6408266
                                  total: 4.75s
                                                   remaining: 2.04s
700:
        learn: 0.6403844
                                  total: 4.76s
                                                   remaining: 2.03s
701:
        learn: 0.6395603
                                  total: 4.76s
                                                   remaining: 2.02s
702:
        learn: 0.6389860
                                  total: 4.77s
                                                   remaining: 2.01s
703:
        learn: 0.6383426
                                  total: 4.78s
                                                   remaining: 2.01s
704:
        learn: 0.6377197
                                  total: 4.78s
                                                   remaining: 2s
705:
        learn: 0.6372729
                                  total: 4.79s
                                                   remaining: 1.99s
        learn: 0.6369431
                                                   remaining: 1.99s
706:
                                  total: 4.8s
707:
        learn: 0.6365085
                                  total: 4.8s
                                                   remaining: 1.98s
                                  total: 4.81s
708:
        learn: 0.6359127
                                                   remaining: 1.97s
709:
        learn: 0.6352080
                                  total: 4.82s
                                                   remaining: 1.97s
710:
        learn: 0.6345713
                                  total: 4.83s
                                                   remaining: 1.96s
711:
        learn: 0.6338955
                                  total: 4.83s
                                                   remaining: 1.95s
712:
        learn: 0.6331831
                                  total: 4.83s
                                                   remaining: 1.94s
713:
        learn: 0.6326181
                                  total: 4.83s
                                                   remaining: 1.94s
        learn: 0.6320549
714:
                                  total: 4.84s
                                                   remaining: 1.93s
715:
        learn: 0.6316457
                                  total: 4.84s
                                                   remaining: 1.92s
716:
        learn: 0.6310548
                                  total: 4.85s
                                                   remaining: 1.92s
717:
        learn: 0.6305186
                                  total: 4.86s
                                                   remaining: 1.91s
718:
        learn: 0.6301806
                                  total: 4.86s
                                                   remaining: 1.9s
```

```
719:
        learn: 0.6295941
                                  total: 4.87s
                                                   remaining: 1.89s
720:
        learn: 0.6289190
                                  total: 4.88s
                                                   remaining: 1.89s
721:
        learn: 0.6284934
                                  total: 4.88s
                                                   remaining: 1.88s
722:
        learn: 0.6275154
                                  total: 4.89s
                                                   remaining: 1.87s
723:
        learn: 0.6271282
                                  total: 4.9s
                                                   remaining: 1.87s
724:
        learn: 0.6265080
                                  total: 4.9s
                                                   remaining: 1.86s
725:
        learn: 0.6258133
                                  total: 4.91s
                                                   remaining: 1.85s
726:
        learn: 0.6251590
                                  total: 4.92s
                                                   remaining: 1.85s
727:
        learn: 0.6247231
                                  total: 4.92s
                                                   remaining: 1.84s
728:
        learn: 0.6243466
                                  total: 4.93s
                                                   remaining: 1.83s
729:
        learn: 0.6238710
                                  total: 4.94s
                                                   remaining: 1.83s
730:
        learn: 0.6235763
                                  total: 4.95s
                                                   remaining: 1.82s
731:
        learn: 0.6231336
                                  total: 4.95s
                                                   remaining: 1.81s
732:
        learn: 0.6225377
                                  total: 4.96s
                                                   remaining: 1.81s
733:
        learn: 0.6221286
                                  total: 4.97s
                                                   remaining: 1.8s
734:
        learn: 0.6217036
                                  total: 4.97s
                                                   remaining: 1.79s
735:
        learn: 0.6210429
                                  total: 4.98s
                                                   remaining: 1.79s
736:
        learn: 0.6204140
                                  total: 4.99s
                                                   remaining: 1.78s
737:
        learn: 0.6195760
                                  total: 5s
                                                   remaining: 1.77s
738:
        learn: 0.6192131
                                  total: 5s
                                                   remaining: 1.77s
739:
        learn: 0.6187658
                                  total: 5.01s
                                                   remaining: 1.76s
740:
        learn: 0.6183452
                                  total: 5.02s
                                                   remaining: 1.75s
                                  total: 5.02s
741:
        learn: 0.6176032
                                                   remaining: 1.75s
        learn: 0.6171867
742:
                                  total: 5.04s
                                                   remaining: 1.74s
743:
        learn: 0.6166010
                                  total: 5.04s
                                                   remaining: 1.74s
744:
        learn: 0.6161379
                                  total: 5.05s
                                                   remaining: 1.73s
745:
                                  total: 5.06s
        learn: 0.6154067
                                                   remaining: 1.72s
746:
        learn: 0.6147241
                                  total: 5.06s
                                                   remaining: 1.72s
747:
        learn: 0.6142797
                                  total: 5.07s
                                                   remaining: 1.71s
748:
        learn: 0.6137404
                                  total: 5.08s
                                                   remaining: 1.7s
749:
        learn: 0.6129811
                                  total: 5.08s
                                                   remaining: 1.69s
750:
        learn: 0.6124456
                                  total: 5.09s
                                                   remaining: 1.69s
751:
        learn: 0.6118078
                                  total: 5.1s
                                                   remaining: 1.68s
752:
        learn: 0.6113067
                                  total: 5.1s
                                                   remaining: 1.67s
753:
        learn: 0.6107259
                                  total: 5.11s
                                                   remaining: 1.67s
754:
        learn: 0.6101124
                                  total: 5.12s
                                                   remaining: 1.66s
755:
        learn: 0.6097874
                                  total: 5.12s
                                                   remaining: 1.65s
756:
        learn: 0.6091115
                                  total: 5.13s
                                                   remaining: 1.65s
757:
        learn: 0.6085945
                                  total: 5.14s
                                                   remaining: 1.64s
758:
        learn: 0.6083518
                                  total: 5.14s
                                                   remaining: 1.63s
759:
        learn: 0.6077890
                                  total: 5.15s
                                                   remaining: 1.63s
760:
        learn: 0.6073682
                                  total: 5.16s
                                                   remaining: 1.62s
        learn: 0.6070129
761:
                                  total: 5.17s
                                                   remaining: 1.61s
762:
        learn: 0.6065551
                                  total: 5.17s
                                                   remaining: 1.61s
763:
        learn: 0.6058847
                                  total: 5.18s
                                                   remaining: 1.6s
764:
        learn: 0.6052366
                                  total: 5.19s
                                                   remaining: 1.59s
765:
        learn: 0.6048426
                                  total: 5.2s
                                                   remaining: 1.59s
        learn: 0.6040747
766:
                                  total: 5.2s
                                                   remaining: 1.58s
                                  total: 5.21s
767:
        learn: 0.6035398
                                                   remaining: 1.57s
768:
        learn: 0.6029748
                                  total: 5.22s
                                                   remaining: 1.57s
769:
        learn: 0.6018860
                                  total: 5.22s
                                                   remaining: 1.56s
770:
        learn: 0.6012724
                                  total: 5.23s
                                                   remaining: 1.55s
771:
        learn: 0.6008916
                                  total: 5.24s
                                                   remaining: 1.55s
772:
                                  total: 5.24s
        learn: 0.6003237
                                                   remaining: 1.54s
773:
        learn: 0.5998078
                                  total: 5.24s
                                                   remaining: 1.53s
774:
        learn: 0.5994424
                                  total: 5.25s
                                                   remaining: 1.52s
775:
        learn: 0.5990777
                                  total: 5.25s
                                                   remaining: 1.52s
776:
        learn: 0.5984818
                                  total: 5.26s
                                                   remaining: 1.51s
                                  total: 5.27s
777:
        learn: 0.5981162
                                                   remaining: 1.5s
778:
        learn: 0.5975674
                                  total: 5.27s
                                                   remaining: 1.5s
```

```
779:
        learn: 0.5973080
                                  total: 5.28s
                                                   remaining: 1.49s
780:
        learn: 0.5966898
                                  total: 5.28s
                                                   remaining: 1.48s
781:
        learn: 0.5961590
                                  total: 5.29s
                                                   remaining: 1.47s
                                  total: 5.3s
782:
        learn: 0.5957466
                                                   remaining: 1.47s
783:
        learn: 0.5953251
                                  total: 5.3s
                                                   remaining: 1.46s
784:
        learn: 0.5950941
                                  total: 5.31s
                                                   remaining: 1.45s
785:
        learn: 0.5948907
                                  total: 5.32s
                                                   remaining: 1.45s
786:
        learn: 0.5941723
                                  total: 5.32s
                                                   remaining: 1.44s
787:
        learn: 0.5938586
                                  total: 5.33s
                                                   remaining: 1.43s
788:
        learn: 0.5935036
                                  total: 5.34s
                                                   remaining: 1.43s
789:
        learn: 0.5931742
                                  total: 5.35s
                                                   remaining: 1.42s
790:
        learn: 0.5928039
                                  total: 5.35s
                                                   remaining: 1.41s
791:
        learn: 0.5923711
                                  total: 5.36s
                                                   remaining: 1.41s
792:
        learn: 0.5916945
                                  total: 5.37s
                                                   remaining: 1.4s
793:
        learn: 0.5908305
                                  total: 5.37s
                                                   remaining: 1.39s
794:
        learn: 0.5901792
                                  total: 5.38s
                                                   remaining: 1.39s
795:
        learn: 0.5896703
                                  total: 5.39s
                                                   remaining: 1.38s
796:
        learn: 0.5889202
                                  total: 5.4s
                                                   remaining: 1.37s
797:
        learn: 0.5884095
                                  total: 5.4s
                                                   remaining: 1.37s
798:
        learn: 0.5876539
                                  total: 5.41s
                                                   remaining: 1.36s
799:
        learn: 0.5873346
                                  total: 5.42s
                                                   remaining: 1.35s
:008
        learn: 0.5865583
                                  total: 5.43s
                                                   remaining: 1.35s
                                  total: 5.43s
801:
        learn: 0.5859097
                                                   remaining: 1.34s
        learn: 0.5853295
802:
                                  total: 5.44s
                                                   remaining: 1.33s
803:
        learn: 0.5850831
                                  total: 5.44s
                                                   remaining: 1.33s
804:
        learn: 0.5844957
                                  total: 5.45s
                                                   remaining: 1.32s
805:
        learn: 0.5836993
                                  total: 5.45s
                                                   remaining: 1.31s
806:
        learn: 0.5833480
                                  total: 5.45s
                                                   remaining: 1.3s
807:
        learn: 0.5829842
                                  total: 5.46s
                                                   remaining: 1.3s
808:
        learn: 0.5827634
                                  total: 5.47s
                                                   remaining: 1.29s
809:
        learn: 0.5820705
                                  total: 5.47s
                                                   remaining: 1.28s
810:
        learn: 0.5816769
                                  total: 5.48s
                                                   remaining: 1.28s
811:
        learn: 0.5813584
                                  total: 5.49s
                                                   remaining: 1.27s
812:
        learn: 0.5809111
                                  total: 5.5s
                                                   remaining: 1.26s
        learn: 0.5806117
813:
                                  total: 5.5s
                                                   remaining: 1.26s
                                  total: 5.51s
814:
        learn: 0.5802256
                                                   remaining: 1.25s
815:
        learn: 0.5797977
                                  total: 5.52s
                                                   remaining: 1.24s
816:
        learn: 0.5794126
                                  total: 5.53s
                                                   remaining: 1.24s
817:
        learn: 0.5791385
                                  total: 5.53s
                                                   remaining: 1.23s
818:
        learn: 0.5786322
                                  total: 5.54s
                                                   remaining: 1.22s
        learn: 0.5780953
819:
                                  total: 5.55s
                                                   remaining: 1.22s
820:
        learn: 0.5777441
                                  total: 5.55s
                                                   remaining: 1.21s
        learn: 0.5773082
821:
                                  total: 5.56s
                                                   remaining: 1.2s
822:
        learn: 0.5768126
                                  total: 5.56s
                                                   remaining: 1.2s
823:
        learn: 0.5763078
                                  total: 5.57s
                                                   remaining: 1.19s
824:
        learn: 0.5758399
                                  total: 5.58s
                                                   remaining: 1.18s
825:
        learn: 0.5755649
                                  total: 5.58s
                                                   remaining: 1.18s
        learn: 0.5749066
826:
                                  total: 5.59s
                                                   remaining: 1.17s
                                  total: 5.6s
827:
        learn: 0.5746988
                                                   remaining: 1.16s
828:
        learn: 0.5742086
                                  total: 5.61s
                                                   remaining: 1.16s
829:
        learn: 0.5736722
                                  total: 5.61s
                                                   remaining: 1.15s
830:
        learn: 0.5732644
                                  total: 5.62s
                                                   remaining: 1.14s
831:
        learn: 0.5728123
                                  total: 5.63s
                                                   remaining: 1.14s
832:
        learn: 0.5725931
                                  total: 5.63s
                                                   remaining: 1.13s
833:
        learn: 0.5723285
                                  total: 5.64s
                                                   remaining: 1.12s
        learn: 0.5719015
834:
                                  total: 5.64s
                                                   remaining: 1.11s
835:
        learn: 0.5714738
                                  total: 5.64s
                                                   remaining: 1.11s
836:
        learn: 0.5711303
                                  total: 5.65s
                                                   remaining: 1.1s
                                  total: 5.66s
837:
        learn: 0.5707540
                                                   remaining: 1.09s
838:
        learn: 0.5701813
                                  total: 5.66s
                                                   remaining: 1.09s
```

```
839:
        learn: 0.5698733
                                  total: 5.67s
                                                   remaining: 1.08s
840:
        learn: 0.5694668
                                  total: 5.68s
                                                   remaining: 1.07s
841:
        learn: 0.5690629
                                  total: 5.68s
                                                   remaining: 1.07s
                                  total: 5.69s
842:
        learn: 0.5686695
                                                   remaining: 1.06s
843:
        learn: 0.5683024
                                  total: 5.7s
                                                   remaining: 1.05s
844:
        learn: 0.5676575
                                  total: 5.71s
                                                   remaining: 1.05s
845:
        learn: 0.5671748
                                  total: 5.71s
                                                   remaining: 1.04s
846:
        learn: 0.5669123
                                  total: 5.72s
                                                   remaining: 1.03s
847:
        learn: 0.5664781
                                  total: 5.73s
                                                   remaining: 1.03s
848:
        learn: 0.5659908
                                  total: 5.73s
                                                   remaining: 1.02s
849:
        learn: 0.5654149
                                  total: 5.74s
                                                   remaining: 1.01s
850:
        learn: 0.5650037
                                  total: 5.74s
                                                   remaining: 1s
851:
        learn: 0.5645850
                                  total: 5.74s
                                                   remaining: 998ms
852:
        learn: 0.5641256
                                  total: 5.75s
                                                   remaining: 991ms
853:
        learn: 0.5635845
                                  total: 5.75s
                                                   remaining: 984ms
        learn: 0.5630693
854:
                                  total: 5.76s
                                                   remaining: 976ms
                                  total: 5.76s
855:
        learn: 0.5624077
                                                   remaining: 969ms
856:
        learn: 0.5619086
                                  total: 5.77s
                                                   remaining: 963ms
                                  total: 5.78s
857:
        learn: 0.5615910
                                                   remaining: 956ms
858:
        learn: 0.5613332
                                  total: 5.78s
                                                   remaining: 950ms
859:
        learn: 0.5608889
                                  total: 5.79s
                                                   remaining: 943ms
860:
        learn: 0.5603956
                                  total: 5.8s
                                                   remaining: 936ms
                                  total: 5.81s
861:
        learn: 0.5596610
                                                   remaining: 930ms
862:
        learn: 0.5592728
                                  total: 5.81s
                                                   remaining: 923ms
863:
        learn: 0.5590131
                                  total: 5.82s
                                                   remaining: 917ms
864:
        learn: 0.5584801
                                  total: 5.83s
                                                   remaining: 909ms
865:
        learn: 0.5581975
                                  total: 5.83s
                                                   remaining: 902ms
866:
        learn: 0.5578498
                                  total: 5.83s
                                                   remaining: 895ms
867:
        learn: 0.5575635
                                  total: 5.84s
                                                   remaining: 888ms
868:
        learn: 0.5572494
                                  total: 5.84s
                                                   remaining: 881ms
869:
        learn: 0.5568147
                                  total: 5.85s
                                                   remaining: 874ms
870:
        learn: 0.5563724
                                  total: 5.85s
                                                   remaining: 867ms
871:
        learn: 0.5558975
                                  total: 5.86s
                                                   remaining: 860ms
872:
        learn: 0.5554436
                                  total: 5.86s
                                                   remaining: 853ms
873:
        learn: 0.5552065
                                  total: 5.87s
                                                   remaining: 846ms
874:
        learn: 0.5546680
                                  total: 5.87s
                                                   remaining: 839ms
875:
        learn: 0.5543911
                                  total: 5.88s
                                                   remaining: 833ms
876:
        learn: 0.5540137
                                  total: 5.89s
                                                   remaining: 826ms
877:
        learn: 0.5535997
                                  total: 5.9s
                                                   remaining: 819ms
878:
        learn: 0.5533835
                                  total: 5.9s
                                                   remaining: 813ms
879:
        learn: 0.5531124
                                  total: 5.91s
                                                   remaining: 806ms
880:
        learn: 0.5526506
                                  total: 5.92s
                                                   remaining: 799ms
        learn: 0.5522713
881:
                                  total: 5.92s
                                                   remaining: 792ms
882:
        learn: 0.5518840
                                  total: 5.93s
                                                   remaining: 786ms
883:
        learn: 0.5517249
                                  total: 5.94s
                                                   remaining: 779ms
884:
        learn: 0.5513504
                                  total: 5.94s
                                                   remaining: 772ms
885:
        learn: 0.5509459
                                  total: 5.95s
                                                   remaining: 766ms
                                                   remaining: 759ms
        learn: 0.5507456
886:
                                  total: 5.96s
                                  total: 5.96s
887:
        learn: 0.5503741
                                                   remaining: 752ms
888:
        learn: 0.5498883
                                  total: 5.97s
                                                   remaining: 746ms
889:
        learn: 0.5495512
                                  total: 5.98s
                                                   remaining: 739ms
890:
        learn: 0.5491173
                                  total: 5.99s
                                                   remaining: 732ms
891:
        learn: 0.5487491
                                  total: 5.99s
                                                   remaining: 725ms
892:
        learn: 0.5483960
                                  total: 6s
                                                   remaining: 719ms
893:
        learn: 0.5479955
                                  total: 6s
                                                   remaining: 712ms
        learn: 0.5475520
894:
                                  total: 6.01s
                                                   remaining: 705ms
                                                   remaining: 699ms
895:
        learn: 0.5472779
                                  total: 6.02s
                                  total: 6.03s
896:
        learn: 0.5468619
                                                   remaining: 692ms
897:
        learn: 0.5465334
                                  total: 6.03s
                                                   remaining: 685ms
898:
        learn: 0.5461718
                                  total: 6.03s
                                                   remaining: 678ms
```

```
899:
        learn: 0.5461018
                                  total: 6.04s
                                                   remaining: 671ms
900:
        learn: 0.5458967
                                  total: 6.04s
                                                   remaining: 664ms
901:
        learn: 0.5456497
                                  total: 6.04s
                                                   remaining: 657ms
                                  total: 6.05s
902:
        learn: 0.5453210
                                                   remaining: 650ms
903:
        learn: 0.5449468
                                  total: 6.05s
                                                   remaining: 643ms
904:
        learn: 0.5441867
                                  total: 6.06s
                                                   remaining: 637ms
905:
        learn: 0.5439683
                                  total: 6.07s
                                                   remaining: 630ms
906:
        learn: 0.5435447
                                  total: 6.08s
                                                   remaining: 623ms
907:
        learn: 0.5433049
                                  total: 6.08s
                                                   remaining: 616ms
908:
        learn: 0.5430305
                                  total: 6.09s
                                                   remaining: 609ms
909:
        learn: 0.5427496
                                  total: 6.09s
                                                   remaining: 603ms
910:
        learn: 0.5423026
                                  total: 6.1s
                                                   remaining: 596ms
911:
        learn: 0.5419261
                                  total: 6.11s
                                                   remaining: 590ms
912:
        learn: 0.5416393
                                  total: 6.12s
                                                   remaining: 583ms
913:
        learn: 0.5413771
                                  total: 6.12s
                                                   remaining: 576ms
        learn: 0.5411076
914:
                                  total: 6.13s
                                                   remaining: 570ms
915:
        learn: 0.5409099
                                  total: 6.14s
                                                   remaining: 563ms
916:
        learn: 0.5405803
                                  total: 6.14s
                                                   remaining: 556ms
917:
        learn: 0.5402941
                                  total: 6.15s
                                                   remaining: 550ms
918:
        learn: 0.5401393
                                  total: 6.16s
                                                   remaining: 543ms
919:
        learn: 0.5396364
                                  total: 6.17s
                                                   remaining: 536ms
920:
        learn: 0.5393633
                                  total: 6.17s
                                                   remaining: 530ms
                                  total: 6.18s
921:
        learn: 0.5388030
                                                   remaining: 523ms
922:
        learn: 0.5384043
                                  total: 6.19s
                                                   remaining: 516ms
923:
        learn: 0.5381346
                                  total: 6.2s
                                                   remaining: 510ms
924:
        learn: 0.5376398
                                  total: 6.21s
                                                   remaining: 503ms
925:
                                  total: 6.21s
        learn: 0.5374221
                                                   remaining: 496ms
926:
        learn: 0.5372626
                                  total: 6.22s
                                                   remaining: 490ms
927:
        learn: 0.5370387
                                  total: 6.22s
                                                   remaining: 483ms
928:
        learn: 0.5367642
                                  total: 6.23s
                                                   remaining: 476ms
929:
        learn: 0.5365625
                                  total: 6.23s
                                                   remaining: 469ms
930:
        learn: 0.5362947
                                  total: 6.23s
                                                   remaining: 462ms
931:
        learn: 0.5358194
                                  total: 6.24s
                                                   remaining: 455ms
932:
        learn: 0.5356769
                                  total: 6.24s
                                                   remaining: 448ms
        learn: 0.5353406
                                                   remaining: 442ms
933:
                                  total: 6.25s
934:
        learn: 0.5352449
                                  total: 6.26s
                                                   remaining: 435ms
935:
        learn: 0.5350025
                                  total: 6.26s
                                                   remaining: 428ms
936:
        learn: 0.5347764
                                  total: 6.27s
                                                   remaining: 422ms
937:
        learn: 0.5341777
                                  total: 6.28s
                                                   remaining: 415ms
938:
        learn: 0.5337108
                                  total: 6.29s
                                                   remaining: 408ms
939:
        learn: 0.5331836
                                  total: 6.29s
                                                   remaining: 402ms
940:
        learn: 0.5328663
                                  total: 6.3s
                                                   remaining: 395ms
941:
        learn: 0.5322751
                                  total: 6.31s
                                                   remaining: 388ms
942:
        learn: 0.5319029
                                  total: 6.31s
                                                   remaining: 382ms
943:
        learn: 0.5316143
                                  total: 6.32s
                                                   remaining: 375ms
944:
        learn: 0.5312319
                                  total: 6.33s
                                                   remaining: 368ms
945:
        learn: 0.5309117
                                  total: 6.34s
                                                   remaining: 362ms
        learn: 0.5305749
946:
                                  total: 6.34s
                                                   remaining: 355ms
947:
        learn: 0.5301842
                                  total: 6.35s
                                                   remaining: 348ms
948:
        learn: 0.5298056
                                  total: 6.36s
                                                   remaining: 342ms
949:
        learn: 0.5295974
                                  total: 6.37s
                                                   remaining: 335ms
950:
        learn: 0.5293861
                                  total: 6.37s
                                                   remaining: 328ms
951:
        learn: 0.5290328
                                  total: 6.38s
                                                   remaining: 322ms
952:
        learn: 0.5287135
                                  total: 6.39s
                                                   remaining: 315ms
953:
        learn: 0.5283412
                                  total: 6.39s
                                                   remaining: 308ms
        learn: 0.5281978
954:
                                  total: 6.4s
                                                   remaining: 302ms
955:
        learn: 0.5280200
                                  total: 6.41s
                                                   remaining: 295ms
956:
                                  total: 6.41s
        learn: 0.5275841
                                                   remaining: 288ms
957:
        learn: 0.5272488
                                  total: 6.42s
                                                   remaining: 282ms
958:
        learn: 0.5269324
                                  total: 6.43s
                                                   remaining: 275ms
```

```
959:
        learn: 0.5266251
                                  total: 6.43s
                                                   remaining: 268ms
960:
        learn: 0.5263626
                                  total: 6.44s
                                                   remaining: 261ms
961:
        learn: 0.5259621
                                  total: 6.44s
                                                   remaining: 254ms
                                  total: 6.44s
        learn: 0.5256021
962:
                                                   remaining: 248ms
963:
        learn: 0.5253681
                                  total: 6.45s
                                                   remaining: 241ms
964:
        learn: 0.5251266
                                  total: 6.46s
                                                   remaining: 234ms
965:
        learn: 0.5248665
                                  total: 6.46s
                                                   remaining: 227ms
966:
        learn: 0.5246052
                                  total: 6.47s
                                                   remaining: 221ms
967:
        learn: 0.5242567
                                  total: 6.48s
                                                   remaining: 214ms
968:
        learn: 0.5239200
                                  total: 6.49s
                                                   remaining: 207ms
                                  total: 6.49s
969:
        learn: 0.5237582
                                                   remaining: 201ms
970:
        learn: 0.5234004
                                  total: 6.5s
                                                   remaining: 194ms
971:
        learn: 0.5233355
                                  total: 6.5s
                                                   remaining: 187ms
972:
        learn: 0.5230380
                                  total: 6.51s
                                                   remaining: 181ms
973:
        learn: 0.5228847
                                  total: 6.52s
                                                   remaining: 174ms
974:
        learn: 0.5225666
                                  total: 6.53s
                                                   remaining: 167ms
975:
        learn: 0.5220526
                                  total: 6.53s
                                                   remaining: 161ms
976:
        learn: 0.5218680
                                  total: 6.54s
                                                   remaining: 154ms
977:
        learn: 0.5218465
                                  total: 6.55s
                                                   remaining: 147ms
978:
        learn: 0.5214841
                                  total: 6.55s
                                                   remaining: 141ms
979:
        learn: 0.5209654
                                  total: 6.56s
                                                   remaining: 134ms
980:
        learn: 0.5206393
                                  total: 6.57s
                                                   remaining: 127ms
981:
        learn: 0.5203879
                                  total: 6.57s
                                                   remaining: 121ms
982:
        learn: 0.5196465
                                  total: 6.58s
                                                   remaining: 114ms
983:
        learn: 0.5194538
                                  total: 6.59s
                                                   remaining: 107ms
                                  total: 6.59s
984:
        learn: 0.5192462
                                                   remaining: 100ms
985:
                                  total: 6.6s
        learn: 0.5189286
                                                   remaining: 93.8ms
986:
        learn: 0.5185438
                                  total: 6.61s
                                                   remaining: 87.1ms
987:
        learn: 0.5183335
                                  total: 6.62s
                                                   remaining: 80.4ms
988:
        learn: 0.5179112
                                  total: 6.63s
                                                   remaining: 73.7ms
                                                   remaining: 67ms
989:
        learn: 0.5176453
                                  total: 6.63s
990:
        learn: 0.5173624
                                  total: 6.63s
                                                   remaining: 60.2ms
991:
        learn: 0.5169905
                                  total: 6.63s
                                                   remaining: 53.5ms
992:
        learn: 0.5167311
                                  total: 6.64s
                                                   remaining: 46.8ms
        learn: 0.5166663
993:
                                  total: 6.65s
                                                   remaining: 40.1ms
994:
        learn: 0.5164243
                                  total: 6.65s
                                                   remaining: 33.4ms
        learn: 0.5160713
995:
                                  total: 6.66s
                                                   remaining: 26.7ms
996:
        learn: 0.5157459
                                  total: 6.67s
                                                   remaining: 20.1ms
997:
        learn: 0.5155377
                                  total: 6.67s
                                                   remaining: 13.4ms
998:
        learn: 0.5153525
                                  total: 6.67s
                                                   remaining: 6.68ms
999:
        learn: 0.5151160
                                  total: 6.68s
                                                   remaining: Ous
Learning rate set to 0.06063
0:
        learn: 58.7160134
                                  total: 9.68ms
                                                   remaining: 9.67s
1:
        learn: 55.5512682
                                  total: 18.1ms
                                                   remaining: 9.03s
2:
        learn: 52.4990118
                                  total: 27.7ms
                                                   remaining: 9.22s
3:
        learn: 49.6636889
                                  total: 35.3ms
                                                   remaining: 8.8s
4:
        learn: 47.0242496
                                  total: 42.9ms
                                                   remaining: 8.53s
5:
        learn: 44.5214480
                                  total: 53.5ms
                                                   remaining: 8.87s
6:
        learn: 42.1710346
                                  total: 61ms
                                                   remaining: 8.65s
7:
        learn: 40.0499556
                                  total: 70.4ms
                                                   remaining: 8.73s
8:
        learn: 37.9575505
                                  total: 77ms
                                                   remaining: 8.48s
9:
        learn: 35.9238749
                                  total: 84.4ms
                                                   remaining: 8.36s
10:
        learn: 34.1060066
                                  total: 91.7ms
                                                   remaining: 8.24s
11:
        learn: 32.3523182
                                  total: 98.5ms
                                                   remaining: 8.11s
12:
        learn: 30.6888130
                                  total: 106ms
                                                   remaining: 8.02s
13:
        learn: 29.1144866
                                  total: 113ms
                                                   remaining: 7.99s
14:
        learn: 27.6657385
                                  total: 121ms
                                                   remaining: 7.93s
15:
        learn: 26.2436041
                                  total: 128ms
                                                   remaining: 7.87s
16:
        learn: 24.8942226
                                  total: 135ms
                                                   remaining: 7.81s
17:
        learn: 23.6841270
                                  total: 143ms
                                                   remaining: 7.79s
```

```
18:
        learn: 22.5450760
                                  total: 150ms
                                                   remaining: 7.75s
19:
        learn: 21.5098007
                                  total: 157ms
                                                   remaining: 7.71s
20:
        learn: 20.4676672
                                  total: 164ms
                                                   remaining: 7.67s
21:
        learn: 19.4744547
                                  total: 170ms
                                                   remaining: 7.58s
22:
        learn: 18.5641531
                                  total: 176ms
                                                   remaining: 7.49s
23:
        learn: 17.6792443
                                  total: 184ms
                                                   remaining: 7.46s
24:
        learn: 16.8779950
                                  total: 190ms
                                                   remaining: 7.4s
25:
        learn: 16.0726542
                                  total: 198ms
                                                   remaining: 7.4s
26:
        learn: 15.3615756
                                  total: 204ms
                                                   remaining: 7.34s
27:
        learn: 14.6769128
                                  total: 207ms
                                                   remaining: 7.18s
                                  total: 210ms
28:
        learn: 14.0340077
                                                   remaining: 7.03s
29:
        learn: 13.4286262
                                  total: 213ms
                                                   remaining: 6.9s
30:
        learn: 12.8401527
                                  total: 218ms
                                                   remaining: 6.83s
31:
        learn: 12.2992209
                                  total: 224ms
                                                   remaining: 6.78s
32:
        learn: 11.7928777
                                  total: 231ms
                                                   remaining: 6.77s
        learn: 11.3062799
                                  total: 236ms
33:
                                                   remaining: 6.7s
34:
        learn: 10.8450959
                                  total: 243ms
                                                   remaining: 6.69s
35:
        learn: 10.4207950
                                  total: 250ms
                                                   remaining: 6.7s
36:
        learn: 10.0011647
                                  total: 256ms
                                                   remaining: 6.66s
        learn: 9.6267219
37:
                                  total: 263ms
                                                   remaining: 6.65s
38:
        learn: 9.2641006
                                  total: 269ms
                                                   remaining: 6.62s
39:
        learn: 8.9102772
                                  total: 272ms
                                                   remaining: 6.54s
40:
        learn: 8.5994858
                                  total: 279ms
                                                   remaining: 6.53s
41:
        learn: 8.3036267
                                  total: 285ms
                                                   remaining: 6.51s
42:
        learn: 8.0353842
                                  total: 293ms
                                                   remaining: 6.52s
        learn: 7.7748727
                                  total: 298ms
43:
                                                   remaining: 6.48s
44:
                                  total: 305ms
        learn: 7.5059727
                                                   remaining: 6.48s
        learn: 7.2614885
45:
                                  total: 313ms
                                                   remaining: 6.49s
        learn: 7.0251295
                                  total: 320ms
46:
                                                   remaining: 6.48s
47:
        learn: 6.8043881
                                  total: 327ms
                                                   remaining: 6.48s
48:
        learn: 6.6019716
                                  total: 334ms
                                                   remaining: 6.48s
49:
        learn: 6.4264098
                                  total: 341ms
                                                   remaining: 6.48s
50:
        learn: 6.2652096
                                  total: 348ms
                                                   remaining: 6.48s
51:
        learn: 6.0966321
                                  total: 355ms
                                                   remaining: 6.48s
52:
        learn: 5.9343653
                                  total: 363ms
                                                   remaining: 6.49s
53:
        learn: 5.7797088
                                  total: 370ms
                                                   remaining: 6.49s
54:
        learn: 5.6297021
                                  total: 378ms
                                                   remaining: 6.5s
55:
        learn: 5.4814290
                                  total: 386ms
                                                   remaining: 6.5s
56:
        learn: 5.3408164
                                  total: 393ms
                                                   remaining: 6.5s
57:
        learn: 5.2301801
                                  total: 396ms
                                                   remaining: 6.43s
58:
        learn: 5.1160486
                                  total: 399ms
                                                   remaining: 6.37s
59:
        learn: 4.9996957
                                  total: 403ms
                                                   remaining: 6.31s
        learn: 4.8925186
60:
                                  total: 407ms
                                                   remaining: 6.26s
61:
        learn: 4.7915525
                                  total: 411ms
                                                   remaining: 6.22s
62:
        learn: 4.6965611
                                  total: 418ms
                                                   remaining: 6.22s
63:
        learn: 4.6089317
                                  total: 425ms
                                                   remaining: 6.21s
64:
        learn: 4.5139212
                                  total: 432ms
                                                   remaining: 6.21s
        learn: 4.4389426
                                  total: 438ms
65:
                                                   remaining: 6.2s
66:
        learn: 4.3526604
                                  total: 443ms
                                                   remaining: 6.17s
67:
        learn: 4.2778722
                                  total: 450ms
                                                   remaining: 6.17s
68:
        learn: 4.2084292
                                  total: 457ms
                                                   remaining: 6.16s
69:
        learn: 4.1484718
                                  total: 464ms
                                                   remaining: 6.16s
70:
        learn: 4.0884235
                                  total: 471ms
                                                   remaining: 6.16s
71:
        learn: 4.0160313
                                  total: 478ms
                                                   remaining: 6.17s
72:
        learn: 3.9496806
                                  total: 486ms
                                                   remaining: 6.17s
73:
        learn: 3.8995120
                                  total: 491ms
                                                   remaining: 6.15s
74:
        learn: 3.8394524
                                  total: 498ms
                                                   remaining: 6.14s
75:
        learn: 3.7937117
                                  total: 506ms
                                                   remaining: 6.15s
76:
        learn: 3.7366216
                                  total: 514ms
                                                   remaining: 6.16s
77:
        learn: 3.6943711
                                  total: 521ms
                                                   remaining: 6.16s
```

```
78:
        learn: 3.6421539
                                  total: 529ms
                                                   remaining: 6.17s
79:
        learn: 3.6019041
                                  total: 536ms
                                                   remaining: 6.17s
:08
        learn: 3.5649567
                                  total: 544ms
                                                   remaining: 6.17s
                                  total: 550ms
81:
        learn: 3.5262322
                                                   remaining: 6.15s
82:
        learn: 3.4890750
                                  total: 557ms
                                                   remaining: 6.16s
83:
        learn: 3.4535907
                                  total: 565ms
                                                   remaining: 6.16s
84:
        learn: 3.4160918
                                  total: 572ms
                                                   remaining: 6.16s
85:
        learn: 3.3876875
                                  total: 580ms
                                                   remaining: 6.16s
86:
        learn: 3.3553493
                                  total: 587ms
                                                   remaining: 6.16s
87:
        learn: 3.3245037
                                  total: 596ms
                                                   remaining: 6.18s
88:
        learn: 3.2866050
                                  total: 599ms
                                                   remaining: 6.13s
89:
        learn: 3.2562701
                                  total: 603ms
                                                   remaining: 6.09s
90:
        learn: 3.2298574
                                  total: 606ms
                                                   remaining: 6.05s
91:
        learn: 3.1966350
                                  total: 610ms
                                                   remaining: 6.02s
        learn: 3.1627202
92:
                                  total: 614ms
                                                   remaining: 5.98s
        learn: 3.1324576
93:
                                  total: 621ms
                                                   remaining: 5.98s
94:
        learn: 3.1114330
                                  total: 628ms
                                                   remaining: 5.98s
95:
        learn: 3.0900013
                                  total: 633ms
                                                   remaining: 5.96s
96:
        learn: 3.0620757
                                  total: 640ms
                                                   remaining: 5.95s
        learn: 3.0341605
97:
                                  total: 646ms
                                                   remaining: 5.94s
98:
        learn: 3.0067568
                                  total: 653ms
                                                   remaining: 5.94s
99:
        learn: 2.9832280
                                  total: 660ms
                                                   remaining: 5.94s
100:
        learn: 2.9693483
                                  total: 665ms
                                                   remaining: 5.92s
101:
        learn: 2.9488559
                                  total: 672ms
                                                   remaining: 5.92s
102:
        learn: 2.9337318
                                  total: 679ms
                                                   remaining: 5.91s
103:
        learn: 2.9069430
                                  total: 686ms
                                                   remaining: 5.91s
        learn: 2.8843332
104:
                                  total: 692ms
                                                   remaining: 5.9s
105:
        learn: 2.8598864
                                  total: 700ms
                                                   remaining: 5.9s
        learn: 2.8458013
                                  total: 706ms
106:
                                                   remaining: 5.89s
107:
        learn: 2.8289037
                                  total: 713ms
                                                   remaining: 5.89s
108:
        learn: 2.8127109
                                  total: 720ms
                                                   remaining: 5.89s
109:
        learn: 2.7978317
                                  total: 727ms
                                                   remaining: 5.88s
110:
        learn: 2.7813056
                                  total: 734ms
                                                   remaining: 5.88s
111:
        learn: 2.7520911
                                  total: 740ms
                                                   remaining: 5.87s
112:
        learn: 2.7355728
                                  total: 747ms
                                                   remaining: 5.86s
113:
        learn: 2.7153475
                                  total: 755ms
                                                   remaining: 5.87s
114:
        learn: 2.6940882
                                  total: 762ms
                                                   remaining: 5.87s
115:
        learn: 2.6788657
                                  total: 770ms
                                                   remaining: 5.87s
                                  total: 777ms
116:
        learn: 2.6631170
                                                   remaining: 5.86s
117:
        learn: 2.6499215
                                  total: 784ms
                                                   remaining: 5.86s
118:
        learn: 2.6387879
                                  total: 793ms
                                                   remaining: 5.87s
119:
        learn: 2.6146179
                                  total: 801ms
                                                   remaining: 5.87s
120:
        learn: 2.6007127
                                  total: 808ms
                                                   remaining: 5.87s
121:
        learn: 2.5831468
                                  total: 812ms
                                                   remaining: 5.84s
122:
        learn: 2.5644595
                                  total: 816ms
                                                   remaining: 5.82s
123:
        learn: 2.5536307
                                  total: 820ms
                                                   remaining: 5.79s
124:
        learn: 2.5333703
                                  total: 824ms
                                                   remaining: 5.77s
125:
        learn: 2.5090780
                                  total: 832ms
                                                   remaining: 5.77s
126:
        learn: 2.4884815
                                  total: 836ms
                                                   remaining: 5.75s
127:
                                  total: 843ms
        learn: 2.4751356
                                                   remaining: 5.74s
128:
        learn: 2.4616025
                                  total: 849ms
                                                   remaining: 5.73s
129:
        learn: 2.4449298
                                  total: 853ms
                                                   remaining: 5.71s
130:
        learn: 2.4311603
                                  total: 861ms
                                                   remaining: 5.71s
131:
        learn: 2.4138008
                                  total: 868ms
                                                   remaining: 5.71s
132:
        learn: 2.3948674
                                  total: 873ms
                                                   remaining: 5.69s
133:
        learn: 2.3802167
                                  total: 879ms
                                                   remaining: 5.68s
134:
        learn: 2.3663460
                                  total: 886ms
                                                   remaining: 5.68s
135:
        learn: 2.3517790
                                  total: 892ms
                                                   remaining: 5.67s
136:
        learn: 2.3355062
                                  total: 899ms
                                                   remaining: 5.66s
137:
        learn: 2.3226767
                                  total: 906ms
                                                   remaining: 5.66s
```

```
138:
        learn: 2.3070260
                                  total: 913ms
                                                   remaining: 5.66s
139:
        learn: 2.2942459
                                  total: 920ms
                                                   remaining: 5.65s
140:
        learn: 2.2843243
                                  total: 927ms
                                                   remaining: 5.65s
                                  total: 934ms
141:
        learn: 2.2673277
                                                   remaining: 5.64s
142:
        learn: 2.2510392
                                  total: 940ms
                                                   remaining: 5.63s
143:
        learn: 2.2356408
                                  total: 947ms
                                                   remaining: 5.63s
144:
        learn: 2.2263143
                                  total: 954ms
                                                   remaining: 5.63s
145:
        learn: 2.2151053
                                  total: 961ms
                                                   remaining: 5.62s
146:
        learn: 2.2020506
                                  total: 968ms
                                                   remaining: 5.62s
147:
        learn: 2.1879985
                                  total: 975ms
                                                   remaining: 5.61s
148:
        learn: 2.1804567
                                  total: 982ms
                                                   remaining: 5.61s
149:
        learn: 2.1706069
                                  total: 987ms
                                                   remaining: 5.59s
150:
        learn: 2.1606709
                                  total: 994ms
                                                   remaining: 5.59s
151:
        learn: 2.1466771
                                  total: 1s
                                                   remaining: 5.6s
152:
        learn: 2.1344019
                                  total: 1.01s
                                                   remaining: 5.62s
        learn: 2.1254475
153:
                                  total: 1.02s
                                                   remaining: 5.62s
154:
        learn: 2.1139600
                                  total: 1.03s
                                                   remaining: 5.61s
155:
        learn: 2.1046397
                                  total: 1.03s
                                                   remaining: 5.6s
156:
        learn: 2.0900703
                                  total: 1.04s
                                                   remaining: 5.59s
        learn: 2.0819407
157:
                                  total: 1.05s
                                                   remaining: 5.59s
158:
        learn: 2.0710260
                                  total: 1.05s
                                                   remaining: 5.58s
159:
        learn: 2.0604672
                                  total: 1.06s
                                                   remaining: 5.58s
                                  total: 1.07s
160:
        learn: 2.0486338
                                                   remaining: 5.57s
161:
        learn: 2.0415363
                                  total: 1.07s
                                                   remaining: 5.56s
162:
        learn: 2.0308524
                                  total: 1.08s
                                                   remaining: 5.56s
163:
        learn: 2.0240488
                                  total: 1.09s
                                                   remaining: 5.55s
164:
        learn: 2.0155333
                                  total: 1.1s
                                                   remaining: 5.55s
165:
        learn: 2.0060564
                                  total: 1.1s
                                                   remaining: 5.54s
                                  total: 1.11s
166:
        learn: 1.9983306
                                                   remaining: 5.53s
167:
        learn: 1.9881352
                                  total: 1.12s
                                                   remaining: 5.53s
168:
        learn: 1.9784280
                                  total: 1.12s
                                                   remaining: 5.52s
169:
        learn: 1.9727684
                                  total: 1.13s
                                                   remaining: 5.52s
170:
        learn: 1.9662112
                                  total: 1.14s
                                                   remaining: 5.51s
171:
        learn: 1.9530647
                                  total: 1.14s
                                                   remaining: 5.51s
172:
        learn: 1.9426364
                                  total: 1.15s
                                                   remaining: 5.5s
173:
        learn: 1.9347032
                                  total: 1.16s
                                                   remaining: 5.5s
174:
        learn: 1.9209630
                                  total: 1.16s
                                                   remaining: 5.49s
175:
        learn: 1.9147477
                                  total: 1.17s
                                                   remaining: 5.47s
176:
        learn: 1.9060092
                                  total: 1.18s
                                                   remaining: 5.47s
177:
        learn: 1.8962625
                                  total: 1.18s
                                                   remaining: 5.46s
178:
        learn: 1.8894895
                                  total: 1.19s
                                                   remaining: 5.45s
179:
        learn: 1.8815477
                                  total: 1.2s
                                                   remaining: 5.45s
180:
        learn: 1.8740803
                                  total: 1.2s
                                                   remaining: 5.43s
181:
        learn: 1.8676282
                                  total: 1.2s
                                                   remaining: 5.41s
182:
        learn: 1.8555800
                                  total: 1.21s
                                                   remaining: 5.38s
183:
        learn: 1.8489453
                                  total: 1.21s
                                                   remaining: 5.36s
184:
        learn: 1.8435230
                                  total: 1.21s
                                                   remaining: 5.34s
185:
        learn: 1.8344475
                                  total: 1.22s
                                                   remaining: 5.34s
186:
        learn: 1.8279593
                                  total: 1.23s
                                                   remaining: 5.33s
                                  total: 1.23s
187:
        learn: 1.8197718
                                                   remaining: 5.31s
188:
        learn: 1.8123888
                                  total: 1.24s
                                                   remaining: 5.31s
189:
        learn: 1.8024603
                                  total: 1.24s
                                                   remaining: 5.3s
190:
        learn: 1.7961214
                                  total: 1.25s
                                                   remaining: 5.29s
191:
        learn: 1.7882568
                                  total: 1.26s
                                                   remaining: 5.29s
192:
        learn: 1.7788528
                                  total: 1.26s
                                                   remaining: 5.29s
193:
        learn: 1.7733181
                                  total: 1.27s
                                                   remaining: 5.28s
194:
        learn: 1.7634391
                                  total: 1.27s
                                                   remaining: 5.26s
195:
        learn: 1.7548821
                                  total: 1.28s
                                                   remaining: 5.26s
196:
        learn: 1.7496744
                                  total: 1.29s
                                                   remaining: 5.25s
197:
        learn: 1.7417509
                                  total: 1.29s
                                                   remaining: 5.25s
```

```
198:
        learn: 1.7339922
                                  total: 1.3s
                                                   remaining: 5.24s
199:
        learn: 1.7281487
                                  total: 1.31s
                                                   remaining: 5.24s
200:
        learn: 1.7185164
                                  total: 1.31s
                                                   remaining: 5.23s
                                  total: 1.32s
201:
        learn: 1.7112126
                                                   remaining: 5.22s
202:
        learn: 1.7057215
                                  total: 1.33s
                                                   remaining: 5.22s
203:
        learn: 1.6997452
                                  total: 1.33s
                                                   remaining: 5.21s
204:
        learn: 1.6948021
                                  total: 1.34s
                                                   remaining: 5.21s
205:
        learn: 1.6850016
                                  total: 1.35s
                                                   remaining: 5.2s
206:
        learn: 1.6802046
                                  total: 1.35s
                                                   remaining: 5.19s
207:
        learn: 1.6750259
                                  total: 1.36s
                                                   remaining: 5.19s
208:
        learn: 1.6691069
                                  total: 1.37s
                                                   remaining: 5.18s
209:
        learn: 1.6634494
                                  total: 1.37s
                                                   remaining: 5.17s
210:
        learn: 1.6570008
                                  total: 1.38s
                                                   remaining: 5.17s
211:
        learn: 1.6518251
                                  total: 1.39s
                                                   remaining: 5.15s
212:
        learn: 1.6447752
                                  total: 1.39s
                                                   remaining: 5.13s
213:
        learn: 1.6383350
                                  total: 1.39s
                                                   remaining: 5.12s
214:
        learn: 1.6279532
                                  total: 1.4s
                                                   remaining: 5.11s
215:
        learn: 1.6224816
                                  total: 1.41s
                                                   remaining: 5.11s
        learn: 1.6172837
                                  total: 1.41s
216:
                                                   remaining: 5.1s
217:
        learn: 1.6081850
                                  total: 1.42s
                                                   remaining: 5.08s
218:
        learn: 1.6030454
                                  total: 1.42s
                                                   remaining: 5.07s
219:
        learn: 1.5983960
                                  total: 1.42s
                                                   remaining: 5.05s
220:
        learn: 1.5932949
                                  total: 1.43s
                                                   remaining: 5.03s
221:
        learn: 1.5896778
                                  total: 1.43s
                                                   remaining: 5.02s
222:
        learn: 1.5847317
                                  total: 1.44s
                                                   remaining: 5.01s
223:
        learn: 1.5792380
                                  total: 1.44s
                                                   remaining: 5s
224:
                                  total: 1.45s
        learn: 1.5745269
                                                   remaining: 4.99s
225:
        learn: 1.5670286
                                  total: 1.45s
                                                   remaining: 4.98s
        learn: 1.5620841
226:
                                  total: 1.46s
                                                   remaining: 4.98s
227:
        learn: 1.5570296
                                  total: 1.47s
                                                   remaining: 4.97s
228:
        learn: 1.5518116
                                  total: 1.48s
                                                   remaining: 4.97s
229:
        learn: 1.5441482
                                  total: 1.48s
                                                   remaining: 4.96s
230:
        learn: 1.5383406
                                  total: 1.49s
                                                   remaining: 4.96s
231:
        learn: 1.5331626
                                  total: 1.5s
                                                   remaining: 4.96s
232:
        learn: 1.5266774
                                  total: 1.5s
                                                   remaining: 4.95s
233:
        learn: 1.5204734
                                  total: 1.51s
                                                   remaining: 4.95s
234:
        learn: 1.5174497
                                  total: 1.52s
                                                   remaining: 4.94s
235:
        learn: 1.5112829
                                  total: 1.52s
                                                   remaining: 4.93s
236:
        learn: 1.5069466
                                  total: 1.53s
                                                   remaining: 4.93s
237:
        learn: 1.5021843
                                  total: 1.54s
                                                   remaining: 4.92s
238:
        learn: 1.4946917
                                  total: 1.54s
                                                   remaining: 4.92s
239:
        learn: 1.4899527
                                  total: 1.55s
                                                   remaining: 4.92s
240:
        learn: 1.4845387
                                  total: 1.56s
                                                   remaining: 4.91s
241:
        learn: 1.4802614
                                  total: 1.57s
                                                   remaining: 4.91s
242:
        learn: 1.4761652
                                  total: 1.57s
                                                   remaining: 4.9s
243:
        learn: 1.4723172
                                  total: 1.58s
                                                   remaining: 4.9s
244:
        learn: 1.4646710
                                  total: 1.59s
                                                   remaining: 4.89s
245:
        learn: 1.4602218
                                  total: 1.59s
                                                   remaining: 4.88s
        learn: 1.4548111
246:
                                  total: 1.6s
                                                   remaining: 4.88s
        learn: 1.4488472
247:
                                  total: 1.61s
                                                   remaining: 4.87s
248:
        learn: 1.4446716
                                  total: 1.61s
                                                   remaining: 4.87s
249:
        learn: 1.4397955
                                  total: 1.62s
                                                   remaining: 4.87s
250:
        learn: 1.4359989
                                  total: 1.63s
                                                   remaining: 4.85s
251:
        learn: 1.4328223
                                  total: 1.63s
                                                   remaining: 4.83s
252:
        learn: 1.4250103
                                  total: 1.63s
                                                   remaining: 4.82s
253:
        learn: 1.4208799
                                  total: 1.64s
                                                   remaining: 4.81s
254:
        learn: 1.4182713
                                  total: 1.64s
                                                   remaining: 4.8s
255:
        learn: 1.4132096
                                  total: 1.65s
                                                   remaining: 4.8s
                                                   remaining: 4.79s
256:
        learn: 1.4098753
                                  total: 1.66s
257:
        learn: 1.4051336
                                  total: 1.66s
                                                   remaining: 4.78s
```

```
258:
        learn: 1.3981487
                                  total: 1.67s
                                                   remaining: 4.78s
259:
        learn: 1.3937053
                                  total: 1.67s
                                                   remaining: 4.77s
260:
        learn: 1.3893492
                                  total: 1.68s
                                                   remaining: 4.76s
261:
        learn: 1.3838097
                                  total: 1.69s
                                                   remaining: 4.75s
262:
        learn: 1.3790761
                                  total: 1.7s
                                                   remaining: 4.75s
263:
        learn: 1.3732696
                                  total: 1.7s
                                                   remaining: 4.74s
264:
        learn: 1.3676152
                                  total: 1.71s
                                                   remaining: 4.74s
265:
        learn: 1.3640041
                                  total: 1.72s
                                                   remaining: 4.73s
266:
        learn: 1.3607656
                                  total: 1.72s
                                                   remaining: 4.73s
267:
        learn: 1.3574813
                                  total: 1.73s
                                                   remaining: 4.72s
268:
        learn: 1.3539522
                                  total: 1.73s
                                                   remaining: 4.71s
269:
        learn: 1.3485688
                                  total: 1.74s
                                                   remaining: 4.71s
270:
        learn: 1.3434407
                                  total: 1.75s
                                                   remaining: 4.7s
271:
        learn: 1.3406181
                                  total: 1.76s
                                                   remaining: 4.7s
272:
        learn: 1.3374147
                                  total: 1.76s
                                                   remaining: 4.69s
                                  total: 1.77s
        learn: 1.3337530
273:
                                                   remaining: 4.69s
274:
        learn: 1.3300232
                                  total: 1.78s
                                                   remaining: 4.69s
275:
        learn: 1.3257811
                                  total: 1.78s
                                                   remaining: 4.68s
276:
        learn: 1.3212461
                                  total: 1.79s
                                                   remaining: 4.68s
277:
        learn: 1.3175519
                                  total: 1.8s
                                                   remaining: 4.67s
278:
        learn: 1.3137598
                                  total: 1.81s
                                                   remaining: 4.67s
279:
        learn: 1.3101931
                                  total: 1.81s
                                                   remaining: 4.66s
280:
        learn: 1.3060149
                                  total: 1.82s
                                                   remaining: 4.66s
281:
        learn: 1.3020355
                                  total: 1.83s
                                                   remaining: 4.65s
282:
        learn: 1.2992934
                                  total: 1.83s
                                                   remaining: 4.64s
        learn: 1.2965461
                                  total: 1.83s
283:
                                                   remaining: 4.63s
284:
        learn: 1.2945561
                                  total: 1.84s
                                                   remaining: 4.61s
285:
        learn: 1.2914318
                                  total: 1.84s
                                                   remaining: 4.6s
                                  total: 1.85s
        learn: 1.2873251
286:
                                                   remaining: 4.59s
287:
        learn: 1.2841095
                                  total: 1.86s
                                                   remaining: 4.59s
288:
        learn: 1.2807880
                                  total: 1.86s
                                                   remaining: 4.58s
289:
        learn: 1.2783871
                                  total: 1.87s
                                                   remaining: 4.57s
290:
        learn: 1.2748817
                                  total: 1.87s
                                                   remaining: 4.57s
291:
        learn: 1.2723242
                                  total: 1.88s
                                                   remaining: 4.56s
292:
        learn: 1.2679784
                                  total: 1.89s
                                                   remaining: 4.56s
293:
        learn: 1.2646722
                                  total: 1.89s
                                                   remaining: 4.55s
294:
        learn: 1.2604789
                                  total: 1.9s
                                                   remaining: 4.54s
295:
        learn: 1.2577392
                                  total: 1.91s
                                                   remaining: 4.54s
296:
        learn: 1.2523757
                                  total: 1.92s
                                                   remaining: 4.53s
297:
        learn: 1.2480375
                                  total: 1.92s
                                                   remaining: 4.53s
298:
        learn: 1.2447091
                                  total: 1.93s
                                                   remaining: 4.52s
299:
        learn: 1.2421184
                                  total: 1.93s
                                                   remaining: 4.51s
300:
        learn: 1.2386712
                                  total: 1.94s
                                                   remaining: 4.51s
301:
        learn: 1.2350467
                                  total: 1.95s
                                                   remaining: 4.5s
302:
        learn: 1.2323247
                                  total: 1.96s
                                                   remaining: 4.51s
303:
        learn: 1.2283240
                                  total: 1.97s
                                                   remaining: 4.51s
304:
        learn: 1.2243214
                                  total: 1.98s
                                                   remaining: 4.5s
        learn: 1.2220620
                                  total: 1.98s
305:
                                                   remaining: 4.5s
        learn: 1.2195782
306:
                                  total: 1.99s
                                                   remaining: 4.49s
                                  total: 1.99s
307:
        learn: 1.2171380
                                                   remaining: 4.47s
308:
        learn: 1.2142089
                                  total: 2s
                                                   remaining: 4.47s
309:
        learn: 1.2115272
                                  total: 2s
                                                   remaining: 4.46s
310:
        learn: 1.2083315
                                  total: 2.01s
                                                   remaining: 4.46s
311:
        learn: 1.2043768
                                  total: 2.02s
                                                   remaining: 4.46s
312:
        learn: 1.2012941
                                  total: 2.03s
                                                   remaining: 4.45s
313:
        learn: 1.1988013
                                  total: 2.03s
                                                   remaining: 4.43s
314:
        learn: 1.1967654
                                  total: 2.03s
                                                   remaining: 4.42s
315:
        learn: 1.1948630
                                  total: 2.04s
                                                   remaining: 4.41s
316:
        learn: 1.1918320
                                  total: 2.04s
                                                   remaining: 4.4s
317:
        learn: 1.1875230
                                  total: 2.05s
                                                   remaining: 4.39s
```

```
318:
        learn: 1.1856547
                                  total: 2.05s
                                                   remaining: 4.38s
319:
        learn: 1.1824952
                                  total: 2.06s
                                                   remaining: 4.38s
320:
        learn: 1.1801892
                                  total: 2.06s
                                                   remaining: 4.37s
        learn: 1.1775103
321:
                                  total: 2.07s
                                                   remaining: 4.36s
322:
        learn: 1.1750925
                                  total: 2.08s
                                                   remaining: 4.36s
323:
        learn: 1.1713509
                                  total: 2.09s
                                                   remaining: 4.35s
324:
        learn: 1.1702866
                                  total: 2.09s
                                                   remaining: 4.35s
325:
        learn: 1.1670390
                                  total: 2.1s
                                                   remaining: 4.34s
326:
        learn: 1.1648310
                                  total: 2.11s
                                                   remaining: 4.34s
327:
        learn: 1.1619457
                                  total: 2.12s
                                                   remaining: 4.33s
        learn: 1.1602678
328:
                                  total: 2.12s
                                                   remaining: 4.33s
329:
        learn: 1.1573264
                                  total: 2.13s
                                                   remaining: 4.32s
330:
        learn: 1.1539937
                                  total: 2.14s
                                                   remaining: 4.32s
331:
        learn: 1.1510393
                                  total: 2.14s
                                                   remaining: 4.32s
332:
        learn: 1.1484014
                                  total: 2.15s
                                                   remaining: 4.31s
333:
        learn: 1.1450301
                                  total: 2.16s
                                                   remaining: 4.3s
334:
        learn: 1.1432488
                                  total: 2.17s
                                                   remaining: 4.3s
335:
        learn: 1.1411751
                                  total: 2.17s
                                                   remaining: 4.29s
        learn: 1.1362000
                                  total: 2.17s
336:
                                                   remaining: 4.28s
337:
        learn: 1.1330571
                                  total: 2.18s
                                                   remaining: 4.28s
338:
        learn: 1.1297136
                                  total: 2.19s
                                                   remaining: 4.27s
339:
        learn: 1.1265727
                                  total: 2.19s
                                                   remaining: 4.26s
340:
        learn: 1.1228758
                                  total: 2.2s
                                                   remaining: 4.26s
341:
        learn: 1.1198268
                                  total: 2.21s
                                                   remaining: 4.25s
342:
        learn: 1.1160918
                                  total: 2.22s
                                                   remaining: 4.25s
        learn: 1.1125205
                                  total: 2.22s
343:
                                                   remaining: 4.24s
                                  total: 2.23s
344:
        learn: 1.1104952
                                                   remaining: 4.23s
345:
        learn: 1.1073602
                                  total: 2.23s
                                                   remaining: 4.21s
        learn: 1.1049227
                                  total: 2.23s
346:
                                                   remaining: 4.2s
347:
        learn: 1.1021896
                                  total: 2.24s
                                                   remaining: 4.19s
348:
        learn: 1.0990849
                                  total: 2.24s
                                                   remaining: 4.18s
349:
        learn: 1.0942383
                                  total: 2.25s
                                                   remaining: 4.18s
350:
        learn: 1.0917527
                                  total: 2.26s
                                                   remaining: 4.17s
351:
        learn: 1.0904202
                                  total: 2.26s
                                                   remaining: 4.17s
        learn: 1.0872449
                                  total: 2.27s
352:
                                                   remaining: 4.16s
353:
        learn: 1.0848065
                                  total: 2.27s
                                                   remaining: 4.15s
354:
        learn: 1.0815271
                                  total: 2.28s
                                                   remaining: 4.15s
355:
        learn: 1.0795655
                                  total: 2.29s
                                                   remaining: 4.14s
356:
        learn: 1.0772846
                                  total: 2.29s
                                                   remaining: 4.13s
357:
        learn: 1.0747553
                                  total: 2.3s
                                                   remaining: 4.13s
358:
        learn: 1.0733099
                                  total: 2.31s
                                                   remaining: 4.12s
359:
        learn: 1.0712542
                                  total: 2.31s
                                                   remaining: 4.12s
360:
        learn: 1.0691065
                                  total: 2.32s
                                                   remaining: 4.11s
361:
        learn: 1.0669075
                                  total: 2.33s
                                                   remaining: 4.1s
362:
        learn: 1.0638804
                                  total: 2.33s
                                                   remaining: 4.1s
        learn: 1.0626114
363:
                                  total: 2.34s
                                                   remaining: 4.09s
364:
        learn: 1.0603106
                                  total: 2.35s
                                                   remaining: 4.09s
        learn: 1.0585289
                                  total: 2.35s
365:
                                                   remaining: 4.08s
366:
        learn: 1.0569247
                                  total: 2.36s
                                                   remaining: 4.07s
        learn: 1.0534295
                                  total: 2.37s
367:
                                                   remaining: 4.07s
368:
        learn: 1.0502342
                                  total: 2.38s
                                                   remaining: 4.06s
369:
        learn: 1.0475422
                                  total: 2.38s
                                                   remaining: 4.06s
370:
        learn: 1.0454969
                                  total: 2.39s
                                                   remaining: 4.05s
371:
                                  total: 2.4s
        learn: 1.0434394
                                                   remaining: 4.05s
372:
        learn: 1.0420381
                                  total: 2.4s
                                                   remaining: 4.04s
373:
        learn: 1.0401572
                                  total: 2.41s
                                                   remaining: 4.04s
374:
        learn: 1.0377312
                                  total: 2.42s
                                                   remaining: 4.03s
375:
        learn: 1.0357065
                                  total: 2.42s
                                                   remaining: 4.03s
376:
        learn: 1.0331142
                                  total: 2.43s
                                                   remaining: 4.01s
377:
        learn: 1.0306838
                                  total: 2.43s
                                                   remaining: 4s
```

```
378:
        learn: 1.0283185
                                  total: 2.43s
                                                   remaining: 3.99s
379:
        learn: 1.0254584
                                  total: 2.44s
                                                   remaining: 3.98s
        learn: 1.0242683
                                  total: 2.44s
380:
                                                   remaining: 3.97s
                                  total: 2.45s
381:
        learn: 1.0219867
                                                   remaining: 3.96s
382:
        learn: 1.0199592
                                  total: 2.45s
                                                   remaining: 3.95s
383:
        learn: 1.0179382
                                  total: 2.46s
                                                   remaining: 3.95s
384:
        learn: 1.0153499
                                  total: 2.47s
                                                   remaining: 3.94s
385:
        learn: 1.0132434
                                  total: 2.47s
                                                   remaining: 3.93s
386:
        learn: 1.0113494
                                  total: 2.48s
                                                   remaining: 3.93s
387:
        learn: 1.0098104
                                  total: 2.49s
                                                   remaining: 3.92s
388:
        learn: 1.0078352
                                  total: 2.49s
                                                   remaining: 3.92s
389:
        learn: 1.0062674
                                  total: 2.5s
                                                   remaining: 3.91s
390:
        learn: 1.0051465
                                  total: 2.51s
                                                   remaining: 3.9s
391:
        learn: 1.0026583
                                  total: 2.51s
                                                   remaining: 3.9s
392:
        learn: 1.0003712
                                  total: 2.52s
                                                   remaining: 3.9s
        learn: 0.9984345
393:
                                  total: 2.53s
                                                   remaining: 3.89s
                                  total: 2.54s
394:
        learn: 0.9971795
                                                   remaining: 3.88s
395:
        learn: 0.9953328
                                  total: 2.54s
                                                   remaining: 3.87s
                                  total: 2.55s
396:
        learn: 0.9933737
                                                   remaining: 3.87s
397:
        learn: 0.9917080
                                  total: 2.56s
                                                   remaining: 3.87s
398:
        learn: 0.9892533
                                  total: 2.57s
                                                   remaining: 3.87s
399:
        learn: 0.9879441
                                  total: 2.58s
                                                   remaining: 3.86s
400:
        learn: 0.9866812
                                  total: 2.58s
                                                   remaining: 3.85s
401:
        learn: 0.9857217
                                  total: 2.59s
                                                   remaining: 3.85s
402:
        learn: 0.9834003
                                  total: 2.59s
                                                   remaining: 3.84s
        learn: 0.9818419
                                  total: 2.6s
403:
                                                   remaining: 3.84s
404:
        learn: 0.9803383
                                  total: 2.6s
                                                   remaining: 3.83s
405:
        learn: 0.9778804
                                  total: 2.61s
                                                   remaining: 3.82s
406:
        learn: 0.9746481
                                  total: 2.62s
                                                   remaining: 3.81s
407:
        learn: 0.9727330
                                  total: 2.62s
                                                   remaining: 3.81s
408:
        learn: 0.9711325
                                  total: 2.63s
                                                   remaining: 3.8s
409:
        learn: 0.9697590
                                  total: 2.63s
                                                   remaining: 3.79s
410:
        learn: 0.9675243
                                  total: 2.64s
                                                   remaining: 3.78s
411:
        learn: 0.9656501
                                  total: 2.65s
                                                   remaining: 3.78s
412:
        learn: 0.9635351
                                  total: 2.65s
                                                   remaining: 3.77s
413:
        learn: 0.9610986
                                  total: 2.66s
                                                   remaining: 3.76s
414:
        learn: 0.9583009
                                  total: 2.67s
                                                   remaining: 3.76s
415:
        learn: 0.9570998
                                  total: 2.67s
                                                   remaining: 3.75s
416:
        learn: 0.9550622
                                  total: 2.68s
                                                   remaining: 3.74s
417:
        learn: 0.9535617
                                  total: 2.69s
                                                   remaining: 3.74s
418:
        learn: 0.9510155
                                  total: 2.69s
                                                   remaining: 3.73s
419:
        learn: 0.9498134
                                  total: 2.7s
                                                   remaining: 3.73s
        learn: 0.9468539
420:
                                  total: 2.7s
                                                   remaining: 3.72s
421:
        learn: 0.9456523
                                  total: 2.71s
                                                   remaining: 3.71s
422:
        learn: 0.9437206
                                  total: 2.72s
                                                   remaining: 3.71s
423:
        learn: 0.9421254
                                  total: 2.72s
                                                   remaining: 3.7s
424:
        learn: 0.9409294
                                  total: 2.73s
                                                   remaining: 3.69s
425:
        learn: 0.9385828
                                  total: 2.73s
                                                   remaining: 3.69s
                                  total: 2.74s
426:
        learn: 0.9356006
                                                   remaining: 3.68s
        learn: 0.9337959
                                  total: 2.75s
427:
                                                   remaining: 3.67s
428:
        learn: 0.9322764
                                  total: 2.75s
                                                   remaining: 3.67s
429:
        learn: 0.9314315
                                  total: 2.76s
                                                   remaining: 3.66s
430:
        learn: 0.9296478
                                  total: 2.77s
                                                   remaining: 3.65s
431:
                                  total: 2.77s
        learn: 0.9280946
                                                   remaining: 3.65s
432:
        learn: 0.9268878
                                  total: 2.78s
                                                   remaining: 3.64s
        learn: 0.9256479
433:
                                  total: 2.79s
                                                   remaining: 3.64s
434:
        learn: 0.9248553
                                  total: 2.79s
                                                   remaining: 3.63s
435:
        learn: 0.9236745
                                  total: 2.8s
                                                   remaining: 3.63s
436:
        learn: 0.9221669
                                  total: 2.81s
                                                   remaining: 3.62s
437:
        learn: 0.9208074
                                  total: 2.81s
                                                   remaining: 3.6s
```

```
438:
        learn: 0.9193380
                                  total: 2.81s
                                                   remaining: 3.6s
439:
        learn: 0.9185795
                                  total: 2.82s
                                                   remaining: 3.59s
440:
        learn: 0.9181424
                                  total: 2.82s
                                                   remaining: 3.58s
441:
        learn: 0.9163893
                                  total: 2.83s
                                                   remaining: 3.57s
442:
        learn: 0.9155079
                                  total: 2.84s
                                                   remaining: 3.57s
443:
        learn: 0.9138255
                                  total: 2.84s
                                                   remaining: 3.56s
444:
        learn: 0.9120466
                                  total: 2.85s
                                                   remaining: 3.56s
445:
        learn: 0.9102231
                                  total: 2.86s
                                                   remaining: 3.55s
446:
        learn: 0.9076182
                                  total: 2.87s
                                                   remaining: 3.55s
447:
        learn: 0.9063753
                                  total: 2.88s
                                                   remaining: 3.54s
                                  total: 2.88s
448:
        learn: 0.9047634
                                                   remaining: 3.54s
449:
        learn: 0.9037838
                                  total: 2.89s
                                                   remaining: 3.53s
450:
        learn: 0.9021052
                                  total: 2.9s
                                                   remaining: 3.53s
451:
        learn: 0.9006982
                                  total: 2.9s
                                                   remaining: 3.52s
452:
        learn: 0.8996547
                                  total: 2.91s
                                                   remaining: 3.51s
453:
        learn: 0.8987499
                                  total: 2.92s
                                                   remaining: 3.51s
                                  total: 2.92s
454:
        learn: 0.8976762
                                                   remaining: 3.5s
455:
        learn: 0.8950241
                                  total: 2.93s
                                                   remaining: 3.5s
                                  total: 2.94s
456:
        learn: 0.8936054
                                                   remaining: 3.49s
457:
        learn: 0.8916313
                                  total: 2.94s
                                                   remaining: 3.48s
458:
        learn: 0.8908676
                                  total: 2.95s
                                                   remaining: 3.48s
459:
        learn: 0.8878331
                                  total: 2.96s
                                                   remaining: 3.47s
460:
        learn: 0.8863432
                                  total: 2.97s
                                                   remaining: 3.47s
461:
        learn: 0.8849474
                                  total: 2.97s
                                                   remaining: 3.46s
462:
        learn: 0.8838629
                                  total: 2.98s
                                                   remaining: 3.46s
463:
                                  total: 2.99s
        learn: 0.8824744
                                                   remaining: 3.45s
464:
        learn: 0.8796443
                                  total: 3s
                                                   remaining: 3.45s
465:
        learn: 0.8767598
                                  total: 3s
                                                   remaining: 3.44s
466:
        learn: 0.8756351
                                  total: 3.01s
                                                   remaining: 3.44s
467:
        learn: 0.8744600
                                  total: 3.01s
                                                   remaining: 3.43s
468:
        learn: 0.8734845
                                  total: 3.02s
                                                   remaining: 3.42s
469:
        learn: 0.8720713
                                  total: 3.02s
                                                   remaining: 3.41s
470:
        learn: 0.8697833
                                  total: 3.02s
                                                   remaining: 3.4s
471:
        learn: 0.8686563
                                  total: 3.03s
                                                   remaining: 3.39s
472:
        learn: 0.8666628
                                  total: 3.04s
                                                   remaining: 3.38s
473:
        learn: 0.8654002
                                  total: 3.04s
                                                   remaining: 3.38s
        learn: 0.8641103
474:
                                  total: 3.05s
                                                   remaining: 3.37s
475:
        learn: 0.8624844
                                  total: 3.06s
                                                   remaining: 3.37s
476:
        learn: 0.8619905
                                  total: 3.06s
                                                   remaining: 3.36s
477:
        learn: 0.8606521
                                  total: 3.07s
                                                   remaining: 3.35s
478:
        learn: 0.8597567
                                  total: 3.08s
                                                   remaining: 3.35s
479:
        learn: 0.8581779
                                  total: 3.08s
                                                   remaining: 3.34s
        learn: 0.8563695
480:
                                  total: 3.09s
                                                   remaining: 3.33s
481:
        learn: 0.8555452
                                  total: 3.09s
                                                   remaining: 3.32s
482:
        learn: 0.8539311
                                  total: 3.1s
                                                   remaining: 3.32s
483:
        learn: 0.8530535
                                  total: 3.1s
                                                   remaining: 3.31s
484:
        learn: 0.8510620
                                  total: 3.11s
                                                   remaining: 3.3s
485:
        learn: 0.8497948
                                  total: 3.12s
                                                   remaining: 3.3s
486:
        learn: 0.8481486
                                  total: 3.13s
                                                   remaining: 3.29s
487:
        learn: 0.8459958
                                  total: 3.13s
                                                   remaining: 3.29s
488:
        learn: 0.8449892
                                  total: 3.14s
                                                   remaining: 3.28s
489:
        learn: 0.8431682
                                  total: 3.15s
                                                   remaining: 3.27s
490:
        learn: 0.8423572
                                  total: 3.15s
                                                   remaining: 3.27s
491:
        learn: 0.8414246
                                  total: 3.16s
                                                   remaining: 3.26s
492:
        learn: 0.8405461
                                  total: 3.17s
                                                   remaining: 3.25s
493:
        learn: 0.8392289
                                  total: 3.17s
                                                   remaining: 3.25s
494:
        learn: 0.8378082
                                  total: 3.18s
                                                   remaining: 3.24s
495:
                                  total: 3.19s
        learn: 0.8366879
                                                   remaining: 3.24s
496:
        learn: 0.8351955
                                  total: 3.19s
                                                   remaining: 3.23s
497:
        learn: 0.8345032
                                  total: 3.2s
                                                   remaining: 3.23s
```

```
498:
        learn: 0.8325676
                                  total: 3.21s
                                                   remaining: 3.22s
499:
        learn: 0.8302309
                                  total: 3.21s
                                                   remaining: 3.21s
500:
        learn: 0.8283170
                                  total: 3.21s
                                                   remaining: 3.2s
501:
        learn: 0.8273049
                                  total: 3.22s
                                                   remaining: 3.19s
502:
        learn: 0.8252636
                                  total: 3.22s
                                                   remaining: 3.18s
503:
        learn: 0.8235786
                                  total: 3.23s
                                                   remaining: 3.17s
504:
        learn: 0.8218032
                                  total: 3.23s
                                                   remaining: 3.17s
505:
        learn: 0.8201164
                                  total: 3.24s
                                                   remaining: 3.16s
506:
        learn: 0.8186693
                                  total: 3.24s
                                                   remaining: 3.15s
507:
        learn: 0.8175642
                                  total: 3.25s
                                                   remaining: 3.15s
508:
        learn: 0.8162228
                                  total: 3.26s
                                                   remaining: 3.14s
509:
        learn: 0.8145793
                                  total: 3.26s
                                                   remaining: 3.13s
510:
        learn: 0.8128938
                                  total: 3.27s
                                                   remaining: 3.13s
511:
        learn: 0.8115221
                                  total: 3.28s
                                                   remaining: 3.12s
512:
        learn: 0.8104448
                                  total: 3.28s
                                                   remaining: 3.12s
        learn: 0.8094443
                                  total: 3.29s
513:
                                                   remaining: 3.11s
514:
        learn: 0.8085653
                                  total: 3.3s
                                                   remaining: 3.1s
515:
        learn: 0.8074096
                                  total: 3.3s
                                                   remaining: 3.1s
        learn: 0.8062211
                                  total: 3.31s
516:
                                                   remaining: 3.09s
517:
        learn: 0.8054397
                                  total: 3.32s
                                                   remaining: 3.09s
518:
        learn: 0.8046084
                                  total: 3.32s
                                                   remaining: 3.08s
519:
        learn: 0.8035494
                                  total: 3.33s
                                                   remaining: 3.08s
520:
        learn: 0.8024172
                                  total: 3.34s
                                                   remaining: 3.07s
        learn: 0.8012443
521:
                                  total: 3.35s
                                                   remaining: 3.06s
522:
        learn: 0.8007141
                                  total: 3.35s
                                                   remaining: 3.06s
523:
        learn: 0.7998170
                                  total: 3.36s
                                                   remaining: 3.05s
524:
        learn: 0.7991080
                                  total: 3.37s
                                                   remaining: 3.04s
525:
        learn: 0.7981407
                                  total: 3.37s
                                                   remaining: 3.04s
526:
        learn: 0.7970882
                                  total: 3.38s
                                                   remaining: 3.03s
527:
        learn: 0.7955520
                                  total: 3.39s
                                                   remaining: 3.03s
528:
        learn: 0.7941874
                                  total: 3.39s
                                                   remaining: 3.02s
529:
        learn: 0.7932665
                                  total: 3.4s
                                                   remaining: 3.02s
530:
        learn: 0.7922604
                                  total: 3.41s
                                                   remaining: 3.01s
531:
        learn: 0.7908553
                                  total: 3.42s
                                                   remaining: 3s
532:
        learn: 0.7892009
                                  total: 3.42s
                                                   remaining: 3s
533:
        learn: 0.7886571
                                  total: 3.42s
                                                   remaining: 2.98s
534:
        learn: 0.7870719
                                  total: 3.42s
                                                   remaining: 2.98s
535:
        learn: 0.7860019
                                  total: 3.43s
                                                   remaining: 2.97s
536:
        learn: 0.7845349
                                  total: 3.43s
                                                   remaining: 2.96s
537:
        learn: 0.7827165
                                  total: 3.44s
                                                   remaining: 2.95s
538:
        learn: 0.7818128
                                  total: 3.44s
                                                   remaining: 2.95s
539:
        learn: 0.7809924
                                  total: 3.45s
                                                   remaining: 2.94s
540:
        learn: 0.7802367
                                  total: 3.46s
                                                   remaining: 2.93s
541:
        learn: 0.7790314
                                  total: 3.46s
                                                   remaining: 2.93s
542:
        learn: 0.7781004
                                  total: 3.47s
                                                   remaining: 2.92s
543:
        learn: 0.7765776
                                  total: 3.48s
                                                   remaining: 2.91s
544:
        learn: 0.7756263
                                  total: 3.48s
                                                   remaining: 2.91s
545:
        learn: 0.7741208
                                  total: 3.49s
                                                   remaining: 2.9s
546:
        learn: 0.7732073
                                  total: 3.5s
                                                   remaining: 2.9s
547:
        learn: 0.7727052
                                  total: 3.5s
                                                   remaining: 2.89s
548:
        learn: 0.7717784
                                  total: 3.51s
                                                   remaining: 2.88s
549:
        learn: 0.7708920
                                  total: 3.52s
                                                   remaining: 2.88s
550:
        learn: 0.7702257
                                  total: 3.52s
                                                   remaining: 2.87s
551:
        learn: 0.7694456
                                  total: 3.53s
                                                   remaining: 2.87s
552:
        learn: 0.7684590
                                  total: 3.54s
                                                   remaining: 2.86s
        learn: 0.7674558
553:
                                  total: 3.55s
                                                   remaining: 2.85s
554:
        learn: 0.7665635
                                  total: 3.55s
                                                   remaining: 2.85s
555:
        learn: 0.7655801
                                  total: 3.56s
                                                   remaining: 2.84s
556:
        learn: 0.7644807
                                  total: 3.57s
                                                   remaining: 2.84s
557:
        learn: 0.7635563
                                  total: 3.57s
                                                   remaining: 2.83s
```

```
558:
        learn: 0.7623200
                                  total: 3.58s
                                                   remaining: 2.83s
559:
        learn: 0.7616001
                                  total: 3.59s
                                                   remaining: 2.82s
560:
        learn: 0.7601818
                                  total: 3.6s
                                                   remaining: 2.81s
561:
        learn: 0.7592788
                                  total: 3.6s
                                                   remaining: 2.81s
562:
        learn: 0.7582910
                                  total: 3.61s
                                                   remaining: 2.8s
563:
        learn: 0.7576839
                                  total: 3.61s
                                                   remaining: 2.79s
564:
        learn: 0.7565668
                                  total: 3.62s
                                                   remaining: 2.79s
565:
        learn: 0.7555020
                                  total: 3.62s
                                                   remaining: 2.78s
566:
        learn: 0.7542437
                                  total: 3.62s
                                                   remaining: 2.77s
567:
        learn: 0.7533099
                                  total: 3.63s
                                                   remaining: 2.76s
568:
        learn: 0.7520729
                                  total: 3.63s
                                                   remaining: 2.75s
569:
        learn: 0.7512779
                                  total: 3.64s
                                                   remaining: 2.75s
570:
        learn: 0.7502779
                                  total: 3.65s
                                                   remaining: 2.74s
571:
        learn: 0.7496052
                                  total: 3.65s
                                                   remaining: 2.73s
572:
        learn: 0.7479835
                                  total: 3.66s
                                                   remaining: 2.73s
573:
        learn: 0.7476231
                                  total: 3.66s
                                                   remaining: 2.72s
574:
        learn: 0.7465030
                                  total: 3.67s
                                                   remaining: 2.71s
575:
        learn: 0.7445512
                                  total: 3.68s
                                                   remaining: 2.71s
576:
        learn: 0.7436623
                                  total: 3.69s
                                                   remaining: 2.7s
577:
        learn: 0.7425772
                                  total: 3.69s
                                                   remaining: 2.7s
578:
        learn: 0.7412787
                                  total: 3.7s
                                                   remaining: 2.69s
579:
        learn: 0.7404142
                                  total: 3.71s
                                                   remaining: 2.69s
580:
        learn: 0.7396413
                                  total: 3.72s
                                                   remaining: 2.68s
581:
        learn: 0.7381953
                                  total: 3.72s
                                                   remaining: 2.67s
582:
        learn: 0.7373258
                                  total: 3.73s
                                                   remaining: 2.67s
583:
        learn: 0.7360402
                                  total: 3.74s
                                                   remaining: 2.66s
584:
        learn: 0.7345250
                                  total: 3.75s
                                                   remaining: 2.66s
585:
        learn: 0.7334720
                                  total: 3.75s
                                                   remaining: 2.65s
        learn: 0.7326949
                                  total: 3.76s
586:
                                                   remaining: 2.64s
587:
        learn: 0.7317112
                                  total: 3.76s
                                                   remaining: 2.63s
588:
        learn: 0.7308089
                                  total: 3.76s
                                                   remaining: 2.63s
589:
        learn: 0.7295170
                                  total: 3.77s
                                                   remaining: 2.62s
590:
        learn: 0.7281723
                                  total: 3.77s
                                                   remaining: 2.61s
591:
        learn: 0.7272552
                                  total: 3.77s
                                                   remaining: 2.6s
592:
        learn: 0.7261332
                                  total: 3.78s
                                                   remaining: 2.59s
593:
        learn: 0.7253471
                                  total: 3.79s
                                                   remaining: 2.59s
594:
        learn: 0.7247067
                                  total: 3.79s
                                                   remaining: 2.58s
595:
        learn: 0.7237978
                                  total: 3.8s
                                                   remaining: 2.58s
596:
        learn: 0.7229172
                                  total: 3.81s
                                                   remaining: 2.57s
597:
        learn: 0.7220440
                                  total: 3.81s
                                                   remaining: 2.56s
598:
        learn: 0.7210579
                                  total: 3.82s
                                                   remaining: 2.56s
599:
        learn: 0.7207124
                                  total: 3.83s
                                                   remaining: 2.55s
        learn: 0.7198284
600:
                                  total: 3.83s
                                                   remaining: 2.54s
601:
        learn: 0.7195635
                                  total: 3.84s
                                                   remaining: 2.54s
602:
        learn: 0.7189215
                                  total: 3.85s
                                                   remaining: 2.53s
        learn: 0.7180755
603:
                                  total: 3.85s
                                                   remaining: 2.53s
604:
        learn: 0.7173739
                                  total: 3.86s
                                                   remaining: 2.52s
        learn: 0.7167552
605:
                                  total: 3.87s
                                                   remaining: 2.51s
606:
        learn: 0.7164365
                                  total: 3.87s
                                                   remaining: 2.51s
607:
        learn: 0.7150193
                                  total: 3.88s
                                                   remaining: 2.5s
608:
        learn: 0.7142484
                                  total: 3.89s
                                                   remaining: 2.49s
609:
        learn: 0.7133248
                                  total: 3.89s
                                                   remaining: 2.49s
610:
        learn: 0.7128259
                                  total: 3.9s
                                                   remaining: 2.48s
611:
        learn: 0.7121207
                                  total: 3.91s
                                                   remaining: 2.48s
612:
        learn: 0.7114766
                                  total: 3.92s
                                                   remaining: 2.47s
        learn: 0.7108072
613:
                                  total: 3.92s
                                                   remaining: 2.46s
614:
        learn: 0.7101652
                                  total: 3.93s
                                                   remaining: 2.46s
615:
        learn: 0.7093417
                                  total: 3.93s
                                                   remaining: 2.45s
                                  total: 3.94s
616:
        learn: 0.7086312
                                                   remaining: 2.45s
617:
        learn: 0.7078399
                                  total: 3.95s
                                                   remaining: 2.44s
```

```
618:
        learn: 0.7066103
                                  total: 3.95s
                                                   remaining: 2.43s
619:
        learn: 0.7059847
                                  total: 3.96s
                                                   remaining: 2.43s
620:
        learn: 0.7053869
                                  total: 3.97s
                                                   remaining: 2.42s
        learn: 0.7048440
621:
                                  total: 3.98s
                                                   remaining: 2.42s
622:
        learn: 0.7042338
                                  total: 3.98s
                                                   remaining: 2.41s
623:
        learn: 0.7035551
                                  total: 3.99s
                                                   remaining: 2.4s
624:
        learn: 0.7029103
                                  total: 4s
                                                   remaining: 2.4s
625:
        learn: 0.7020411
                                  total: 4s
                                                   remaining: 2.39s
                                                   remaining: 2.38s
626:
        learn: 0.7014127
                                  total: 4.01s
627:
        learn: 0.6998367
                                  total: 4.02s
                                                   remaining: 2.38s
628:
        learn: 0.6992209
                                  total: 4.03s
                                                   remaining: 2.37s
                                  total: 4.03s
629:
        learn: 0.6984949
                                                   remaining: 2.37s
630:
        learn: 0.6977090
                                  total: 4.04s
                                                   remaining: 2.36s
631:
        learn: 0.6970369
                                  total: 4.04s
                                                   remaining: 2.35s
632:
        learn: 0.6963424
                                  total: 4.05s
                                                   remaining: 2.35s
633:
        learn: 0.6957687
                                  total: 4.05s
                                                   remaining: 2.34s
634:
        learn: 0.6947272
                                  total: 4.05s
                                                   remaining: 2.33s
635:
        learn: 0.6940731
                                  total: 4.06s
                                                   remaining: 2.32s
636:
        learn: 0.6936410
                                  total: 4.06s
                                                   remaining: 2.32s
637:
        learn: 0.6933898
                                  total: 4.07s
                                                   remaining: 2.31s
638:
        learn: 0.6922550
                                  total: 4.08s
                                                   remaining: 2.3s
639:
        learn: 0.6913960
                                  total: 4.08s
                                                   remaining: 2.3s
640:
        learn: 0.6904443
                                  total: 4.09s
                                                   remaining: 2.29s
641:
        learn: 0.6892155
                                  total: 4.09s
                                                   remaining: 2.28s
642:
        learn: 0.6882957
                                  total: 4.1s
                                                   remaining: 2.28s
643:
        learn: 0.6878259
                                  total: 4.11s
                                                   remaining: 2.27s
644:
        learn: 0.6871626
                                  total: 4.12s
                                                   remaining: 2.27s
645:
        learn: 0.6860388
                                  total: 4.12s
                                                   remaining: 2.26s
646:
        learn: 0.6849651
                                  total: 4.13s
                                                   remaining: 2.25s
647:
        learn: 0.6844828
                                  total: 4.14s
                                                   remaining: 2.25s
648:
        learn: 0.6839842
                                  total: 4.14s
                                                   remaining: 2.24s
649:
        learn: 0.6837453
                                  total: 4.15s
                                                   remaining: 2.23s
650:
        learn: 0.6831544
                                  total: 4.16s
                                                   remaining: 2.23s
651:
        learn: 0.6824804
                                  total: 4.16s
                                                   remaining: 2.22s
        learn: 0.6820508
652:
                                  total: 4.17s
                                                   remaining: 2.21s
653:
        learn: 0.6814792
                                  total: 4.17s
                                                   remaining: 2.21s
654:
        learn: 0.6806871
                                  total: 4.18s
                                                   remaining: 2.2s
655:
        learn: 0.6802425
                                  total: 4.19s
                                                   remaining: 2.2s
656:
        learn: 0.6792797
                                  total: 4.2s
                                                   remaining: 2.19s
657:
        learn: 0.6784378
                                  total: 4.2s
                                                   remaining: 2.19s
658:
        learn: 0.6777644
                                  total: 4.21s
                                                   remaining: 2.18s
659:
        learn: 0.6763442
                                  total: 4.22s
                                                   remaining: 2.17s
        learn: 0.6757015
660:
                                  total: 4.23s
                                                   remaining: 2.17s
661:
        learn: 0.6751527
                                  total: 4.24s
                                                   remaining: 2.16s
662:
        learn: 0.6741991
                                  total: 4.24s
                                                   remaining: 2.15s
663:
        learn: 0.6735747
                                  total: 4.24s
                                                   remaining: 2.15s
664:
        learn: 0.6730015
                                  total: 4.25s
                                                   remaining: 2.14s
        learn: 0.6726765
665:
                                  total: 4.25s
                                                   remaining: 2.13s
666:
        learn: 0.6720390
                                  total: 4.26s
                                                   remaining: 2.13s
                                  total: 4.26s
667:
        learn: 0.6714134
                                                   remaining: 2.12s
668:
        learn: 0.6706532
                                  total: 4.27s
                                                   remaining: 2.11s
669:
        learn: 0.6698587
                                  total: 4.28s
                                                   remaining: 2.1s
670:
        learn: 0.6691074
                                  total: 4.28s
                                                   remaining: 2.1s
671:
        learn: 0.6686923
                                  total: 4.29s
                                                   remaining: 2.09s
672:
        learn: 0.6679811
                                  total: 4.29s
                                                   remaining: 2.09s
        learn: 0.6671897
673:
                                  total: 4.3s
                                                   remaining: 2.08s
674:
        learn: 0.6663189
                                  total: 4.31s
                                                   remaining: 2.07s
675:
        learn: 0.6649782
                                  total: 4.31s
                                                   remaining: 2.07s
676:
        learn: 0.6638832
                                  total: 4.32s
                                                   remaining: 2.06s
677:
        learn: 0.6632489
                                  total: 4.33s
                                                   remaining: 2.05s
```

```
678:
        learn: 0.6626516
                                  total: 4.33s
                                                   remaining: 2.05s
679:
        learn: 0.6617857
                                  total: 4.34s
                                                   remaining: 2.04s
680:
        learn: 0.6612687
                                  total: 4.35s
                                                   remaining: 2.04s
        learn: 0.6606383
                                  total: 4.36s
681:
                                                   remaining: 2.03s
682:
        learn: 0.6596538
                                  total: 4.37s
                                                   remaining: 2.03s
683:
        learn: 0.6589933
                                  total: 4.38s
                                                   remaining: 2.02s
684:
        learn: 0.6582140
                                  total: 4.38s
                                                   remaining: 2.02s
685:
        learn: 0.6576404
                                  total: 4.39s
                                                   remaining: 2.01s
686:
        learn: 0.6568439
                                  total: 4.4s
                                                   remaining: 2s
687:
        learn: 0.6564704
                                  total: 4.41s
                                                   remaining: 2s
688:
        learn: 0.6553998
                                  total: 4.41s
                                                   remaining: 1.99s
689:
        learn: 0.6540038
                                  total: 4.42s
                                                   remaining: 1.99s
690:
        learn: 0.6533962
                                  total: 4.43s
                                                   remaining: 1.98s
691:
        learn: 0.6526010
                                  total: 4.44s
                                                   remaining: 1.98s
692:
        learn: 0.6521649
                                  total: 4.45s
                                                   remaining: 1.97s
        learn: 0.6513972
693:
                                  total: 4.45s
                                                   remaining: 1.96s
694:
        learn: 0.6506226
                                  total: 4.45s
                                                   remaining: 1.95s
695:
        learn: 0.6498597
                                  total: 4.46s
                                                   remaining: 1.95s
696:
        learn: 0.6493774
                                  total: 4.46s
                                                   remaining: 1.94s
697:
        learn: 0.6488510
                                  total: 4.47s
                                                   remaining: 1.93s
698:
        learn: 0.6480470
                                  total: 4.48s
                                                   remaining: 1.93s
699:
        learn: 0.6472772
                                  total: 4.49s
                                                   remaining: 1.92s
                                  total: 4.49s
700:
        learn: 0.6466738
                                                   remaining: 1.92s
701:
        learn: 0.6458644
                                  total: 4.5s
                                                   remaining: 1.91s
702:
        learn: 0.6454091
                                  total: 4.51s
                                                   remaining: 1.91s
703:
        learn: 0.6448884
                                  total: 4.52s
                                                   remaining: 1.9s
704:
        learn: 0.6441792
                                  total: 4.53s
                                                   remaining: 1.89s
705:
        learn: 0.6437279
                                  total: 4.54s
                                                   remaining: 1.89s
706:
        learn: 0.6432919
                                  total: 4.54s
                                                   remaining: 1.88s
707:
        learn: 0.6427060
                                  total: 4.55s
                                                   remaining: 1.88s
708:
        learn: 0.6422161
                                  total: 4.56s
                                                   remaining: 1.87s
709:
        learn: 0.6417603
                                  total: 4.57s
                                                   remaining: 1.87s
710:
        learn: 0.6407527
                                  total: 4.58s
                                                   remaining: 1.86s
711:
        learn: 0.6401823
                                  total: 4.59s
                                                   remaining: 1.85s
712:
        learn: 0.6390837
                                  total: 4.59s
                                                   remaining: 1.85s
713:
        learn: 0.6384657
                                  total: 4.6s
                                                   remaining: 1.84s
714:
        learn: 0.6379473
                                  total: 4.61s
                                                   remaining: 1.84s
715:
        learn: 0.6375421
                                  total: 4.62s
                                                   remaining: 1.83s
716:
        learn: 0.6366778
                                  total: 4.63s
                                                   remaining: 1.83s
717:
        learn: 0.6362157
                                  total: 4.64s
                                                   remaining: 1.82s
718:
        learn: 0.6356724
                                  total: 4.64s
                                                   remaining: 1.81s
719:
        learn: 0.6350525
                                  total: 4.65s
                                                   remaining: 1.81s
720:
        learn: 0.6344001
                                  total: 4.66s
                                                   remaining: 1.8s
721:
        learn: 0.6336774
                                  total: 4.66s
                                                   remaining: 1.79s
722:
        learn: 0.6327410
                                  total: 4.67s
                                                   remaining: 1.79s
723:
        learn: 0.6322895
                                  total: 4.67s
                                                   remaining: 1.78s
724:
        learn: 0.6318875
                                  total: 4.67s
                                                   remaining: 1.77s
725:
        learn: 0.6313620
                                  total: 4.68s
                                                   remaining: 1.77s
726:
        learn: 0.6308664
                                  total: 4.68s
                                                   remaining: 1.76s
                                  total: 4.69s
727:
        learn: 0.6303057
                                                   remaining: 1.75s
728:
        learn: 0.6298695
                                  total: 4.7s
                                                   remaining: 1.75s
729:
        learn: 0.6294780
                                  total: 4.71s
                                                   remaining: 1.74s
730:
        learn: 0.6284491
                                  total: 4.71s
                                                   remaining: 1.73s
731:
        learn: 0.6279488
                                  total: 4.72s
                                                   remaining: 1.73s
732:
        learn: 0.6272870
                                  total: 4.73s
                                                   remaining: 1.72s
        learn: 0.6266725
733:
                                  total: 4.74s
                                                   remaining: 1.72s
734:
        learn: 0.6254970
                                  total: 4.74s
                                                   remaining: 1.71s
735:
                                  total: 4.75s
        learn: 0.6250112
                                                   remaining: 1.7s
736:
        learn: 0.6245972
                                  total: 4.76s
                                                   remaining: 1.7s
737:
        learn: 0.6241038
                                  total: 4.77s
                                                   remaining: 1.69s
```

```
738:
        learn: 0.6238493
                                  total: 4.78s
                                                   remaining: 1.69s
739:
        learn: 0.6229090
                                  total: 4.78s
                                                   remaining: 1.68s
740:
        learn: 0.6223474
                                  total: 4.79s
                                                   remaining: 1.67s
                                  total: 4.8s
741:
        learn: 0.6219068
                                                   remaining: 1.67s
742:
        learn: 0.6213236
                                  total: 4.8s
                                                   remaining: 1.66s
743:
        learn: 0.6208613
                                  total: 4.81s
                                                   remaining: 1.66s
744:
        learn: 0.6197793
                                  total: 4.82s
                                                   remaining: 1.65s
745:
        learn: 0.6192309
                                  total: 4.83s
                                                   remaining: 1.65s
746:
        learn: 0.6187947
                                  total: 4.84s
                                                   remaining: 1.64s
747:
        learn: 0.6181553
                                  total: 4.84s
                                                   remaining: 1.63s
748:
        learn: 0.6170977
                                  total: 4.85s
                                                   remaining: 1.62s
749:
        learn: 0.6163625
                                  total: 4.85s
                                                   remaining: 1.62s
750:
        learn: 0.6158230
                                  total: 4.85s
                                                   remaining: 1.61s
751:
        learn: 0.6152772
                                  total: 4.86s
                                                   remaining: 1.6s
752:
        learn: 0.6148468
                                  total: 4.86s
                                                   remaining: 1.59s
753:
        learn: 0.6143010
                                  total: 4.87s
                                                   remaining: 1.59s
754:
        learn: 0.6136961
                                  total: 4.88s
                                                   remaining: 1.58s
755:
        learn: 0.6125589
                                  total: 4.88s
                                                   remaining: 1.57s
756:
        learn: 0.6117258
                                  total: 4.89s
                                                   remaining: 1.57s
757:
        learn: 0.6110974
                                  total: 4.9s
                                                   remaining: 1.56s
758:
        learn: 0.6108629
                                  total: 4.9s
                                                   remaining: 1.56s
759:
        learn: 0.6104259
                                  total: 4.91s
                                                   remaining: 1.55s
                                  total: 4.92s
760:
        learn: 0.6097580
                                                   remaining: 1.54s
761:
        learn: 0.6092591
                                  total: 4.92s
                                                   remaining: 1.54s
762:
        learn: 0.6084934
                                  total: 4.93s
                                                   remaining: 1.53s
763:
        learn: 0.6079077
                                  total: 4.93s
                                                   remaining: 1.52s
764:
        learn: 0.6076621
                                  total: 4.94s
                                                   remaining: 1.52s
765:
        learn: 0.6072226
                                  total: 4.95s
                                                   remaining: 1.51s
        learn: 0.6066984
766:
                                  total: 4.95s
                                                   remaining: 1.5s
767:
        learn: 0.6063147
                                  total: 4.96s
                                                   remaining: 1.5s
768:
        learn: 0.6059001
                                  total: 4.96s
                                                   remaining: 1.49s
769:
        learn: 0.6054168
                                  total: 4.97s
                                                   remaining: 1.49s
770:
        learn: 0.6050230
                                  total: 4.98s
                                                   remaining: 1.48s
771:
        learn: 0.6044511
                                  total: 4.98s
                                                   remaining: 1.47s
772:
        learn: 0.6040859
                                  total: 4.99s
                                                   remaining: 1.47s
773:
        learn: 0.6035600
                                  total: 5s
                                                   remaining: 1.46s
774:
        learn: 0.6026417
                                  total: 5s
                                                   remaining: 1.45s
775:
        learn: 0.6022094
                                  total: 5.01s
                                                   remaining: 1.45s
776:
        learn: 0.6014601
                                  total: 5.02s
                                                   remaining: 1.44s
777:
        learn: 0.6009810
                                  total: 5.02s
                                                   remaining: 1.43s
778:
        learn: 0.6007380
                                  total: 5.03s
                                                   remaining: 1.43s
779:
        learn: 0.6004432
                                  total: 5.04s
                                                   remaining: 1.42s
780:
        learn: 0.5998597
                                  total: 5.04s
                                                   remaining: 1.41s
781:
        learn: 0.5993309
                                  total: 5.05s
                                                   remaining: 1.41s
782:
        learn: 0.5985319
                                  total: 5.05s
                                                   remaining: 1.4s
783:
        learn: 0.5981161
                                  total: 5.06s
                                                   remaining: 1.39s
784:
        learn: 0.5975501
                                  total: 5.06s
                                                   remaining: 1.39s
785:
        learn: 0.5972734
                                  total: 5.07s
                                                   remaining: 1.38s
                                  total: 5.07s
786:
        learn: 0.5967967
                                                   remaining: 1.37s
787:
        learn: 0.5964448
                                  total: 5.08s
                                                   remaining: 1.37s
788:
        learn: 0.5961197
                                  total: 5.08s
                                                   remaining: 1.36s
789:
        learn: 0.5952969
                                  total: 5.09s
                                                   remaining: 1.35s
790:
        learn: 0.5948191
                                  total: 5.1s
                                                   remaining: 1.35s
791:
        learn: 0.5943564
                                  total: 5.1s
                                                   remaining: 1.34s
792:
        learn: 0.5939332
                                  total: 5.11s
                                                   remaining: 1.33s
793:
        learn: 0.5932741
                                  total: 5.12s
                                                   remaining: 1.33s
794:
        learn: 0.5930927
                                  total: 5.13s
                                                   remaining: 1.32s
795:
        learn: 0.5924287
                                  total: 5.13s
                                                   remaining: 1.31s
                                  total: 5.14s
796:
        learn: 0.5921129
                                                   remaining: 1.31s
797:
        learn: 0.5916271
                                  total: 5.15s
                                                   remaining: 1.3s
```

```
798:
        learn: 0.5913386
                                  total: 5.16s
                                                   remaining: 1.3s
799:
        learn: 0.5911972
                                  total: 5.17s
                                                   remaining: 1.29s
:008
        learn: 0.5908617
                                  total: 5.17s
                                                   remaining: 1.28s
801:
        learn: 0.5906436
                                  total: 5.18s
                                                   remaining: 1.28s
802:
        learn: 0.5901514
                                  total: 5.19s
                                                   remaining: 1.27s
803:
        learn: 0.5898247
                                  total: 5.19s
                                                   remaining: 1.27s
804:
        learn: 0.5891946
                                  total: 5.2s
                                                   remaining: 1.26s
805:
        learn: 0.5886583
                                  total: 5.2s
                                                   remaining: 1.25s
806:
        learn: 0.5876373
                                  total: 5.21s
                                                   remaining: 1.25s
807:
        learn: 0.5866710
                                  total: 5.21s
                                                   remaining: 1.24s
808:
        learn: 0.5857817
                                  total: 5.21s
                                                   remaining: 1.23s
                                  total: 5.22s
809:
        learn: 0.5853043
                                                   remaining: 1.22s
810:
        learn: 0.5847747
                                  total: 5.22s
                                                   remaining: 1.22s
811:
        learn: 0.5844238
                                  total: 5.23s
                                                   remaining: 1.21s
812:
        learn: 0.5840320
                                  total: 5.24s
                                                   remaining: 1.2s
        learn: 0.5836389
813:
                                  total: 5.24s
                                                   remaining: 1.2s
                                  total: 5.25s
814:
        learn: 0.5833158
                                                   remaining: 1.19s
815:
        learn: 0.5830259
                                  total: 5.25s
                                                   remaining: 1.19s
                                  total: 5.26s
816:
        learn: 0.5825587
                                                   remaining: 1.18s
817:
        learn: 0.5821116
                                  total: 5.27s
                                                   remaining: 1.17s
818:
        learn: 0.5816804
                                  total: 5.28s
                                                   remaining: 1.17s
819:
        learn: 0.5813964
                                  total: 5.28s
                                                   remaining: 1.16s
                                  total: 5.29s
820:
        learn: 0.5809823
                                                   remaining: 1.15s
        learn: 0.5805594
821:
                                  total: 5.29s
                                                   remaining: 1.15s
822:
        learn: 0.5801507
                                  total: 5.3s
                                                   remaining: 1.14s
823:
        learn: 0.5792926
                                  total: 5.31s
                                                   remaining: 1.13s
824:
        learn: 0.5783726
                                  total: 5.32s
                                                   remaining: 1.13s
825:
        learn: 0.5779587
                                  total: 5.32s
                                                   remaining: 1.12s
826:
        learn: 0.5774252
                                  total: 5.33s
                                                   remaining: 1.11s
827:
        learn: 0.5770815
                                  total: 5.34s
                                                   remaining: 1.11s
828:
        learn: 0.5765553
                                  total: 5.34s
                                                   remaining: 1.1s
829:
        learn: 0.5761553
                                  total: 5.35s
                                                   remaining: 1.09s
830:
        learn: 0.5758873
                                  total: 5.36s
                                                   remaining: 1.09s
831:
        learn: 0.5755336
                                  total: 5.37s
                                                   remaining: 1.08s
832:
        learn: 0.5752158
                                  total: 5.37s
                                                   remaining: 1.08s
                                  total: 5.38s
833:
        learn: 0.5745982
                                                   remaining: 1.07s
834:
        learn: 0.5739713
                                  total: 5.39s
                                                   remaining: 1.06s
835:
        learn: 0.5734577
                                  total: 5.4s
                                                   remaining: 1.06s
836:
        learn: 0.5731508
                                  total: 5.41s
                                                   remaining: 1.05s
837:
        learn: 0.5726951
                                  total: 5.41s
                                                   remaining: 1.05s
838:
        learn: 0.5723422
                                  total: 5.42s
                                                   remaining: 1.04s
839:
        learn: 0.5720169
                                  total: 5.42s
                                                   remaining: 1.03s
840:
        learn: 0.5717698
                                  total: 5.42s
                                                   remaining: 1.02s
        learn: 0.5714625
841:
                                  total: 5.43s
                                                   remaining: 1.02s
842:
        learn: 0.5710961
                                  total: 5.43s
                                                   remaining: 1.01s
843:
        learn: 0.5708315
                                  total: 5.44s
                                                   remaining: 1s
844:
        learn: 0.5702597
                                  total: 5.44s
                                                   remaining: 999ms
845:
        learn: 0.5699934
                                                   remaining: 992ms
                                  total: 5.45s
846:
        learn: 0.5694316
                                  total: 5.45s
                                                   remaining: 985ms
847:
        learn: 0.5689132
                                  total: 5.46s
                                                   remaining: 979ms
848:
        learn: 0.5684741
                                  total: 5.47s
                                                   remaining: 972ms
849:
        learn: 0.5679587
                                  total: 5.47s
                                                   remaining: 966ms
850:
        learn: 0.5675456
                                  total: 5.48s
                                                   remaining: 960ms
851:
                                  total: 5.49s
        learn: 0.5671421
                                                   remaining: 954ms
852:
        learn: 0.5666592
                                  total: 5.5s
                                                   remaining: 947ms
        learn: 0.5662049
853:
                                  total: 5.5s
                                                   remaining: 941ms
854:
        learn: 0.5655050
                                  total: 5.51s
                                                   remaining: 935ms
855:
        learn: 0.5651327
                                  total: 5.52s
                                                   remaining: 929ms
                                  total: 5.53s
856:
        learn: 0.5648951
                                                   remaining: 923ms
857:
        learn: 0.5644931
                                  total: 5.54s
                                                   remaining: 916ms
```

```
858:
        learn: 0.5640286
                                  total: 5.54s
                                                   remaining: 910ms
859:
        learn: 0.5636550
                                  total: 5.55s
                                                   remaining: 903ms
        learn: 0.5632614
                                  total: 5.55s
860:
                                                   remaining: 897ms
        learn: 0.5630338
861:
                                  total: 5.56s
                                                   remaining: 890ms
862:
        learn: 0.5625935
                                  total: 5.56s
                                                   remaining: 883ms
863:
        learn: 0.5624300
                                  total: 5.57s
                                                   remaining: 876ms
864:
        learn: 0.5621086
                                  total: 5.57s
                                                   remaining: 870ms
865:
        learn: 0.5616992
                                  total: 5.58s
                                                   remaining: 863ms
866:
        learn: 0.5612470
                                  total: 5.58s
                                                   remaining: 856ms
867:
        learn: 0.5608069
                                  total: 5.58s
                                                   remaining: 849ms
868:
        learn: 0.5601471
                                  total: 5.59s
                                                   remaining: 842ms
869:
        learn: 0.5599670
                                  total: 5.59s
                                                   remaining: 836ms
870:
        learn: 0.5596457
                                  total: 5.6s
                                                   remaining: 829ms
871:
        learn: 0.5592724
                                  total: 5.61s
                                                   remaining: 823ms
872:
        learn: 0.5584360
                                  total: 5.61s
                                                   remaining: 817ms
873:
        learn: 0.5582201
                                  total: 5.62s
                                                   remaining: 810ms
                                  total: 5.62s
874:
        learn: 0.5578584
                                                   remaining: 803ms
875:
        learn: 0.5574243
                                  total: 5.62s
                                                   remaining: 796ms
                                  total: 5.63s
876:
        learn: 0.5570628
                                                   remaining: 789ms
877:
        learn: 0.5569754
                                  total: 5.63s
                                                   remaining: 782ms
878:
        learn: 0.5566113
                                  total: 5.64s
                                                   remaining: 776ms
879:
        learn: 0.5562231
                                  total: 5.65s
                                                   remaining: 770ms
                                  total: 5.65s
880:
        learn: 0.5555033
                                                   remaining: 764ms
881:
        learn: 0.5551087
                                  total: 5.66s
                                                   remaining: 757ms
882:
        learn: 0.5546715
                                  total: 5.67s
                                                   remaining: 751ms
883:
        learn: 0.5544140
                                  total: 5.68s
                                                   remaining: 745ms
                                  total: 5.68s
884:
        learn: 0.5540558
                                                   remaining: 739ms
885:
        learn: 0.5534990
                                  total: 5.69s
                                                   remaining: 732ms
886:
        learn: 0.5532676
                                  total: 5.69s
                                                   remaining: 726ms
887:
        learn: 0.5530282
                                  total: 5.7s
                                                   remaining: 719ms
888:
        learn: 0.5527434
                                  total: 5.71s
                                                   remaining: 713ms
889:
        learn: 0.5519787
                                  total: 5.71s
                                                   remaining: 706ms
890:
        learn: 0.5512370
                                  total: 5.72s
                                                   remaining: 700ms
891:
        learn: 0.5509572
                                  total: 5.73s
                                                   remaining: 693ms
892:
        learn: 0.5507246
                                  total: 5.74s
                                                   remaining: 687ms
        learn: 0.5503008
                                  total: 5.74s
893:
                                                   remaining: 681ms
894:
        learn: 0.5500730
                                  total: 5.75s
                                                   remaining: 675ms
895:
        learn: 0.5496866
                                  total: 5.76s
                                                   remaining: 668ms
896:
        learn: 0.5494653
                                  total: 5.76s
                                                   remaining: 662ms
897:
        learn: 0.5490220
                                  total: 5.77s
                                                   remaining: 655ms
898:
        learn: 0.5489956
                                  total: 5.78s
                                                   remaining: 649ms
899:
        learn: 0.5486906
                                  total: 5.78s
                                                   remaining: 643ms
        learn: 0.5481452
900:
                                  total: 5.79s
                                                   remaining: 637ms
901:
        learn: 0.5475211
                                  total: 5.8s
                                                   remaining: 630ms
902:
        learn: 0.5469375
                                  total: 5.8s
                                                   remaining: 624ms
903:
        learn: 0.5461880
                                  total: 5.81s
                                                   remaining: 617ms
904:
        learn: 0.5458110
                                  total: 5.82s
                                                   remaining: 611ms
        learn: 0.5454330
                                                   remaining: 604ms
905:
                                  total: 5.82s
906:
        learn: 0.5450911
                                  total: 5.82s
                                                   remaining: 597ms
907:
        learn: 0.5447383
                                  total: 5.83s
                                                   remaining: 590ms
908:
        learn: 0.5446632
                                  total: 5.83s
                                                   remaining: 584ms
909:
        learn: 0.5443419
                                  total: 5.84s
                                                   remaining: 577ms
910:
        learn: 0.5437317
                                  total: 5.84s
                                                   remaining: 571ms
911:
        learn: 0.5434236
                                  total: 5.85s
                                                   remaining: 565ms
912:
        learn: 0.5430557
                                  total: 5.86s
                                                   remaining: 558ms
        learn: 0.5424609
913:
                                  total: 5.86s
                                                   remaining: 552ms
914:
        learn: 0.5420619
                                  total: 5.87s
                                                   remaining: 545ms
915:
        learn: 0.5418619
                                  total: 5.88s
                                                   remaining: 539ms
                                  total: 5.88s
916:
        learn: 0.5414273
                                                   remaining: 532ms
917:
        learn: 0.5409465
                                  total: 5.89s
                                                   remaining: 526ms
```

```
918:
        learn: 0.5406239
                                  total: 5.89s
                                                   remaining: 519ms
919:
        learn: 0.5403316
                                  total: 5.9s
                                                   remaining: 513ms
920:
        learn: 0.5399962
                                  total: 5.9s
                                                   remaining: 507ms
                                  total: 5.91s
        learn: 0.5396741
921:
                                                   remaining: 500ms
922:
        learn: 0.5392800
                                  total: 5.92s
                                                   remaining: 494ms
923:
        learn: 0.5390990
                                  total: 5.92s
                                                   remaining: 487ms
924:
        learn: 0.5386705
                                  total: 5.93s
                                                   remaining: 481ms
925:
        learn: 0.5383298
                                  total: 5.94s
                                                   remaining: 475ms
926:
        learn: 0.5379681
                                  total: 5.95s
                                                   remaining: 468ms
927:
        learn: 0.5376395
                                  total: 5.96s
                                                   remaining: 462ms
928:
        learn: 0.5371480
                                  total: 5.96s
                                                   remaining: 456ms
                                  total: 5.97s
929:
        learn: 0.5365463
                                                   remaining: 449ms
930:
        learn: 0.5362228
                                  total: 5.98s
                                                   remaining: 443ms
931:
        learn: 0.5357813
                                  total: 5.98s
                                                   remaining: 437ms
932:
        learn: 0.5352835
                                  total: 5.99s
                                                   remaining: 430ms
933:
        learn: 0.5349085
                                  total: 6s
                                                   remaining: 424ms
934:
        learn: 0.5344156
                                  total: 6.01s
                                                   remaining: 418ms
935:
        learn: 0.5340445
                                  total: 6.01s
                                                   remaining: 411ms
936:
        learn: 0.5338106
                                  total: 6.02s
                                                   remaining: 405ms
937:
        learn: 0.5334782
                                  total: 6.02s
                                                   remaining: 398ms
938:
        learn: 0.5329355
                                  total: 6.03s
                                                   remaining: 392ms
939:
        learn: 0.5327082
                                  total: 6.03s
                                                   remaining: 385ms
940:
        learn: 0.5321463
                                  total: 6.03s
                                                   remaining: 378ms
941:
        learn: 0.5317898
                                  total: 6.04s
                                                   remaining: 372ms
942:
        learn: 0.5312256
                                  total: 6.04s
                                                   remaining: 365ms
943:
                                  total: 6.05s
        learn: 0.5310065
                                                   remaining: 359ms
944:
        learn: 0.5307649
                                  total: 6.05s
                                                   remaining: 352ms
945:
        learn: 0.5305503
                                  total: 6.06s
                                                   remaining: 346ms
946:
        learn: 0.5301336
                                  total: 6.07s
                                                   remaining: 340ms
947:
        learn: 0.5296492
                                  total: 6.07s
                                                   remaining: 333ms
948:
        learn: 0.5294099
                                  total: 6.08s
                                                   remaining: 327ms
949:
        learn: 0.5289660
                                  total: 6.09s
                                                   remaining: 320ms
950:
        learn: 0.5287487
                                  total: 6.09s
                                                   remaining: 314ms
951:
        learn: 0.5284304
                                  total: 6.1s
                                                   remaining: 308ms
        learn: 0.5280001
                                                   remaining: 301ms
952:
                                  total: 6.11s
953:
        learn: 0.5275904
                                  total: 6.12s
                                                   remaining: 295ms
954:
        learn: 0.5272261
                                  total: 6.12s
                                                   remaining: 288ms
955:
        learn: 0.5267218
                                  total: 6.13s
                                                   remaining: 282ms
956:
        learn: 0.5264351
                                  total: 6.13s
                                                   remaining: 276ms
957:
        learn: 0.5262648
                                  total: 6.14s
                                                   remaining: 269ms
958:
        learn: 0.5259057
                                  total: 6.15s
                                                   remaining: 263ms
959:
        learn: 0.5255756
                                  total: 6.16s
                                                   remaining: 256ms
        learn: 0.5251339
960:
                                  total: 6.16s
                                                   remaining: 250ms
961:
        learn: 0.5247638
                                  total: 6.17s
                                                   remaining: 244ms
962:
        learn: 0.5243082
                                  total: 6.18s
                                                   remaining: 237ms
963:
        learn: 0.5239925
                                  total: 6.18s
                                                   remaining: 231ms
964:
        learn: 0.5237857
                                  total: 6.19s
                                                   remaining: 225ms
        learn: 0.5233870
965:
                                  total: 6.2s
                                                   remaining: 218ms
966:
        learn: 0.5231292
                                  total: 6.21s
                                                   remaining: 212ms
967:
        learn: 0.5228029
                                  total: 6.21s
                                                   remaining: 205ms
968:
        learn: 0.5222919
                                  total: 6.22s
                                                   remaining: 199ms
969:
        learn: 0.5219913
                                  total: 6.22s
                                                   remaining: 192ms
970:
        learn: 0.5217130
                                  total: 6.22s
                                                   remaining: 186ms
971:
        learn: 0.5215137
                                  total: 6.23s
                                                   remaining: 179ms
972:
        learn: 0.5212420
                                  total: 6.24s
                                                   remaining: 173ms
        learn: 0.5208197
973:
                                  total: 6.24s
                                                   remaining: 167ms
974:
        learn: 0.5206041
                                  total: 6.25s
                                                   remaining: 160ms
975:
                                  total: 6.25s
        learn: 0.5202962
                                                   remaining: 154ms
976:
        learn: 0.5201588
                                  total: 6.26s
                                                   remaining: 147ms
977:
        learn: 0.5199588
                                  total: 6.27s
                                                   remaining: 141ms
```

```
978:
        learn: 0.5197556
                                  total: 6.28s
                                                   remaining: 135ms
979:
        learn: 0.5193459
                                  total: 6.28s
                                                   remaining: 128ms
980:
        learn: 0.5191728
                                  total: 6.29s
                                                   remaining: 122ms
981:
        learn: 0.5191526
                                  total: 6.29s
                                                   remaining: 115ms
982:
        learn: 0.5187202
                                  total: 6.3s
                                                   remaining: 109ms
983:
        learn: 0.5183406
                                  total: 6.31s
                                                   remaining: 103ms
984:
        learn: 0.5180136
                                  total: 6.32s
                                                   remaining: 96.2ms
985:
        learn: 0.5175793
                                  total: 6.32s
                                                   remaining: 89.8ms
986:
        learn: 0.5174137
                                  total: 6.33s
                                                   remaining: 83.4ms
987:
        learn: 0.5173956
                                  total: 6.34s
                                                   remaining: 77ms
                                  total: 6.35s
988:
        learn: 0.5168893
                                                   remaining: 70.6ms
989:
        learn: 0.5164848
                                  total: 6.36s
                                                   remaining: 64.2ms
990:
        learn: 0.5160133
                                  total: 6.37s
                                                   remaining: 57.8ms
991:
        learn: 0.5158704
                                  total: 6.37s
                                                   remaining: 51.4ms
992:
        learn: 0.5154791
                                  total: 6.38s
                                                   remaining: 45ms
993:
        learn: 0.5152084
                                  total: 6.39s
                                                   remaining: 38.6ms
994:
        learn: 0.5148385
                                  total: 6.39s
                                                   remaining: 32.1ms
995:
        learn: 0.5145167
                                  total: 6.39s
                                                   remaining: 25.7ms
        learn: 0.5139988
                                  total: 6.4s
996:
                                                   remaining: 19.3ms
997:
        learn: 0.5137984
                                  total: 6.41s
                                                   remaining: 12.8ms
998:
        learn: 0.5135772
                                  total: 6.41s
                                                   remaining: 6.42ms
999:
        learn: 0.5133012
                                  total: 6.42s
                                                   remaining: Ous
Learning rate set to 0.06063
0:
        learn: 59.2610050
                                  total: 13.5ms
                                                   remaining: 13.4s
1:
        learn: 56.0575891
                                  total: 21.7ms
                                                   remaining: 10.8s
2:
        learn: 53.0390927
                                  total: 28.5ms
                                                   remaining: 9.46s
3:
        learn: 50.1226170
                                  total: 35.8ms
                                                   remaining: 8.92s
4:
        learn: 47.4401818
                                  total: 42.5ms
                                                   remaining: 8.45s
5:
        learn: 44.9700194
                                  total: 49ms
                                                   remaining: 8.12s
6:
        learn: 42.5295066
                                  total: 55.2ms
                                                   remaining: 7.83s
7:
        learn: 40.3164006
                                  total: 62.5ms
                                                   remaining: 7.75s
8:
        learn: 38.2344566
                                  total: 69.9ms
                                                   remaining: 7.7s
9:
        learn: 36.2294473
                                  total: 77.2ms
                                                   remaining: 7.64s
10:
        learn: 34.3723742
                                  total: 83.8ms
                                                   remaining: 7.53s
        learn: 32.6044700
                                  total: 91ms
11:
                                                   remaining: 7.49s
12:
        learn: 30.9295099
                                  total: 95.7ms
                                                   remaining: 7.27s
13:
        learn: 29.3809907
                                  total: 103ms
                                                   remaining: 7.26s
14:
        learn: 27.8762092
                                  total: 110ms
                                                   remaining: 7.24s
        learn: 26.4865670
15:
                                  total: 117ms
                                                   remaining: 7.19s
16:
        learn: 25.1632569
                                  total: 124ms
                                                   remaining: 7.17s
17:
        learn: 23.9073271
                                  total: 132ms
                                                   remaining: 7.18s
18:
        learn: 22.7354349
                                  total: 139ms
                                                   remaining: 7.16s
19:
        learn: 21.6569933
                                  total: 146ms
                                                   remaining: 7.15s
20:
        learn: 20.6665464
                                  total: 153ms
                                                   remaining: 7.15s
21:
        learn: 19.6769717
                                  total: 161ms
                                                   remaining: 7.15s
22:
        learn: 18.7197568
                                  total: 168ms
                                                   remaining: 7.14s
23:
        learn: 17.8274538
                                  total: 176ms
                                                   remaining: 7.17s
24:
        learn: 16.9757759
                                  total: 184ms
                                                   remaining: 7.16s
25:
        learn: 16.2150234
                                  total: 191ms
                                                   remaining: 7.14s
26:
        learn: 15.4705898
                                  total: 194ms
                                                   remaining: 6.99s
27:
        learn: 14.7757660
                                  total: 197ms
                                                   remaining: 6.85s
                                  total: 200ms
28:
        learn: 14.1290791
                                                   remaining: 6.71s
29:
        learn: 13.5240059
                                  total: 205ms
                                                   remaining: 6.63s
30:
        learn: 12.9520697
                                  total: 212ms
                                                   remaining: 6.61s
31:
        learn: 12.4017546
                                  total: 216ms
                                                   remaining: 6.54s
32:
        learn: 11.8781886
                                  total: 224ms
                                                   remaining: 6.55s
33:
        learn: 11.4069794
                                  total: 230ms
                                                   remaining: 6.52s
34:
        learn: 10.9366082
                                  total: 237ms
                                                   remaining: 6.53s
35:
        learn: 10.4859155
                                  total: 244ms
                                                   remaining: 6.54s
36:
        learn: 10.0873609
                                  total: 251ms
                                                   remaining: 6.54s
```

```
37:
        learn: 9.7131108
                                  total: 258ms
                                                   remaining: 6.53s
38:
        learn: 9.3689957
                                  total: 265ms
                                                   remaining: 6.53s
                                  total: 273ms
39:
        learn: 9.0053487
                                                   remaining: 6.54s
                                  total: 280ms
40:
        learn: 8.6876361
                                                   remaining: 6.54s
41:
        learn: 8.3780798
                                  total: 287ms
                                                   remaining: 6.55s
42:
        learn: 8.1137783
                                  total: 294ms
                                                   remaining: 6.55s
43:
        learn: 7.8208561
                                  total: 302ms
                                                   remaining: 6.56s
44:
        learn: 7.5510879
                                  total: 309ms
                                                   remaining: 6.56s
45:
        learn: 7.3213508
                                  total: 317ms
                                                   remaining: 6.57s
46:
        learn: 7.0839701
                                  total: 324ms
                                                   remaining: 6.58s
47:
        learn: 6.8671128
                                  total: 332ms
                                                   remaining: 6.58s
48:
        learn: 6.6533145
                                  total: 339ms
                                                   remaining: 6.59s
49:
        learn: 6.4552518
                                  total: 347ms
                                                   remaining: 6.6s
50:
        learn: 6.2789831
                                  total: 354ms
                                                   remaining: 6.59s
        learn: 6.0971297
51:
                                  total: 362ms
                                                   remaining: 6.6s
        learn: 5.9399185
52:
                                  total: 370ms
                                                   remaining: 6.6s
53:
        learn: 5.7755647
                                  total: 377ms
                                                   remaining: 6.61s
54:
        learn: 5.6267940
                                  total: 385ms
                                                   remaining: 6.62s
55:
        learn: 5.4876803
                                  total: 392ms
                                                   remaining: 6.61s
        learn: 5.3581316
56:
                                  total: 395ms
                                                   remaining: 6.54s
57:
        learn: 5.2498468
                                  total: 398ms
                                                   remaining: 6.47s
58:
        learn: 5.1348541
                                  total: 402ms
                                                   remaining: 6.41s
59:
        learn: 5.0218819
                                  total: 423ms
                                                   remaining: 6.63s
60:
        learn: 4.9116459
                                  total: 431ms
                                                   remaining: 6.63s
61:
        learn: 4.8079417
                                  total: 434ms
                                                   remaining: 6.56s
62:
                                  total: 437ms
        learn: 4.7203131
                                                   remaining: 6.5s
        learn: 4.6341641
63:
                                  total: 440ms
                                                   remaining: 6.43s
        learn: 4.5326218
64:
                                  total: 447ms
                                                   remaining: 6.44s
65:
                                  total: 453ms
        learn: 4.4577310
                                                   remaining: 6.41s
66:
        learn: 4.3684451
                                  total: 461ms
                                                   remaining: 6.41s
67:
        learn: 4.2915245
                                  total: 468ms
                                                   remaining: 6.41s
        learn: 4.2301304
68:
                                  total: 475ms
                                                   remaining: 6.41s
        learn: 4.1647118
69:
                                  total: 482ms
                                                   remaining: 6.4s
70:
        learn: 4.1076760
                                  total: 489ms
                                                   remaining: 6.4s
71:
        learn: 4.0359757
                                  total: 495ms
                                                   remaining: 6.37s
72:
        learn: 3.9730519
                                  total: 500ms
                                                   remaining: 6.34s
73:
        learn: 3.9215873
                                  total: 507ms
                                                   remaining: 6.34s
74:
        learn: 3.8750651
                                  total: 513ms
                                                   remaining: 6.33s
75:
        learn: 3.8120616
                                  total: 520ms
                                                   remaining: 6.32s
76:
        learn: 3.7560550
                                  total: 526ms
                                                   remaining: 6.31s
77:
        learn: 3.7012148
                                  total: 531ms
                                                   remaining: 6.28s
78:
        learn: 3.6550003
                                  total: 539ms
                                                   remaining: 6.28s
79:
        learn: 3.6116825
                                  total: 546ms
                                                   remaining: 6.28s
:08
        learn: 3.5756572
                                  total: 554ms
                                                   remaining: 6.28s
81:
        learn: 3.5315442
                                  total: 561ms
                                                   remaining: 6.28s
82:
        learn: 3.4869936
                                  total: 567ms
                                                   remaining: 6.26s
83:
        learn: 3.4438217
                                  total: 574ms
                                                   remaining: 6.26s
84:
        learn: 3.4110057
                                  total: 582ms
                                                   remaining: 6.26s
85:
        learn: 3.3768833
                                  total: 588ms
                                                   remaining: 6.25s
86:
        learn: 3.3391561
                                  total: 597ms
                                                   remaining: 6.26s
87:
        learn: 3.3029505
                                  total: 600ms
                                                   remaining: 6.22s
88:
        learn: 3.2749806
                                  total: 603ms
                                                   remaining: 6.17s
89:
        learn: 3.2436266
                                  total: 607ms
                                                   remaining: 6.13s
90:
        learn: 3.2078374
                                  total: 610ms
                                                   remaining: 6.09s
91:
        learn: 3.1783964
                                  total: 614ms
                                                   remaining: 6.06s
92:
        learn: 3.1489339
                                  total: 621ms
                                                   remaining: 6.05s
93:
        learn: 3.1260316
                                  total: 625ms
                                                   remaining: 6.02s
94:
        learn: 3.1033200
                                  total: 632ms
                                                   remaining: 6.02s
95:
        learn: 3.0809791
                                  total: 637ms
                                                   remaining: 6s
96:
        learn: 3.0547615
                                  total: 641ms
                                                   remaining: 5.96s
```

```
97:
        learn: 3.0256937
                                  total: 647ms
                                                   remaining: 5.96s
98:
        learn: 2.9999968
                                  total: 655ms
                                                   remaining: 5.96s
99:
        learn: 2.9818316
                                  total: 662ms
                                                   remaining: 5.96s
100:
        learn: 2.9616159
                                  total: 669ms
                                                   remaining: 5.96s
101:
        learn: 2.9349591
                                  total: 676ms
                                                   remaining: 5.95s
102:
        learn: 2.9150377
                                  total: 683ms
                                                   remaining: 5.95s
103:
        learn: 2.8959568
                                  total: 690ms
                                                   remaining: 5.94s
104:
        learn: 2.8758161
                                  total: 697ms
                                                   remaining: 5.94s
105:
        learn: 2.8536857
                                  total: 704ms
                                                   remaining: 5.94s
106:
        learn: 2.8388227
                                  total: 711ms
                                                   remaining: 5.93s
107:
        learn: 2.8194163
                                  total: 718ms
                                                   remaining: 5.93s
108:
        learn: 2.7953048
                                  total: 726ms
                                                   remaining: 5.93s
                                  total: 732ms
109:
        learn: 2.7736146
                                                   remaining: 5.92s
110:
        learn: 2.7467996
                                  total: 739ms
                                                   remaining: 5.92s
        learn: 2.7337372
111:
                                  total: 746ms
                                                   remaining: 5.92s
        learn: 2.7079036
                                  total: 753ms
112:
                                                   remaining: 5.91s
113:
        learn: 2.6889521
                                  total: 760ms
                                                   remaining: 5.91s
114:
        learn: 2.6683495
                                  total: 767ms
                                                   remaining: 5.9s
115:
        learn: 2.6526417
                                  total: 774ms
                                                   remaining: 5.89s
        learn: 2.6314833
116:
                                  total: 781ms
                                                   remaining: 5.9s
117:
        learn: 2.6122933
                                  total: 789ms
                                                   remaining: 5.89s
118:
        learn: 2.5910547
                                  total: 797ms
                                                   remaining: 5.9s
119:
        learn: 2.5733311
                                  total: 801ms
                                                   remaining: 5.87s
                                  total: 804ms
120:
        learn: 2.5606779
                                                   remaining: 5.84s
121:
        learn: 2.5434249
                                  total: 807ms
                                                   remaining: 5.8s
122:
        learn: 2.5238526
                                  total: 810ms
                                                   remaining: 5.78s
        learn: 2.5071113
123:
                                  total: 814ms
                                                   remaining: 5.75s
        learn: 2.4916807
124:
                                  total: 818ms
                                                   remaining: 5.73s
125:
        learn: 2.4783327
                                  total: 825ms
                                                   remaining: 5.72s
126:
        learn: 2.4641742
                                  total: 830ms
                                                   remaining: 5.71s
127:
        learn: 2.4543255
                                  total: 837ms
                                                   remaining: 5.7s
128:
        learn: 2.4404437
                                  total: 844ms
                                                   remaining: 5.7s
129:
        learn: 2.4291982
                                  total: 849ms
                                                   remaining: 5.68s
130:
        learn: 2.4027050
                                  total: 856ms
                                                   remaining: 5.68s
131:
        learn: 2.3850688
                                  total: 862ms
                                                   remaining: 5.67s
132:
        learn: 2.3683009
                                  total: 869ms
                                                   remaining: 5.67s
133:
        learn: 2.3542271
                                  total: 876ms
                                                   remaining: 5.66s
134:
        learn: 2.3469134
                                  total: 883ms
                                                   remaining: 5.66s
        learn: 2.3393424
135:
                                  total: 890ms
                                                   remaining: 5.65s
        learn: 2.3271027
136:
                                  total: 896ms
                                                   remaining: 5.64s
137:
        learn: 2.3167434
                                  total: 903ms
                                                   remaining: 5.64s
138:
        learn: 2.2966891
                                  total: 909ms
                                                   remaining: 5.63s
139:
        learn: 2.2870754
                                  total: 918ms
                                                   remaining: 5.64s
140:
        learn: 2.2746076
                                  total: 926ms
                                                   remaining: 5.64s
141:
        learn: 2.2611590
                                  total: 935ms
                                                   remaining: 5.65s
142:
        learn: 2.2462779
                                  total: 941ms
                                                   remaining: 5.64s
143:
        learn: 2.2308565
                                  total: 948ms
                                                   remaining: 5.64s
144:
        learn: 2.2228469
                                                   remaining: 5.63s
                                  total: 955ms
145:
        learn: 2.2109732
                                  total: 963ms
                                                   remaining: 5.63s
146:
        learn: 2.1964970
                                  total: 970ms
                                                   remaining: 5.63s
147:
        learn: 2.1816768
                                  total: 974ms
                                                   remaining: 5.61s
148:
        learn: 2.1710082
                                  total: 981ms
                                                   remaining: 5.6s
149:
        learn: 2.1619820
                                  total: 990ms
                                                   remaining: 5.61s
150:
        learn: 2.1523421
                                  total: 997ms
                                                   remaining: 5.6s
151:
        learn: 2.1405254
                                  total: 1s
                                                   remaining: 5.59s
152:
        learn: 2.1300910
                                  total: 1.01s
                                                   remaining: 5.58s
153:
        learn: 2.1222702
                                  total: 1.01s
                                                   remaining: 5.56s
154:
        learn: 2.1154792
                                  total: 1.02s
                                                   remaining: 5.56s
155:
        learn: 2.1062309
                                  total: 1.03s
                                                   remaining: 5.55s
156:
        learn: 2.0894519
                                  total: 1.03s
                                                   remaining: 5.55s
```

```
157:
        learn: 2.0802683
                                  total: 1.04s
                                                   remaining: 5.54s
158:
        learn: 2.0709389
                                  total: 1.05s
                                                   remaining: 5.54s
        learn: 2.0619161
159:
                                  total: 1.05s
                                                   remaining: 5.53s
160:
        learn: 2.0521798
                                  total: 1.06s
                                                   remaining: 5.53s
161:
        learn: 2.0460559
                                  total: 1.07s
                                                   remaining: 5.52s
162:
        learn: 2.0338001
                                  total: 1.07s
                                                   remaining: 5.51s
163:
        learn: 2.0260673
                                  total: 1.08s
                                                   remaining: 5.5s
164:
        learn: 2.0196635
                                  total: 1.09s
                                                   remaining: 5.5s
165:
        learn: 2.0112271
                                  total: 1.09s
                                                   remaining: 5.49s
166:
        learn: 2.0050063
                                  total: 1.1s
                                                   remaining: 5.49s
167:
        learn: 1.9969451
                                  total: 1.11s
                                                   remaining: 5.48s
168:
        learn: 1.9873139
                                  total: 1.11s
                                                   remaining: 5.47s
169:
        learn: 1.9810212
                                  total: 1.12s
                                                   remaining: 5.45s
170:
        learn: 1.9735898
                                  total: 1.12s
                                                   remaining: 5.45s
171:
        learn: 1.9676078
                                  total: 1.13s
                                                   remaining: 5.43s
172:
        learn: 1.9588326
                                  total: 1.14s
                                                   remaining: 5.43s
173:
        learn: 1.9501125
                                  total: 1.14s
                                                   remaining: 5.42s
174:
        learn: 1.9428481
                                  total: 1.15s
                                                   remaining: 5.42s
175:
        learn: 1.9327614
                                  total: 1.16s
                                                   remaining: 5.41s
        learn: 1.9276990
176:
                                  total: 1.16s
                                                   remaining: 5.41s
177:
        learn: 1.9183653
                                  total: 1.17s
                                                   remaining: 5.4s
178:
        learn: 1.9066776
                                  total: 1.18s
                                                   remaining: 5.4s
                                  total: 1.18s
179:
        learn: 1.8977590
                                                   remaining: 5.39s
        learn: 1.8912220
180:
                                  total: 1.19s
                                                   remaining: 5.39s
181:
        learn: 1.8842419
                                  total: 1.2s
                                                   remaining: 5.39s
182:
        learn: 1.8703852
                                  total: 1.21s
                                                   remaining: 5.38s
183:
                                  total: 1.21s
        learn: 1.8638302
                                                   remaining: 5.36s
184:
        learn: 1.8563095
                                  total: 1.21s
                                                   remaining: 5.34s
185:
        learn: 1.8500933
                                  total: 1.22s
                                                   remaining: 5.32s
186:
        learn: 1.8382748
                                  total: 1.22s
                                                   remaining: 5.3s
187:
        learn: 1.8328671
                                  total: 1.23s
                                                   remaining: 5.3s
188:
        learn: 1.8287512
                                  total: 1.23s
                                                   remaining: 5.29s
        learn: 1.8219302
189:
                                  total: 1.24s
                                                   remaining: 5.28s
190:
        learn: 1.8158467
                                  total: 1.25s
                                                   remaining: 5.28s
191:
        learn: 1.8084022
                                  total: 1.25s
                                                   remaining: 5.27s
192:
        learn: 1.8020777
                                  total: 1.26s
                                                   remaining: 5.26s
193:
        learn: 1.7968777
                                  total: 1.27s
                                                   remaining: 5.26s
194:
        learn: 1.7917130
                                  total: 1.27s
                                                   remaining: 5.26s
195:
        learn: 1.7813790
                                  total: 1.28s
                                                   remaining: 5.25s
196:
        learn: 1.7717192
                                  total: 1.29s
                                                   remaining: 5.25s
197:
        learn: 1.7629303
                                  total: 1.29s
                                                   remaining: 5.25s
198:
        learn: 1.7563119
                                  total: 1.3s
                                                   remaining: 5.24s
199:
        learn: 1.7489292
                                  total: 1.31s
                                                   remaining: 5.23s
200:
        learn: 1.7422521
                                  total: 1.31s
                                                   remaining: 5.23s
201:
        learn: 1.7342119
                                  total: 1.32s
                                                   remaining: 5.23s
202:
        learn: 1.7306745
                                  total: 1.33s
                                                   remaining: 5.22s
203:
        learn: 1.7218776
                                  total: 1.34s
                                                   remaining: 5.21s
204:
        learn: 1.7180788
                                  total: 1.34s
                                                   remaining: 5.21s
205:
        learn: 1.7108710
                                  total: 1.35s
                                                   remaining: 5.2s
                                  total: 1.36s
206:
        learn: 1.7043105
                                                   remaining: 5.2s
207:
        learn: 1.6994185
                                  total: 1.36s
                                                   remaining: 5.19s
208:
        learn: 1.6940216
                                  total: 1.37s
                                                   remaining: 5.19s
209:
        learn: 1.6883670
                                  total: 1.38s
                                                   remaining: 5.18s
210:
        learn: 1.6816746
                                  total: 1.39s
                                                   remaining: 5.18s
211:
        learn: 1.6759768
                                  total: 1.39s
                                                   remaining: 5.17s
212:
        learn: 1.6710001
                                  total: 1.4s
                                                   remaining: 5.17s
213:
        learn: 1.6568312
                                  total: 1.41s
                                                   remaining: 5.16s
214:
        learn: 1.6544646
                                  total: 1.41s
                                                   remaining: 5.16s
215:
        learn: 1.6501528
                                  total: 1.42s
                                                   remaining: 5.14s
216:
        learn: 1.6472831
                                  total: 1.42s
                                                   remaining: 5.12s
```

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217:
        learn: 1.6442668
                                  total: 1.42s
                                                   remaining: 5.11s
218:
        learn: 1.6350770
                                  total: 1.43s
                                                   remaining: 5.09s
219:
        learn: 1.6299037
                                  total: 1.43s
                                                   remaining: 5.08s
220:
        learn: 1.6246287
                                  total: 1.44s
                                                   remaining: 5.07s
221:
        learn: 1.6211232
                                  total: 1.44s
                                                   remaining: 5.06s
222:
        learn: 1.6148779
                                  total: 1.45s
                                                   remaining: 5.05s
223:
        learn: 1.6082560
                                  total: 1.46s
                                                   remaining: 5.04s
224:
        learn: 1.6006114
                                  total: 1.46s
                                                   remaining: 5.03s
225:
        learn: 1.5943811
                                  total: 1.47s
                                                   remaining: 5.02s
226:
        learn: 1.5916346
                                  total: 1.47s
                                                   remaining: 5.02s
227:
        learn: 1.5876520
                                  total: 1.48s
                                                   remaining: 5.01s
228:
        learn: 1.5836297
                                  total: 1.49s
                                                   remaining: 5s
229:
        learn: 1.5753328
                                  total: 1.49s
                                                   remaining: 4.99s
230:
        learn: 1.5637116
                                  total: 1.5s
                                                   remaining: 4.99s
231:
        learn: 1.5575952
                                  total: 1.5s
                                                   remaining: 4.98s
232:
        learn: 1.5499800
                                  total: 1.51s
                                                   remaining: 4.98s
233:
        learn: 1.5428572
                                  total: 1.52s
                                                   remaining: 4.97s
234:
        learn: 1.5390364
                                  total: 1.52s
                                                   remaining: 4.96s
235:
                                  total: 1.53s
        learn: 1.5338282
                                                   remaining: 4.96s
236:
        learn: 1.5279161
                                  total: 1.54s
                                                   remaining: 4.95s
237:
        learn: 1.5229339
                                  total: 1.54s
                                                   remaining: 4.95s
238:
        learn: 1.5143691
                                  total: 1.55s
                                                   remaining: 4.94s
239:
        learn: 1.5118833
                                  total: 1.56s
                                                   remaining: 4.94s
240:
        learn: 1.5083182
                                  total: 1.56s
                                                   remaining: 4.93s
241:
        learn: 1.5044419
                                  total: 1.57s
                                                   remaining: 4.93s
242:
                                  total: 1.58s
        learn: 1.4982727
                                                   remaining: 4.92s
243:
                                  total: 1.59s
        learn: 1.4919953
                                                   remaining: 4.92s
244:
        learn: 1.4895331
                                  total: 1.59s
                                                   remaining: 4.91s
245:
        learn: 1.4847084
                                  total: 1.6s
                                                   remaining: 4.91s
246:
        learn: 1.4754841
                                  total: 1.61s
                                                   remaining: 4.9s
247:
        learn: 1.4722635
                                  total: 1.62s
                                                   remaining: 4.9s
248:
        learn: 1.4662659
                                  total: 1.62s
                                                   remaining: 4.89s
249:
        learn: 1.4602615
                                  total: 1.62s
                                                   remaining: 4.87s
250:
        learn: 1.4572845
                                  total: 1.63s
                                                   remaining: 4.86s
251:
                                  total: 1.63s
        learn: 1.4528654
                                                   remaining: 4.84s
        learn: 1.4475260
252:
                                  total: 1.64s
                                                   remaining: 4.83s
253:
        learn: 1.4438336
                                  total: 1.64s
                                                   remaining: 4.82s
254:
        learn: 1.4394998
                                  total: 1.65s
                                                   remaining: 4.81s
255:
        learn: 1.4359416
                                  total: 1.65s
                                                   remaining: 4.81s
256:
        learn: 1.4314312
                                  total: 1.66s
                                                   remaining: 4.8s
257:
        learn: 1.4280174
                                  total: 1.67s
                                                   remaining: 4.79s
258:
        learn: 1.4217801
                                  total: 1.67s
                                                   remaining: 4.79s
259:
        learn: 1.4146675
                                  total: 1.68s
                                                   remaining: 4.78s
260:
        learn: 1.4102389
                                  total: 1.69s
                                                   remaining: 4.78s
261:
        learn: 1.4057934
                                  total: 1.7s
                                                   remaining: 4.78s
262:
        learn: 1.4001151
                                  total: 1.7s
                                                   remaining: 4.77s
263:
        learn: 1.3967446
                                  total: 1.71s
                                                   remaining: 4.77s
        learn: 1.3913181
                                  total: 1.72s
264:
                                                   remaining: 4.77s
                                  total: 1.72s
265:
        learn: 1.3872022
                                                   remaining: 4.76s
266:
        learn: 1.3838375
                                  total: 1.73s
                                                   remaining: 4.75s
267:
        learn: 1.3806273
                                  total: 1.74s
                                                   remaining: 4.75s
268:
        learn: 1.3768956
                                  total: 1.75s
                                                   remaining: 4.75s
269:
        learn: 1.3736398
                                  total: 1.75s
                                                   remaining: 4.74s
270:
        learn: 1.3703623
                                  total: 1.76s
                                                   remaining: 4.74s
271:
        learn: 1.3656570
                                  total: 1.77s
                                                   remaining: 4.73s
272:
        learn: 1.3614025
                                  total: 1.77s
                                                   remaining: 4.73s
273:
        learn: 1.3567342
                                  total: 1.78s
                                                   remaining: 4.72s
274:
        learn: 1.3505292
                                  total: 1.79s
                                                   remaining: 4.72s
275:
        learn: 1.3476621
                                  total: 1.8s
                                                   remaining: 4.71s
276:
        learn: 1.3441744
                                  total: 1.8s
                                                   remaining: 4.71s
```

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277:
        learn: 1.3403675
                                  total: 1.81s
                                                   remaining: 4.7s
278:
        learn: 1.3357971
                                  total: 1.82s
                                                   remaining: 4.7s
279:
        learn: 1.3310309
                                  total: 1.82s
                                                   remaining: 4.69s
280:
        learn: 1.3264914
                                  total: 1.83s
                                                   remaining: 4.67s
281:
        learn: 1.3195886
                                  total: 1.83s
                                                   remaining: 4.66s
282:
        learn: 1.3171539
                                  total: 1.83s
                                                   remaining: 4.65s
283:
        learn: 1.3138858
                                  total: 1.84s
                                                   remaining: 4.64s
284:
        learn: 1.3092261
                                  total: 1.85s
                                                   remaining: 4.63s
285:
        learn: 1.3058949
                                  total: 1.85s
                                                   remaining: 4.63s
286:
        learn: 1.3031197
                                  total: 1.86s
                                                   remaining: 4.62s
287:
        learn: 1.2976667
                                  total: 1.87s
                                                   remaining: 4.62s
288:
        learn: 1.2940466
                                  total: 1.87s
                                                   remaining: 4.61s
289:
        learn: 1.2899578
                                  total: 1.88s
                                                   remaining: 4.6s
290:
        learn: 1.2863961
                                  total: 1.88s
                                                   remaining: 4.59s
        learn: 1.2835776
291:
                                  total: 1.89s
                                                   remaining: 4.58s
        learn: 1.2796459
292:
                                  total: 1.9s
                                                   remaining: 4.58s
293:
        learn: 1.2763163
                                  total: 1.9s
                                                   remaining: 4.57s
294:
        learn: 1.2723457
                                  total: 1.91s
                                                   remaining: 4.56s
295:
        learn: 1.2685482
                                  total: 1.92s
                                                   remaining: 4.56s
296:
        learn: 1.2631824
                                  total: 1.93s
                                                   remaining: 4.56s
297:
        learn: 1.2602211
                                  total: 1.93s
                                                   remaining: 4.55s
298:
        learn: 1.2580233
                                  total: 1.94s
                                                   remaining: 4.55s
299:
        learn: 1.2558425
                                  total: 1.95s
                                                   remaining: 4.54s
300:
        learn: 1.2521450
                                  total: 1.95s
                                                   remaining: 4.54s
301:
        learn: 1.2488423
                                  total: 1.96s
                                                   remaining: 4.53s
302:
        learn: 1.2452559
                                  total: 1.96s
                                                   remaining: 4.52s
303:
                                  total: 1.97s
        learn: 1.2423039
                                                   remaining: 4.51s
304:
        learn: 1.2394914
                                  total: 1.98s
                                                   remaining: 4.51s
        learn: 1.2372383
                                  total: 1.98s
305:
                                                   remaining: 4.5s
306:
        learn: 1.2327218
                                  total: 1.99s
                                                   remaining: 4.5s
                                  total: 2s
307:
        learn: 1.2290945
                                                   remaining: 4.49s
308:
        learn: 1.2262537
                                  total: 2s
                                                   remaining: 4.49s
309:
        learn: 1.2237176
                                  total: 2.01s
                                                   remaining: 4.48s
310:
        learn: 1.2193592
                                  total: 2.02s
                                                   remaining: 4.47s
        learn: 1.2142533
                                  total: 2.02s
311:
                                                   remaining: 4.46s
312:
        learn: 1.2119554
                                  total: 2.02s
                                                   remaining: 4.44s
313:
        learn: 1.2073358
                                  total: 2.03s
                                                   remaining: 4.43s
314:
        learn: 1.2031677
                                  total: 2.03s
                                                   remaining: 4.42s
315:
        learn: 1.2006287
                                  total: 2.04s
                                                   remaining: 4.42s
316:
        learn: 1.1970605
                                  total: 2.04s
                                                   remaining: 4.41s
317:
        learn: 1.1944007
                                  total: 2.05s
                                                   remaining: 4.4s
318:
        learn: 1.1896860
                                  total: 2.06s
                                                   remaining: 4.39s
        learn: 1.1863029
319:
                                  total: 2.06s
                                                   remaining: 4.38s
320:
        learn: 1.1828591
                                  total: 2.07s
                                                   remaining: 4.38s
321:
        learn: 1.1798513
                                  total: 2.08s
                                                   remaining: 4.37s
322:
        learn: 1.1754619
                                  total: 2.08s
                                                   remaining: 4.37s
323:
        learn: 1.1730251
                                  total: 2.09s
                                                   remaining: 4.36s
        learn: 1.1696796
                                  total: 2.1s
324:
                                                   remaining: 4.35s
325:
        learn: 1.1672832
                                  total: 2.1s
                                                   remaining: 4.35s
326:
        learn: 1.1641056
                                  total: 2.11s
                                                   remaining: 4.34s
327:
        learn: 1.1615128
                                  total: 2.12s
                                                   remaining: 4.34s
328:
        learn: 1.1591106
                                  total: 2.12s
                                                   remaining: 4.33s
329:
        learn: 1.1568168
                                  total: 2.13s
                                                   remaining: 4.32s
330:
        learn: 1.1552017
                                  total: 2.14s
                                                   remaining: 4.32s
331:
        learn: 1.1514769
                                  total: 2.14s
                                                   remaining: 4.31s
332:
        learn: 1.1498304
                                  total: 2.15s
                                                   remaining: 4.31s
333:
        learn: 1.1469830
                                  total: 2.16s
                                                   remaining: 4.3s
334:
        learn: 1.1447290
                                  total: 2.16s
                                                   remaining: 4.3s
                                  total: 2.17s
                                                   remaining: 4.29s
335:
        learn: 1.1410523
336:
        learn: 1.1391140
                                  total: 2.18s
                                                   remaining: 4.29s
```

```
337:
        learn: 1.1365321
                                  total: 2.19s
                                                   remaining: 4.28s
338:
        learn: 1.1349174
                                  total: 2.19s
                                                   remaining: 4.28s
339:
        learn: 1.1319765
                                  total: 2.2s
                                                   remaining: 4.27s
340:
        learn: 1.1282453
                                  total: 2.21s
                                                   remaining: 4.27s
341:
        learn: 1.1263154
                                  total: 2.22s
                                                   remaining: 4.26s
342:
        learn: 1.1234675
                                  total: 2.22s
                                                   remaining: 4.25s
343:
        learn: 1.1224812
                                  total: 2.22s
                                                   remaining: 4.24s
344:
        learn: 1.1185859
                                  total: 2.23s
                                                   remaining: 4.23s
345:
        learn: 1.1166296
                                  total: 2.23s
                                                   remaining: 4.22s
346:
        learn: 1.1132519
                                  total: 2.24s
                                                   remaining: 4.21s
347:
                                  total: 2.24s
        learn: 1.1115548
                                                   remaining: 4.2s
348:
        learn: 1.1098410
                                  total: 2.25s
                                                   remaining: 4.19s
349:
        learn: 1.1073239
                                  total: 2.25s
                                                   remaining: 4.19s
350:
        learn: 1.1041156
                                  total: 2.26s
                                                   remaining: 4.17s
351:
        learn: 1.1011856
                                  total: 2.26s
                                                   remaining: 4.17s
                                  total: 2.27s
352:
        learn: 1.0977183
                                                   remaining: 4.16s
353:
        learn: 1.0955579
                                  total: 2.28s
                                                   remaining: 4.16s
354:
        learn: 1.0924129
                                  total: 2.29s
                                                   remaining: 4.15s
        learn: 1.0911739
                                  total: 2.29s
355:
                                                   remaining: 4.14s
356:
        learn: 1.0890960
                                  total: 2.3s
                                                   remaining: 4.14s
357:
        learn: 1.0863561
                                  total: 2.31s
                                                   remaining: 4.13s
358:
        learn: 1.0816410
                                  total: 2.31s
                                                   remaining: 4.13s
359:
        learn: 1.0794189
                                  total: 2.32s
                                                   remaining: 4.12s
360:
        learn: 1.0775474
                                  total: 2.33s
                                                   remaining: 4.12s
361:
        learn: 1.0746101
                                  total: 2.33s
                                                   remaining: 4.11s
        learn: 1.0730696
                                  total: 2.34s
362:
                                                   remaining: 4.11s
                                  total: 2.35s
363:
        learn: 1.0708083
                                                   remaining: 4.1s
364:
        learn: 1.0675287
                                  total: 2.35s
                                                   remaining: 4.1s
        learn: 1.0632705
                                  total: 2.36s
365:
                                                   remaining: 4.09s
366:
        learn: 1.0589868
                                  total: 2.37s
                                                   remaining: 4.09s
367:
        learn: 1.0559924
                                  total: 2.38s
                                                   remaining: 4.08s
368:
        learn: 1.0546958
                                  total: 2.39s
                                                   remaining: 4.08s
369:
        learn: 1.0532257
                                  total: 2.39s
                                                   remaining: 4.07s
370:
        learn: 1.0517051
                                  total: 2.39s
                                                   remaining: 4.06s
        learn: 1.0486624
                                  total: 2.4s
371:
                                                   remaining: 4.04s
        learn: 1.0464832
372:
                                  total: 2.4s
                                                   remaining: 4.03s
373:
        learn: 1.0435461
                                  total: 2.4s
                                                   remaining: 4.02s
374:
        learn: 1.0411600
                                  total: 2.41s
                                                   remaining: 4.02s
375:
        learn: 1.0389009
                                  total: 2.42s
                                                   remaining: 4.01s
376:
        learn: 1.0365361
                                  total: 2.42s
                                                   remaining: 4s
377:
        learn: 1.0351482
                                  total: 2.43s
                                                   remaining: 4s
378:
        learn: 1.0330842
                                  total: 2.43s
                                                   remaining: 3.99s
379:
        learn: 1.0315782
                                  total: 2.44s
                                                   remaining: 3.98s
380:
        learn: 1.0279402
                                  total: 2.45s
                                                   remaining: 3.98s
381:
        learn: 1.0263093
                                  total: 2.45s
                                                   remaining: 3.97s
382:
        learn: 1.0231339
                                  total: 2.46s
                                                   remaining: 3.96s
383:
        learn: 1.0209818
                                  total: 2.46s
                                                   remaining: 3.95s
        learn: 1.0190011
                                  total: 2.47s
384:
                                                   remaining: 3.95s
385:
        learn: 1.0169965
                                  total: 2.48s
                                                   remaining: 3.94s
                                  total: 2.49s
386:
        learn: 1.0145901
                                                   remaining: 3.94s
387:
        learn: 1.0128277
                                  total: 2.49s
                                                   remaining: 3.93s
388:
        learn: 1.0106189
                                  total: 2.5s
                                                   remaining: 3.92s
389:
        learn: 1.0080402
                                  total: 2.5s
                                                   remaining: 3.92s
390:
                                  total: 2.51s
        learn: 1.0070484
                                                   remaining: 3.91s
391:
        learn: 1.0047328
                                  total: 2.52s
                                                   remaining: 3.91s
392:
        learn: 1.0019108
                                  total: 2.53s
                                                   remaining: 3.9s
393:
        learn: 0.9993345
                                  total: 2.53s
                                                   remaining: 3.9s
394:
                                  total: 2.54s
        learn: 0.9972421
                                                   remaining: 3.89s
                                  total: 2.55s
395:
        learn: 0.9953875
                                                   remaining: 3.88s
396:
        learn: 0.9937572
                                  total: 2.55s
                                                   remaining: 3.88s
```

```
397:
        learn: 0.9923321
                                  total: 2.56s
                                                   remaining: 3.88s
398:
        learn: 0.9896760
                                  total: 2.57s
                                                   remaining: 3.87s
399:
        learn: 0.9883551
                                  total: 2.58s
                                                   remaining: 3.86s
                                  total: 2.58s
400:
        learn: 0.9864110
                                                   remaining: 3.86s
401:
        learn: 0.9838650
                                  total: 2.59s
                                                   remaining: 3.85s
402:
        learn: 0.9823228
                                  total: 2.59s
                                                   remaining: 3.84s
403:
        learn: 0.9789156
                                  total: 2.6s
                                                   remaining: 3.83s
404:
        learn: 0.9758898
                                  total: 2.6s
                                                   remaining: 3.82s
405:
        learn: 0.9736754
                                  total: 2.6s
                                                   remaining: 3.81s
406:
        learn: 0.9713183
                                  total: 2.61s
                                                   remaining: 3.8s
407:
        learn: 0.9688498
                                  total: 2.61s
                                                   remaining: 3.79s
408:
        learn: 0.9675339
                                  total: 2.62s
                                                   remaining: 3.79s
409:
        learn: 0.9660489
                                  total: 2.63s
                                                   remaining: 3.78s
410:
        learn: 0.9648679
                                  total: 2.63s
                                                   remaining: 3.77s
411:
        learn: 0.9632036
                                  total: 2.64s
                                                   remaining: 3.77s
        learn: 0.9619977
412:
                                  total: 2.65s
                                                   remaining: 3.76s
413:
        learn: 0.9602984
                                  total: 2.65s
                                                   remaining: 3.75s
414:
        learn: 0.9573414
                                  total: 2.66s
                                                   remaining: 3.75s
        learn: 0.9554160
                                  total: 2.67s
415:
                                                   remaining: 3.74s
416:
        learn: 0.9531829
                                  total: 2.67s
                                                   remaining: 3.74s
417:
        learn: 0.9518191
                                  total: 2.68s
                                                   remaining: 3.73s
418:
        learn: 0.9495806
                                  total: 2.69s
                                                   remaining: 3.73s
419:
        learn: 0.9473793
                                  total: 2.69s
                                                   remaining: 3.72s
        learn: 0.9454691
420:
                                  total: 2.7s
                                                   remaining: 3.71s
421:
        learn: 0.9432661
                                  total: 2.71s
                                                   remaining: 3.71s
422:
        learn: 0.9418817
                                  total: 2.71s
                                                   remaining: 3.7s
423:
                                  total: 2.72s
        learn: 0.9400315
                                                   remaining: 3.7s
424:
        learn: 0.9386581
                                  total: 2.73s
                                                   remaining: 3.69s
425:
        learn: 0.9374719
                                  total: 2.74s
                                                   remaining: 3.69s
426:
        learn: 0.9361932
                                  total: 2.74s
                                                   remaining: 3.68s
427:
        learn: 0.9341715
                                  total: 2.75s
                                                   remaining: 3.68s
428:
        learn: 0.9325083
                                  total: 2.76s
                                                   remaining: 3.67s
429:
        learn: 0.9312577
                                  total: 2.77s
                                                   remaining: 3.67s
430:
        learn: 0.9301986
                                  total: 2.77s
                                                   remaining: 3.66s
        learn: 0.9289962
431:
                                  total: 2.78s
                                                   remaining: 3.66s
432:
        learn: 0.9278417
                                  total: 2.79s
                                                   remaining: 3.65s
433:
        learn: 0.9268352
                                  total: 2.79s
                                                   remaining: 3.64s
434:
        learn: 0.9256300
                                  total: 2.79s
                                                   remaining: 3.63s
435:
        learn: 0.9244221
                                  total: 2.79s
                                                   remaining: 3.62s
436:
        learn: 0.9218207
                                  total: 2.8s
                                                   remaining: 3.61s
437:
        learn: 0.9204299
                                  total: 2.81s
                                                   remaining: 3.6s
438:
        learn: 0.9187190
                                  total: 2.81s
                                                   remaining: 3.59s
        learn: 0.9171420
439:
                                  total: 2.82s
                                                   remaining: 3.59s
440:
        learn: 0.9162263
                                  total: 2.82s
                                                   remaining: 3.58s
441:
        learn: 0.9140567
                                  total: 2.83s
                                                   remaining: 3.57s
442:
        learn: 0.9119777
                                  total: 2.84s
                                                   remaining: 3.57s
443:
        learn: 0.9103901
                                  total: 2.84s
                                                   remaining: 3.56s
        learn: 0.9091059
                                                   remaining: 3.55s
444:
                                  total: 2.85s
445:
        learn: 0.9085359
                                  total: 2.85s
                                                   remaining: 3.55s
446:
        learn: 0.9067670
                                  total: 2.86s
                                                   remaining: 3.54s
447:
        learn: 0.9060928
                                  total: 2.87s
                                                   remaining: 3.54s
448:
        learn: 0.9040018
                                  total: 2.88s
                                                   remaining: 3.53s
449:
        learn: 0.9026692
                                  total: 2.88s
                                                   remaining: 3.52s
450:
                                  total: 2.89s
        learn: 0.9017270
                                                   remaining: 3.52s
451:
        learn: 0.9002957
                                  total: 2.9s
                                                   remaining: 3.52s
        learn: 0.8978231
452:
                                  total: 2.91s
                                                   remaining: 3.51s
453:
        learn: 0.8949396
                                  total: 2.91s
                                                   remaining: 3.5s
454:
                                  total: 2.92s
        learn: 0.8932412
                                                   remaining: 3.5s
                                  total: 2.93s
455:
        learn: 0.8912744
                                                   remaining: 3.49s
456:
        learn: 0.8900237
                                  total: 2.93s
                                                   remaining: 3.49s
```

```
457:
        learn: 0.8888398
                                  total: 2.94s
                                                   remaining: 3.48s
458:
        learn: 0.8878249
                                  total: 2.95s
                                                   remaining: 3.47s
459:
        learn: 0.8867297
                                  total: 2.95s
                                                   remaining: 3.47s
                                  total: 2.96s
460:
        learn: 0.8849453
                                                   remaining: 3.46s
461:
        learn: 0.8829107
                                  total: 2.97s
                                                   remaining: 3.46s
462:
        learn: 0.8820625
                                  total: 2.97s
                                                   remaining: 3.45s
463:
        learn: 0.8808431
                                  total: 2.98s
                                                   remaining: 3.44s
464:
        learn: 0.8783014
                                  total: 2.98s
                                                   remaining: 3.44s
465:
        learn: 0.8766632
                                  total: 2.99s
                                                   remaining: 3.43s
466:
        learn: 0.8747926
                                  total: 2.99s
                                                   remaining: 3.42s
467:
        learn: 0.8728878
                                  total: 3s
                                                   remaining: 3.41s
468:
        learn: 0.8718154
                                  total: 3s
                                                   remaining: 3.4s
469:
        learn: 0.8703155
                                  total: 3s
                                                   remaining: 3.39s
470:
        learn: 0.8679387
                                  total: 3.01s
                                                   remaining: 3.38s
471:
        learn: 0.8662976
                                  total: 3.01s
                                                   remaining: 3.37s
        learn: 0.8639271
472:
                                  total: 3.02s
                                                   remaining: 3.36s
473:
        learn: 0.8623258
                                  total: 3.02s
                                                   remaining: 3.36s
474:
        learn: 0.8601217
                                  total: 3.03s
                                                   remaining: 3.35s
475:
        learn: 0.8582093
                                  total: 3.04s
                                                   remaining: 3.35s
476:
        learn: 0.8568574
                                  total: 3.05s
                                                   remaining: 3.34s
477:
        learn: 0.8557801
                                  total: 3.05s
                                                   remaining: 3.33s
478:
        learn: 0.8541543
                                  total: 3.06s
                                                   remaining: 3.33s
                                  total: 3.06s
479:
        learn: 0.8531979
                                                   remaining: 3.32s
480:
        learn: 0.8516322
                                  total: 3.07s
                                                   remaining: 3.31s
481:
        learn: 0.8496601
                                  total: 3.08s
                                                   remaining: 3.31s
482:
                                  total: 3.09s
        learn: 0.8483915
                                                   remaining: 3.3s
483:
        learn: 0.8463943
                                  total: 3.09s
                                                   remaining: 3.3s
484:
        learn: 0.8447486
                                  total: 3.1s
                                                   remaining: 3.29s
485:
        learn: 0.8433164
                                  total: 3.11s
                                                   remaining: 3.29s
486:
        learn: 0.8422105
                                  total: 3.11s
                                                   remaining: 3.28s
487:
        learn: 0.8413706
                                  total: 3.12s
                                                   remaining: 3.27s
488:
        learn: 0.8401073
                                  total: 3.13s
                                                   remaining: 3.27s
489:
        learn: 0.8389606
                                  total: 3.13s
                                                   remaining: 3.26s
490:
        learn: 0.8370014
                                  total: 3.14s
                                                   remaining: 3.26s
491:
        learn: 0.8359676
                                  total: 3.15s
                                                   remaining: 3.25s
492:
        learn: 0.8350189
                                  total: 3.15s
                                                   remaining: 3.25s
493:
        learn: 0.8333296
                                  total: 3.16s
                                                   remaining: 3.24s
494:
        learn: 0.8310929
                                  total: 3.17s
                                                   remaining: 3.23s
495:
        learn: 0.8301541
                                  total: 3.18s
                                                   remaining: 3.23s
496:
        learn: 0.8293155
                                  total: 3.18s
                                                   remaining: 3.22s
497:
        learn: 0.8277185
                                  total: 3.19s
                                                   remaining: 3.21s
498:
        learn: 0.8262685
                                  total: 3.19s
                                                   remaining: 3.2s
499:
        learn: 0.8251080
                                  total: 3.19s
                                                   remaining: 3.19s
500:
        learn: 0.8245987
                                  total: 3.2s
                                                   remaining: 3.19s
501:
        learn: 0.8235641
                                  total: 3.21s
                                                   remaining: 3.18s
502:
        learn: 0.8225904
                                  total: 3.21s
                                                   remaining: 3.17s
503:
        learn: 0.8216551
                                  total: 3.21s
                                                   remaining: 3.16s
        learn: 0.8206448
                                  total: 3.22s
504:
                                                   remaining: 3.15s
505:
        learn: 0.8194479
                                  total: 3.22s
                                                   remaining: 3.15s
506:
        learn: 0.8184597
                                  total: 3.22s
                                                   remaining: 3.13s
507:
        learn: 0.8164449
                                  total: 3.23s
                                                   remaining: 3.13s
508:
        learn: 0.8151503
                                  total: 3.23s
                                                   remaining: 3.12s
509:
        learn: 0.8142101
                                  total: 3.23s
                                                   remaining: 3.11s
510:
                                  total: 3.24s
        learn: 0.8132122
                                                   remaining: 3.1s
511:
        learn: 0.8119836
                                  total: 3.25s
                                                   remaining: 3.09s
        learn: 0.8099408
512:
                                  total: 3.25s
                                                   remaining: 3.09s
513:
        learn: 0.8087615
                                  total: 3.26s
                                                   remaining: 3.08s
514:
                                  total: 3.27s
        learn: 0.8078206
                                                   remaining: 3.08s
515:
        learn: 0.8065806
                                  total: 3.27s
                                                   remaining: 3.07s
516:
        learn: 0.8057524
                                  total: 3.28s
                                                   remaining: 3.06s
```

```
517:
        learn: 0.8053980
                                  total: 3.29s
                                                   remaining: 3.06s
518:
        learn: 0.8049291
                                  total: 3.29s
                                                   remaining: 3.05s
519:
        learn: 0.8029780
                                  total: 3.3s
                                                   remaining: 3.05s
520:
        learn: 0.8012856
                                  total: 3.31s
                                                   remaining: 3.04s
521:
        learn: 0.8005571
                                  total: 3.31s
                                                   remaining: 3.04s
522:
        learn: 0.7993968
                                  total: 3.32s
                                                   remaining: 3.03s
523:
        learn: 0.7982387
                                  total: 3.33s
                                                   remaining: 3.02s
524:
        learn: 0.7972070
                                  total: 3.33s
                                                   remaining: 3.02s
525:
        learn: 0.7963552
                                  total: 3.34s
                                                   remaining: 3.01s
526:
        learn: 0.7946319
                                  total: 3.35s
                                                   remaining: 3s
527:
        learn: 0.7940048
                                  total: 3.35s
                                                   remaining: 3s
528:
        learn: 0.7930405
                                  total: 3.36s
                                                   remaining: 2.99s
529:
        learn: 0.7921784
                                  total: 3.37s
                                                   remaining: 2.99s
530:
        learn: 0.7915442
                                  total: 3.38s
                                                   remaining: 2.98s
531:
        learn: 0.7909248
                                  total: 3.38s
                                                   remaining: 2.98s
532:
        learn: 0.7902345
                                  total: 3.39s
                                                   remaining: 2.97s
533:
        learn: 0.7895512
                                  total: 3.39s
                                                   remaining: 2.96s
534:
        learn: 0.7881069
                                  total: 3.4s
                                                   remaining: 2.95s
535:
        learn: 0.7874096
                                  total: 3.4s
                                                   remaining: 2.94s
536:
        learn: 0.7857986
                                  total: 3.4s
                                                   remaining: 2.93s
537:
        learn: 0.7847816
                                  total: 3.41s
                                                   remaining: 2.93s
538:
        learn: 0.7839547
                                  total: 3.42s
                                                   remaining: 2.92s
                                  total: 3.42s
539:
        learn: 0.7831802
                                                   remaining: 2.92s
540:
        learn: 0.7817177
                                  total: 3.43s
                                                   remaining: 2.91s
541:
        learn: 0.7804849
                                  total: 3.44s
                                                   remaining: 2.9s
542:
        learn: 0.7796822
                                  total: 3.44s
                                                   remaining: 2.9s
543:
        learn: 0.7787236
                                  total: 3.45s
                                                   remaining: 2.89s
544:
        learn: 0.7774338
                                  total: 3.46s
                                                   remaining: 2.88s
        learn: 0.7767880
545:
                                  total: 3.46s
                                                   remaining: 2.88s
546:
        learn: 0.7758017
                                  total: 3.47s
                                                   remaining: 2.87s
547:
        learn: 0.7752930
                                  total: 3.47s
                                                   remaining: 2.87s
548:
        learn: 0.7738397
                                  total: 3.48s
                                                   remaining: 2.86s
549:
        learn: 0.7727038
                                  total: 3.49s
                                                   remaining: 2.85s
550:
        learn: 0.7717455
                                  total: 3.5s
                                                   remaining: 2.85s
        learn: 0.7710169
                                  total: 3.5s
551:
                                                   remaining: 2.84s
                                  total: 3.51s
552:
        learn: 0.7699626
                                                   remaining: 2.84s
553:
        learn: 0.7693513
                                  total: 3.51s
                                                   remaining: 2.83s
554:
        learn: 0.7688394
                                  total: 3.52s
                                                   remaining: 2.82s
555:
        learn: 0.7682833
                                  total: 3.53s
                                                   remaining: 2.82s
556:
        learn: 0.7673879
                                  total: 3.53s
                                                   remaining: 2.81s
557:
        learn: 0.7661125
                                  total: 3.54s
                                                   remaining: 2.8s
558:
        learn: 0.7647558
                                  total: 3.55s
                                                   remaining: 2.8s
559:
        learn: 0.7639830
                                  total: 3.55s
                                                   remaining: 2.79s
560:
        learn: 0.7633217
                                  total: 3.56s
                                                   remaining: 2.79s
561:
        learn: 0.7627943
                                  total: 3.56s
                                                   remaining: 2.78s
562:
        learn: 0.7621356
                                  total: 3.57s
                                                   remaining: 2.77s
563:
        learn: 0.7610186
                                  total: 3.57s
                                                   remaining: 2.76s
        learn: 0.7602195
                                  total: 3.57s
564:
                                                   remaining: 2.75s
                                  total: 3.58s
565:
        learn: 0.7590409
                                                   remaining: 2.74s
566:
        learn: 0.7583787
                                  total: 3.58s
                                                   remaining: 2.74s
567:
        learn: 0.7577467
                                  total: 3.59s
                                                   remaining: 2.73s
568:
        learn: 0.7562495
                                  total: 3.6s
                                                   remaining: 2.73s
569:
        learn: 0.7551624
                                  total: 3.6s
                                                   remaining: 2.72s
570:
        learn: 0.7537236
                                  total: 3.61s
                                                   remaining: 2.71s
571:
        learn: 0.7527701
                                  total: 3.62s
                                                   remaining: 2.71s
        learn: 0.7511935
572:
                                  total: 3.62s
                                                   remaining: 2.7s
573:
        learn: 0.7498919
                                  total: 3.63s
                                                   remaining: 2.69s
574:
        learn: 0.7488846
                                  total: 3.64s
                                                   remaining: 2.69s
                                  total: 3.65s
575:
        learn: 0.7478282
                                                   remaining: 2.68s
576:
        learn: 0.7466329
                                  total: 3.65s
                                                   remaining: 2.68s
```

```
577:
        learn: 0.7457821
                                  total: 3.66s
                                                   remaining: 2.67s
578:
        learn: 0.7445571
                                  total: 3.67s
                                                   remaining: 2.67s
579:
        learn: 0.7440627
                                  total: 3.67s
                                                   remaining: 2.66s
580:
        learn: 0.7431696
                                  total: 3.68s
                                                   remaining: 2.66s
581:
        learn: 0.7418426
                                  total: 3.69s
                                                   remaining: 2.65s
582:
        learn: 0.7408967
                                  total: 3.7s
                                                   remaining: 2.64s
583:
        learn: 0.7397459
                                  total: 3.7s
                                                   remaining: 2.64s
584:
        learn: 0.7384340
                                  total: 3.71s
                                                   remaining: 2.63s
585:
        learn: 0.7378706
                                  total: 3.71s
                                                   remaining: 2.62s
586:
        learn: 0.7368722
                                  total: 3.72s
                                                   remaining: 2.62s
587:
        learn: 0.7365931
                                  total: 3.73s
                                                   remaining: 2.61s
588:
        learn: 0.7359086
                                  total: 3.74s
                                                   remaining: 2.61s
589:
        learn: 0.7350490
                                  total: 3.74s
                                                   remaining: 2.6s
590:
        learn: 0.7340402
                                  total: 3.75s
                                                   remaining: 2.59s
591:
        learn: 0.7328628
                                  total: 3.76s
                                                   remaining: 2.59s
592:
        learn: 0.7317974
                                  total: 3.77s
                                                   remaining: 2.59s
593:
        learn: 0.7308424
                                  total: 3.77s
                                                   remaining: 2.58s
594:
        learn: 0.7303826
                                  total: 3.78s
                                                   remaining: 2.57s
595:
        learn: 0.7297132
                                  total: 3.79s
                                                   remaining: 2.57s
596:
        learn: 0.7286184
                                  total: 3.79s
                                                   remaining: 2.56s
597:
        learn: 0.7278131
                                  total: 3.8s
                                                   remaining: 2.55s
598:
        learn: 0.7271118
                                  total: 3.81s
                                                   remaining: 2.55s
                                  total: 3.81s
599:
        learn: 0.7264616
                                                   remaining: 2.54s
600:
        learn: 0.7262344
                                  total: 3.81s
                                                   remaining: 2.53s
601:
        learn: 0.7252240
                                  total: 3.82s
                                                   remaining: 2.53s
        learn: 0.7241674
602:
                                  total: 3.83s
                                                   remaining: 2.52s
603:
        learn: 0.7235076
                                  total: 3.84s
                                                   remaining: 2.52s
        learn: 0.7223598
604:
                                  total: 3.84s
                                                   remaining: 2.51s
        learn: 0.7210146
605:
                                  total: 3.85s
                                                   remaining: 2.5s
606:
        learn: 0.7200316
                                  total: 3.86s
                                                   remaining: 2.5s
607:
        learn: 0.7190191
                                  total: 3.86s
                                                   remaining: 2.49s
608:
        learn: 0.7183641
                                  total: 3.87s
                                                   remaining: 2.48s
609:
        learn: 0.7181585
                                  total: 3.88s
                                                   remaining: 2.48s
610:
        learn: 0.7173094
                                  total: 3.88s
                                                   remaining: 2.47s
        learn: 0.7165163
                                  total: 3.89s
611:
                                                   remaining: 2.47s
                                  total: 3.9s
612:
        learn: 0.7150700
                                                   remaining: 2.46s
613:
        learn: 0.7146459
                                  total: 3.9s
                                                   remaining: 2.45s
614:
        learn: 0.7131994
                                  total: 3.91s
                                                   remaining: 2.44s
615:
        learn: 0.7120419
                                  total: 3.91s
                                                   remaining: 2.44s
616:
        learn: 0.7111544
                                  total: 3.92s
                                                   remaining: 2.43s
617:
        learn: 0.7105365
                                  total: 3.92s
                                                   remaining: 2.43s
618:
        learn: 0.7100895
                                  total: 3.93s
                                                   remaining: 2.42s
        learn: 0.7096437
619:
                                  total: 3.94s
                                                   remaining: 2.41s
620:
        learn: 0.7089367
                                  total: 3.94s
                                                   remaining: 2.41s
621:
        learn: 0.7077216
                                  total: 3.95s
                                                   remaining: 2.4s
        learn: 0.7066594
622:
                                  total: 3.96s
                                                   remaining: 2.4s
623:
        learn: 0.7062381
                                  total: 3.97s
                                                   remaining: 2.39s
        learn: 0.7058496
624:
                                  total: 3.97s
                                                   remaining: 2.38s
                                  total: 3.97s
625:
        learn: 0.7050709
                                                   remaining: 2.37s
                                  total: 3.98s
626:
        learn: 0.7042882
                                                   remaining: 2.37s
627:
        learn: 0.7035703
                                  total: 3.98s
                                                   remaining: 2.36s
628:
        learn: 0.7030809
                                  total: 3.98s
                                                   remaining: 2.35s
629:
        learn: 0.7023160
                                  total: 3.99s
                                                   remaining: 2.34s
630:
        learn: 0.7013788
                                  total: 4s
                                                   remaining: 2.34s
631:
        learn: 0.7009584
                                  total: 4s
                                                   remaining: 2.33s
        learn: 0.7001620
632:
                                  total: 4.01s
                                                   remaining: 2.32s
633:
        learn: 0.6993784
                                  total: 4.01s
                                                   remaining: 2.32s
634:
        learn: 0.6988635
                                  total: 4.02s
                                                   remaining: 2.31s
635:
        learn: 0.6983994
                                  total: 4.03s
                                                   remaining: 2.3s
636:
        learn: 0.6972141
                                  total: 4.03s
                                                   remaining: 2.3s
```

```
637:
        learn: 0.6964688
                                  total: 4.04s
                                                   remaining: 2.29s
638:
        learn: 0.6955816
                                  total: 4.05s
                                                   remaining: 2.29s
639:
        learn: 0.6949309
                                  total: 4.05s
                                                   remaining: 2.28s
640:
        learn: 0.6940698
                                  total: 4.06s
                                                   remaining: 2.27s
641:
        learn: 0.6924406
                                  total: 4.07s
                                                   remaining: 2.27s
642:
        learn: 0.6912950
                                  total: 4.08s
                                                   remaining: 2.26s
643:
        learn: 0.6909199
                                  total: 4.08s
                                                   remaining: 2.26s
644:
        learn: 0.6902196
                                  total: 4.09s
                                                   remaining: 2.25s
                                                   remaining: 2.24s
645:
        learn: 0.6896939
                                  total: 4.1s
646:
        learn: 0.6892352
                                  total: 4.1s
                                                   remaining: 2.24s
647:
        learn: 0.6888594
                                  total: 4.11s
                                                   remaining: 2.23s
                                  total: 4.12s
648:
        learn: 0.6877653
                                                   remaining: 2.23s
649:
        learn: 0.6870704
                                  total: 4.12s
                                                   remaining: 2.22s
650:
        learn: 0.6865473
                                  total: 4.13s
                                                   remaining: 2.21s
651:
        learn: 0.6859454
                                  total: 4.14s
                                                   remaining: 2.21s
652:
        learn: 0.6848661
                                  total: 4.14s
                                                   remaining: 2.2s
                                  total: 4.15s
653:
        learn: 0.6843414
                                                   remaining: 2.2s
654:
        learn: 0.6833947
                                  total: 4.16s
                                                   remaining: 2.19s
655:
        learn: 0.6823481
                                  total: 4.17s
                                                   remaining: 2.18s
656:
        learn: 0.6814623
                                  total: 4.17s
                                                   remaining: 2.18s
657:
        learn: 0.6808885
                                  total: 4.17s
                                                   remaining: 2.17s
658:
        learn: 0.6799647
                                  total: 4.18s
                                                   remaining: 2.16s
                                  total: 4.18s
659:
        learn: 0.6793232
                                                   remaining: 2.15s
660:
        learn: 0.6785159
                                  total: 4.19s
                                                   remaining: 2.15s
661:
        learn: 0.6777204
                                  total: 4.19s
                                                   remaining: 2.14s
662:
        learn: 0.6771871
                                  total: 4.2s
                                                   remaining: 2.13s
663:
        learn: 0.6762695
                                  total: 4.2s
                                                   remaining: 2.13s
664:
        learn: 0.6752705
                                  total: 4.21s
                                                   remaining: 2.12s
665:
        learn: 0.6748869
                                  total: 4.22s
                                                   remaining: 2.12s
666:
        learn: 0.6737409
                                  total: 4.22s
                                                   remaining: 2.11s
667:
        learn: 0.6728838
                                  total: 4.23s
                                                   remaining: 2.1s
668:
        learn: 0.6722641
                                  total: 4.24s
                                                   remaining: 2.1s
669:
        learn: 0.6719067
                                  total: 4.25s
                                                   remaining: 2.09s
670:
        learn: 0.6713475
                                  total: 4.25s
                                                   remaining: 2.08s
        learn: 0.6706958
671:
                                  total: 4.26s
                                                   remaining: 2.08s
        learn: 0.6702346
672:
                                  total: 4.27s
                                                   remaining: 2.07s
673:
        learn: 0.6697633
                                  total: 4.27s
                                                   remaining: 2.07s
674:
        learn: 0.6692949
                                  total: 4.28s
                                                   remaining: 2.06s
675:
        learn: 0.6688239
                                  total: 4.29s
                                                   remaining: 2.06s
676:
        learn: 0.6680332
                                  total: 4.3s
                                                   remaining: 2.05s
677:
        learn: 0.6674959
                                  total: 4.3s
                                                   remaining: 2.04s
678:
        learn: 0.6671121
                                  total: 4.31s
                                                   remaining: 2.04s
        learn: 0.6663759
679:
                                  total: 4.32s
                                                   remaining: 2.03s
680:
        learn: 0.6659941
                                  total: 4.33s
                                                   remaining: 2.03s
681:
        learn: 0.6654611
                                  total: 4.33s
                                                   remaining: 2.02s
682:
        learn: 0.6646960
                                  total: 4.34s
                                                   remaining: 2.01s
683:
        learn: 0.6633605
                                  total: 4.35s
                                                   remaining: 2.01s
        learn: 0.6628661
684:
                                  total: 4.35s
                                                   remaining: 2s
685:
        learn: 0.6623756
                                  total: 4.36s
                                                   remaining: 2s
                                  total: 4.37s
686:
        learn: 0.6619973
                                                   remaining: 1.99s
687:
        learn: 0.6611323
                                  total: 4.37s
                                                   remaining: 1.98s
688:
        learn: 0.6598278
                                  total: 4.38s
                                                   remaining: 1.98s
689:
        learn: 0.6586557
                                  total: 4.38s
                                                   remaining: 1.97s
690:
        learn: 0.6575878
                                  total: 4.39s
                                                   remaining: 1.96s
691:
        learn: 0.6566013
                                  total: 4.39s
                                                   remaining: 1.95s
        learn: 0.6558248
692:
                                  total: 4.4s
                                                   remaining: 1.95s
693:
        learn: 0.6551355
                                  total: 4.41s
                                                   remaining: 1.94s
694:
        learn: 0.6544360
                                  total: 4.41s
                                                   remaining: 1.94s
                                  total: 4.42s
695:
        learn: 0.6538931
                                                   remaining: 1.93s
696:
        learn: 0.6534133
                                  total: 4.42s
                                                   remaining: 1.92s
```

```
697:
        learn: 0.6526494
                                  total: 4.43s
                                                   remaining: 1.92s
698:
        learn: 0.6519047
                                  total: 4.44s
                                                   remaining: 1.91s
699:
        learn: 0.6513338
                                  total: 4.44s
                                                   remaining: 1.9s
                                  total: 4.45s
700:
        learn: 0.6503486
                                                   remaining: 1.9s
701:
        learn: 0.6499878
                                  total: 4.46s
                                                   remaining: 1.89s
702:
        learn: 0.6492359
                                  total: 4.46s
                                                   remaining: 1.89s
703:
        learn: 0.6488641
                                  total: 4.47s
                                                   remaining: 1.88s
704:
        learn: 0.6481426
                                  total: 4.48s
                                                   remaining: 1.87s
705:
        learn: 0.6471823
                                  total: 4.49s
                                                   remaining: 1.87s
706:
        learn: 0.6466890
                                  total: 4.49s
                                                   remaining: 1.86s
707:
        learn: 0.6461542
                                  total: 4.5s
                                                   remaining: 1.86s
708:
        learn: 0.6457915
                                  total: 4.51s
                                                   remaining: 1.85s
709:
        learn: 0.6454053
                                  total: 4.52s
                                                   remaining: 1.84s
710:
        learn: 0.6447201
                                  total: 4.52s
                                                   remaining: 1.84s
711:
        learn: 0.6443460
                                  total: 4.53s
                                                   remaining: 1.83s
        learn: 0.6435988
712:
                                  total: 4.54s
                                                   remaining: 1.83s
713:
        learn: 0.6429026
                                  total: 4.54s
                                                   remaining: 1.82s
714:
        learn: 0.6422986
                                  total: 4.55s
                                                   remaining: 1.81s
715:
        learn: 0.6417023
                                  total: 4.56s
                                                   remaining: 1.81s
716:
        learn: 0.6407800
                                  total: 4.57s
                                                   remaining: 1.8s
717:
        learn: 0.6405003
                                  total: 4.57s
                                                   remaining: 1.8s
718:
        learn: 0.6397728
                                  total: 4.58s
                                                   remaining: 1.79s
                                  total: 4.58s
719:
        learn: 0.6395143
                                                   remaining: 1.78s
720:
        learn: 0.6389339
                                  total: 4.58s
                                                   remaining: 1.77s
721:
        learn: 0.6387394
                                  total: 4.59s
                                                   remaining: 1.77s
722:
                                  total: 4.59s
        learn: 0.6380439
                                                   remaining: 1.76s
723:
        learn: 0.6374462
                                  total: 4.6s
                                                   remaining: 1.75s
        learn: 0.6367026
724:
                                  total: 4.61s
                                                   remaining: 1.75s
725:
        learn: 0.6366172
                                  total: 4.62s
                                                   remaining: 1.74s
726:
        learn: 0.6357156
                                  total: 4.63s
                                                   remaining: 1.74s
727:
        learn: 0.6351494
                                  total: 4.63s
                                                   remaining: 1.73s
728:
        learn: 0.6347673
                                  total: 4.63s
                                                   remaining: 1.72s
729:
        learn: 0.6344604
                                  total: 4.64s
                                                   remaining: 1.72s
730:
        learn: 0.6341557
                                  total: 4.65s
                                                   remaining: 1.71s
731:
        learn: 0.6332802
                                  total: 4.66s
                                                   remaining: 1.71s
732:
        learn: 0.6327737
                                  total: 4.66s
                                                   remaining: 1.7s
733:
        learn: 0.6322190
                                  total: 4.67s
                                                   remaining: 1.69s
734:
        learn: 0.6318093
                                  total: 4.68s
                                                   remaining: 1.69s
735:
        learn: 0.6309757
                                  total: 4.68s
                                                   remaining: 1.68s
736:
        learn: 0.6300654
                                  total: 4.69s
                                                   remaining: 1.67s
737:
        learn: 0.6297082
                                  total: 4.7s
                                                   remaining: 1.67s
738:
        learn: 0.6292520
                                  total: 4.71s
                                                   remaining: 1.66s
739:
        learn: 0.6286437
                                  total: 4.71s
                                                   remaining: 1.66s
                                  total: 4.72s
740:
        learn: 0.6283008
                                                   remaining: 1.65s
741:
        learn: 0.6277660
                                  total: 4.73s
                                                   remaining: 1.64s
742:
        learn: 0.6273330
                                  total: 4.73s
                                                   remaining: 1.64s
743:
        learn: 0.6272556
                                  total: 4.74s
                                                   remaining: 1.63s
744:
        learn: 0.6268319
                                  total: 4.75s
                                                   remaining: 1.62s
                                  total: 4.75s
745:
        learn: 0.6261887
                                                   remaining: 1.62s
                                  total: 4.76s
746:
        learn: 0.6256019
                                                   remaining: 1.61s
747:
        learn: 0.6246967
                                  total: 4.76s
                                                   remaining: 1.6s
748:
        learn: 0.6237770
                                  total: 4.77s
                                                   remaining: 1.6s
749:
        learn: 0.6229059
                                  total: 4.78s
                                                   remaining: 1.59s
750:
        learn: 0.6224582
                                  total: 4.78s
                                                   remaining: 1.58s
751:
        learn: 0.6220924
                                  total: 4.79s
                                                   remaining: 1.58s
752:
        learn: 0.6214872
                                  total: 4.8s
                                                   remaining: 1.57s
753:
        learn: 0.6206210
                                  total: 4.8s
                                                   remaining: 1.57s
754:
        learn: 0.6198592
                                  total: 4.81s
                                                   remaining: 1.56s
755:
        learn: 0.6194809
                                  total: 4.81s
                                                   remaining: 1.55s
756:
        learn: 0.6186953
                                  total: 4.82s
                                                   remaining: 1.55s
```

```
757:
        learn: 0.6183544
                                  total: 4.83s
                                                   remaining: 1.54s
758:
        learn: 0.6180895
                                  total: 4.83s
                                                   remaining: 1.53s
759:
        learn: 0.6175546
                                  total: 4.84s
                                                   remaining: 1.53s
760:
        learn: 0.6171013
                                  total: 4.85s
                                                   remaining: 1.52s
761:
        learn: 0.6166593
                                  total: 4.85s
                                                   remaining: 1.52s
762:
        learn: 0.6163635
                                  total: 4.86s
                                                   remaining: 1.51s
763:
        learn: 0.6159788
                                  total: 4.87s
                                                   remaining: 1.5s
764:
        learn: 0.6154115
                                  total: 4.87s
                                                   remaining: 1.5s
765:
        learn: 0.6147739
                                  total: 4.88s
                                                   remaining: 1.49s
766:
        learn: 0.6141005
                                  total: 4.89s
                                                   remaining: 1.48s
767:
        learn: 0.6132815
                                  total: 4.89s
                                                   remaining: 1.48s
768:
        learn: 0.6127981
                                  total: 4.9s
                                                   remaining: 1.47s
769:
        learn: 0.6120448
                                  total: 4.91s
                                                   remaining: 1.47s
770:
        learn: 0.6117789
                                  total: 4.91s
                                                   remaining: 1.46s
771:
        learn: 0.6117036
                                  total: 4.92s
                                                   remaining: 1.45s
772:
        learn: 0.6110743
                                  total: 4.92s
                                                   remaining: 1.45s
773:
        learn: 0.6106746
                                  total: 4.93s
                                                   remaining: 1.44s
774:
        learn: 0.6102736
                                  total: 4.94s
                                                   remaining: 1.43s
775:
        learn: 0.6094789
                                  total: 4.95s
                                                   remaining: 1.43s
776:
        learn: 0.6084332
                                  total: 4.95s
                                                   remaining: 1.42s
777:
        learn: 0.6081663
                                  total: 4.96s
                                                   remaining: 1.42s
778:
        learn: 0.6075890
                                  total: 4.96s
                                                   remaining: 1.41s
                                  total: 4.96s
779:
        learn: 0.6067239
                                                   remaining: 1.4s
        learn: 0.6061447
780:
                                  total: 4.97s
                                                   remaining: 1.39s
781:
        learn: 0.6058419
                                  total: 4.97s
                                                   remaining: 1.39s
782:
        learn: 0.6055127
                                  total: 4.98s
                                                   remaining: 1.38s
783:
        learn: 0.6052329
                                  total: 4.99s
                                                   remaining: 1.37s
784:
        learn: 0.6049073
                                  total: 4.99s
                                                   remaining: 1.37s
                                  total: 5s
785:
        learn: 0.6044246
                                                   remaining: 1.36s
786:
        learn: 0.6037024
                                  total: 5s
                                                   remaining: 1.35s
787:
        learn: 0.6034885
                                  total: 5.01s
                                                   remaining: 1.35s
788:
        learn: 0.6029352
                                  total: 5.02s
                                                   remaining: 1.34s
789:
        learn: 0.6026882
                                  total: 5.02s
                                                   remaining: 1.33s
790:
        learn: 0.6020250
                                  total: 5.03s
                                                   remaining: 1.33s
791:
        learn: 0.6013898
                                  total: 5.04s
                                                   remaining: 1.32s
                                  total: 5.04s
792:
        learn: 0.6010748
                                                   remaining: 1.32s
793:
        learn: 0.6004410
                                  total: 5.05s
                                                   remaining: 1.31s
794:
        learn: 0.5998522
                                  total: 5.06s
                                                   remaining: 1.3s
795:
        learn: 0.5992043
                                  total: 5.06s
                                                   remaining: 1.3s
796:
        learn: 0.5989764
                                  total: 5.07s
                                                   remaining: 1.29s
797:
        learn: 0.5983593
                                  total: 5.08s
                                                   remaining: 1.28s
798:
        learn: 0.5976463
                                  total: 5.08s
                                                   remaining: 1.28s
799:
        learn: 0.5970809
                                  total: 5.09s
                                                   remaining: 1.27s
:008
        learn: 0.5964338
                                  total: 5.1s
                                                   remaining: 1.27s
801:
        learn: 0.5961141
                                  total: 5.11s
                                                   remaining: 1.26s
802:
        learn: 0.5954389
                                  total: 5.11s
                                                   remaining: 1.25s
803:
        learn: 0.5954250
                                  total: 5.12s
                                                   remaining: 1.25s
        learn: 0.5954157
804:
                                  total: 5.13s
                                                   remaining: 1.24s
                                  total: 5.13s
805:
        learn: 0.5954004
                                                   remaining: 1.24s
806:
        learn: 0.5948470
                                  total: 5.14s
                                                   remaining: 1.23s
807:
        learn: 0.5942251
                                  total: 5.15s
                                                   remaining: 1.22s
808:
        learn: 0.5936613
                                  total: 5.15s
                                                   remaining: 1.22s
809:
        learn: 0.5932672
                                  total: 5.16s
                                                   remaining: 1.21s
810:
        learn: 0.5928094
                                  total: 5.16s
                                                   remaining: 1.2s
811:
        learn: 0.5926185
                                  total: 5.17s
                                                   remaining: 1.2s
        learn: 0.5921517
812:
                                  total: 5.17s
                                                   remaining: 1.19s
813:
        learn: 0.5920850
                                  total: 5.17s
                                                   remaining: 1.18s
814:
        learn: 0.5914565
                                  total: 5.18s
                                                   remaining: 1.18s
                                  total: 5.18s
815:
        learn: 0.5912538
                                                   remaining: 1.17s
816:
        learn: 0.5906691
                                  total: 5.19s
                                                   remaining: 1.16s
```

```
817:
        learn: 0.5901625
                                  total: 5.19s
                                                   remaining: 1.16s
818:
        learn: 0.5891544
                                  total: 5.2s
                                                   remaining: 1.15s
819:
        learn: 0.5888754
                                  total: 5.21s
                                                   remaining: 1.14s
820:
        learn: 0.5883647
                                  total: 5.21s
                                                   remaining: 1.14s
821:
        learn: 0.5877982
                                  total: 5.22s
                                                   remaining: 1.13s
822:
        learn: 0.5873627
                                  total: 5.22s
                                                   remaining: 1.12s
823:
        learn: 0.5869349
                                  total: 5.23s
                                                   remaining: 1.12s
824:
        learn: 0.5867545
                                  total: 5.24s
                                                   remaining: 1.11s
825:
        learn: 0.5860744
                                  total: 5.25s
                                                   remaining: 1.1s
826:
        learn: 0.5856600
                                  total: 5.25s
                                                   remaining: 1.1s
827:
        learn: 0.5852824
                                  total: 5.26s
                                                   remaining: 1.09s
                                  total: 5.27s
828:
        learn: 0.5848060
                                                   remaining: 1.09s
829:
        learn: 0.5844304
                                  total: 5.28s
                                                   remaining: 1.08s
830:
        learn: 0.5842457
                                  total: 5.28s
                                                   remaining: 1.07s
831:
        learn: 0.5839583
                                  total: 5.29s
                                                   remaining: 1.07s
832:
        learn: 0.5834739
                                  total: 5.3s
                                                   remaining: 1.06s
                                  total: 5.31s
833:
        learn: 0.5832401
                                                   remaining: 1.06s
                                                   remaining: 1.05s
834:
        learn: 0.5829507
                                  total: 5.31s
                                  total: 5.32s
835:
        learn: 0.5822993
                                                   remaining: 1.04s
836:
        learn: 0.5815354
                                  total: 5.33s
                                                   remaining: 1.04s
837:
        learn: 0.5809077
                                  total: 5.34s
                                                   remaining: 1.03s
838:
        learn: 0.5805658
                                  total: 5.34s
                                                   remaining: 1.02s
                                  total: 5.35s
839:
        learn: 0.5802207
                                                   remaining: 1.02s
840:
        learn: 0.5796854
                                  total: 5.36s
                                                   remaining: 1.01s
841:
        learn: 0.5792994
                                  total: 5.36s
                                                   remaining: 1.01s
842:
                                  total: 5.37s
        learn: 0.5787605
                                                   remaining: 1000ms
843:
        learn: 0.5784953
                                  total: 5.37s
                                                   remaining: 993ms
844:
        learn: 0.5778741
                                  total: 5.38s
                                                   remaining: 986ms
845:
        learn: 0.5777939
                                  total: 5.38s
                                                   remaining: 979ms
846:
        learn: 0.5774203
                                  total: 5.39s
                                                   remaining: 973ms
847:
        learn: 0.5769531
                                  total: 5.39s
                                                   remaining: 967ms
848:
        learn: 0.5766182
                                  total: 5.4s
                                                   remaining: 960ms
849:
        learn: 0.5763396
                                  total: 5.41s
                                                   remaining: 954ms
850:
        learn: 0.5761281
                                  total: 5.41s
                                                   remaining: 948ms
        learn: 0.5758216
                                                   remaining: 942ms
851:
                                  total: 5.42s
852:
        learn: 0.5755115
                                  total: 5.43s
                                                   remaining: 935ms
853:
        learn: 0.5751345
                                  total: 5.43s
                                                   remaining: 929ms
854:
        learn: 0.5747749
                                  total: 5.44s
                                                   remaining: 923ms
855:
        learn: 0.5743445
                                  total: 5.45s
                                                   remaining: 917ms
856:
        learn: 0.5738824
                                  total: 5.46s
                                                   remaining: 911ms
857:
        learn: 0.5733780
                                  total: 5.46s
                                                   remaining: 904ms
858:
        learn: 0.5731311
                                  total: 5.47s
                                                   remaining: 898ms
        learn: 0.5726567
859:
                                  total: 5.48s
                                                   remaining: 892ms
        learn: 0.5719591
860:
                                  total: 5.49s
                                                   remaining: 886ms
861:
        learn: 0.5713639
                                  total: 5.49s
                                                   remaining: 880ms
862:
        learn: 0.5709510
                                  total: 5.5s
                                                   remaining: 874ms
863:
        learn: 0.5702038
                                  total: 5.51s
                                                   remaining: 867ms
        learn: 0.5699727
                                                   remaining: 861ms
864:
                                  total: 5.52s
                                  total: 5.53s
865:
        learn: 0.5695097
                                                   remaining: 855ms
866:
        learn: 0.5689729
                                  total: 5.54s
                                                   remaining: 849ms
867:
        learn: 0.5686174
                                  total: 5.54s
                                                   remaining: 843ms
868:
        learn: 0.5686090
                                  total: 5.55s
                                                   remaining: 837ms
869:
        learn: 0.5680594
                                  total: 5.56s
                                                   remaining: 831ms
870:
                                  total: 5.56s
        learn: 0.5678270
                                                   remaining: 824ms
871:
        learn: 0.5671398
                                  total: 5.57s
                                                   remaining: 817ms
        learn: 0.5665240
872:
                                  total: 5.57s
                                                   remaining: 811ms
873:
        learn: 0.5663142
                                  total: 5.58s
                                                   remaining: 805ms
874:
                                  total: 5.59s
        learn: 0.5661303
                                                   remaining: 798ms
                                  total: 5.59s
875:
        learn: 0.5659692
                                                   remaining: 792ms
876:
        learn: 0.5655669
                                  total: 5.6s
                                                   remaining: 785ms
```

```
877:
        learn: 0.5648355
                                  total: 5.61s
                                                   remaining: 779ms
878:
        learn: 0.5644477
                                  total: 5.61s
                                                   remaining: 773ms
879:
        learn: 0.5640283
                                  total: 5.62s
                                                   remaining: 766ms
880:
        learn: 0.5636339
                                  total: 5.63s
                                                   remaining: 760ms
881:
        learn: 0.5633042
                                  total: 5.63s
                                                   remaining: 754ms
882:
        learn: 0.5626677
                                  total: 5.64s
                                                   remaining: 747ms
883:
        learn: 0.5620267
                                  total: 5.65s
                                                   remaining: 741ms
884:
        learn: 0.5618063
                                  total: 5.65s
                                                   remaining: 735ms
885:
        learn: 0.5613630
                                  total: 5.66s
                                                   remaining: 728ms
886:
        learn: 0.5609667
                                  total: 5.67s
                                                   remaining: 722ms
887:
        learn: 0.5603932
                                  total: 5.67s
                                                   remaining: 716ms
888:
        learn: 0.5599674
                                  total: 5.68s
                                                   remaining: 710ms
889:
        learn: 0.5593645
                                  total: 5.69s
                                                   remaining: 703ms
890:
        learn: 0.5590091
                                  total: 5.7s
                                                   remaining: 697ms
891:
        learn: 0.5583062
                                  total: 5.71s
                                                   remaining: 691ms
        learn: 0.5578563
892:
                                  total: 5.71s
                                                   remaining: 684ms
893:
        learn: 0.5573390
                                  total: 5.72s
                                                   remaining: 678ms
894:
        learn: 0.5570043
                                  total: 5.73s
                                                   remaining: 672ms
                                  total: 5.73s
895:
        learn: 0.5569965
                                                   remaining: 666ms
896:
        learn: 0.5567264
                                  total: 5.74s
                                                   remaining: 659ms
897:
        learn: 0.5561556
                                  total: 5.75s
                                                   remaining: 653ms
898:
        learn: 0.5558138
                                  total: 5.75s
                                                   remaining: 646ms
                                  total: 5.76s
899:
        learn: 0.5554542
                                                   remaining: 640ms
900:
        learn: 0.5552726
                                  total: 5.76s
                                                   remaining: 633ms
901:
        learn: 0.5549491
                                  total: 5.76s
                                                   remaining: 626ms
                                  total: 5.77s
902:
        learn: 0.5545468
                                                   remaining: 620ms
903:
                                  total: 5.77s
        learn: 0.5543386
                                                   remaining: 613ms
904:
        learn: 0.5540101
                                  total: 5.78s
                                                   remaining: 607ms
905:
        learn: 0.5536341
                                  total: 5.78s
                                                   remaining: 600ms
906:
        learn: 0.5531628
                                  total: 5.79s
                                                   remaining: 594ms
907:
        learn: 0.5530393
                                  total: 5.8s
                                                   remaining: 587ms
908:
        learn: 0.5528993
                                  total: 5.8s
                                                   remaining: 581ms
909:
        learn: 0.5523333
                                  total: 5.81s
                                                   remaining: 575ms
910:
        learn: 0.5519024
                                  total: 5.82s
                                                   remaining: 568ms
        learn: 0.5516292
                                                   remaining: 562ms
911:
                                  total: 5.82s
912:
        learn: 0.5511612
                                  total: 5.83s
                                                   remaining: 556ms
913:
        learn: 0.5506969
                                  total: 5.84s
                                                   remaining: 549ms
914:
        learn: 0.5503331
                                  total: 5.84s
                                                   remaining: 543ms
915:
        learn: 0.5501732
                                  total: 5.85s
                                                   remaining: 537ms
916:
        learn: 0.5498193
                                  total: 5.86s
                                                   remaining: 530ms
917:
        learn: 0.5493294
                                  total: 5.87s
                                                   remaining: 524ms
918:
        learn: 0.5491134
                                  total: 5.87s
                                                   remaining: 517ms
919:
        learn: 0.5487632
                                  total: 5.88s
                                                   remaining: 511ms
920:
        learn: 0.5483557
                                  total: 5.88s
                                                   remaining: 505ms
921:
        learn: 0.5480224
                                  total: 5.89s
                                                   remaining: 498ms
922:
        learn: 0.5480158
                                  total: 5.89s
                                                   remaining: 492ms
923:
        learn: 0.5473784
                                  total: 5.9s
                                                   remaining: 485ms
        learn: 0.5468298
924:
                                  total: 5.91s
                                                   remaining: 479ms
                                  total: 5.92s
925:
        learn: 0.5464037
                                                   remaining: 473ms
926:
        learn: 0.5458648
                                  total: 5.92s
                                                   remaining: 466ms
927:
        learn: 0.5452910
                                  total: 5.93s
                                                   remaining: 460ms
928:
        learn: 0.5452407
                                  total: 5.93s
                                                   remaining: 454ms
929:
        learn: 0.5442372
                                  total: 5.94s
                                                   remaining: 447ms
930:
        learn: 0.5439201
                                  total: 5.95s
                                                   remaining: 441ms
931:
        learn: 0.5438728
                                  total: 5.96s
                                                   remaining: 435ms
932:
        learn: 0.5434201
                                  total: 5.96s
                                                   remaining: 428ms
933:
        learn: 0.5430677
                                  total: 5.96s
                                                   remaining: 421ms
934:
        learn: 0.5426266
                                  total: 5.96s
                                                   remaining: 415ms
                                  total: 5.97s
935:
        learn: 0.5420424
                                                   remaining: 408ms
936:
        learn: 0.5417440
                                  total: 5.97s
                                                   remaining: 402ms
```

```
937:
        learn: 0.5413844
                                  total: 5.98s
                                                   remaining: 395ms
938:
        learn: 0.5412986
                                  total: 5.99s
                                                   remaining: 389ms
939:
        learn: 0.5406030
                                  total: 6s
                                                   remaining: 383ms
940:
        learn: 0.5401455
                                  total: 6s
                                                   remaining: 376ms
941:
        learn: 0.5396443
                                  total: 6s
                                                   remaining: 370ms
942:
        learn: 0.5394556
                                  total: 6.01s
                                                   remaining: 363ms
943:
        learn: 0.5391478
                                  total: 6.02s
                                                   remaining: 357ms
944:
        learn: 0.5389015
                                  total: 6.02s
                                                   remaining: 351ms
945:
        learn: 0.5384049
                                  total: 6.03s
                                                   remaining: 344ms
946:
        learn: 0.5382200
                                  total: 6.04s
                                                   remaining: 338ms
947:
        learn: 0.5379034
                                  total: 6.04s
                                                   remaining: 332ms
948:
        learn: 0.5376947
                                  total: 6.05s
                                                   remaining: 325ms
949:
        learn: 0.5375102
                                  total: 6.06s
                                                   remaining: 319ms
950:
        learn: 0.5372440
                                  total: 6.06s
                                                   remaining: 312ms
951:
        learn: 0.5371238
                                  total: 6.07s
                                                   remaining: 306ms
952:
        learn: 0.5367440
                                  total: 6.08s
                                                   remaining: 300ms
953:
        learn: 0.5362598
                                  total: 6.08s
                                                   remaining: 293ms
954:
        learn: 0.5358214
                                  total: 6.09s
                                                   remaining: 287ms
955:
        learn: 0.5353443
                                  total: 6.1s
                                                   remaining: 281ms
956:
        learn: 0.5350273
                                  total: 6.11s
                                                   remaining: 274ms
957:
        learn: 0.5346084
                                  total: 6.11s
                                                   remaining: 268ms
958:
        learn: 0.5342587
                                  total: 6.12s
                                                   remaining: 262ms
959:
        learn: 0.5338854
                                  total: 6.13s
                                                   remaining: 255ms
960:
        learn: 0.5334194
                                  total: 6.13s
                                                   remaining: 249ms
961:
        learn: 0.5331048
                                  total: 6.13s
                                                   remaining: 242ms
962:
                                  total: 6.14s
        learn: 0.5329485
                                                   remaining: 236ms
                                  total: 6.14s
963:
        learn: 0.5325711
                                                   remaining: 229ms
964:
        learn: 0.5322471
                                  total: 6.14s
                                                   remaining: 223ms
965:
        learn: 0.5320814
                                  total: 6.15s
                                                   remaining: 217ms
966:
        learn: 0.5316863
                                  total: 6.16s
                                                   remaining: 210ms
967:
        learn: 0.5314228
                                  total: 6.16s
                                                   remaining: 204ms
968:
        learn: 0.5311730
                                  total: 6.17s
                                                   remaining: 197ms
969:
        learn: 0.5308838
                                  total: 6.18s
                                                   remaining: 191ms
970:
        learn: 0.5306675
                                  total: 6.18s
                                                   remaining: 185ms
        learn: 0.5304938
971:
                                  total: 6.19s
                                                   remaining: 178ms
972:
        learn: 0.5300640
                                  total: 6.2s
                                                   remaining: 172ms
973:
        learn: 0.5296976
                                  total: 6.2s
                                                   remaining: 166ms
974:
        learn: 0.5294365
                                  total: 6.21s
                                                   remaining: 159ms
975:
        learn: 0.5291354
                                  total: 6.22s
                                                   remaining: 153ms
976:
        learn: 0.5286687
                                  total: 6.23s
                                                   remaining: 147ms
977:
        learn: 0.5282768
                                  total: 6.23s
                                                   remaining: 140ms
978:
        learn: 0.5279637
                                  total: 6.24s
                                                   remaining: 134ms
979:
        learn: 0.5274642
                                  total: 6.25s
                                                   remaining: 128ms
980:
        learn: 0.5274570
                                  total: 6.25s
                                                   remaining: 121ms
981:
        learn: 0.5274444
                                  total: 6.26s
                                                   remaining: 115ms
982:
        learn: 0.5274365
                                  total: 6.27s
                                                   remaining: 108ms
983:
        learn: 0.5274300
                                  total: 6.27s
                                                   remaining: 102ms
        learn: 0.5270470
                                  total: 6.28s
                                                   remaining: 95.7ms
984:
985:
        learn: 0.5266414
                                  total: 6.29s
                                                   remaining: 89.3ms
986:
        learn: 0.5266141
                                  total: 6.3s
                                                   remaining: 82.9ms
987:
        learn: 0.5262013
                                  total: 6.3s
                                                   remaining: 76.6ms
988:
        learn: 0.5259148
                                  total: 6.31s
                                                   remaining: 70.2ms
989:
        learn: 0.5254162
                                  total: 6.32s
                                                   remaining: 63.8ms
990:
        learn: 0.5251460
                                  total: 6.33s
                                                   remaining: 57.5ms
991:
        learn: 0.5245680
                                  total: 6.33s
                                                   remaining: 51ms
        learn: 0.5241726
992:
                                  total: 6.33s
                                                   remaining: 44.6ms
993:
        learn: 0.5237504
                                  total: 6.34s
                                                   remaining: 38.2ms
994:
                                  total: 6.34s
        learn: 0.5235108
                                                   remaining: 31.9ms
995:
        learn: 0.5232551
                                  total: 6.34s
                                                   remaining: 25.5ms
996:
        learn: 0.5231840
                                  total: 6.35s
                                                   remaining: 19.1ms
```

```
997:
        learn: 0.5228513
                                  total: 6.36s
                                                   remaining: 12.7ms
998:
        learn: 0.5225973
                                  total: 6.36s
                                                   remaining: 6.37ms
999:
        learn: 0.5221660
                                  total: 6.37s
                                                   remaining: Ous
Learning rate set to 0.06063
                                  total: 8.04ms
0:
        learn: 59.2392912
                                                   remaining: 8.03s
1:
        learn: 56.0352203
                                  total: 14.4ms
                                                   remaining: 7.18s
2:
        learn: 53.0589554
                                  total: 22ms
                                                   remaining: 7.3s
3:
        learn: 50.1208241
                                  total: 29.3ms
                                                   remaining: 7.31s
4:
        learn: 47.4308835
                                  total: 36.4ms
                                                   remaining: 7.25s
5:
        learn: 44.9751072
                                  total: 43.7ms
                                                   remaining: 7.25s
6:
        learn: 42.5928108
                                  total: 50.6ms
                                                   remaining: 7.18s
7:
        learn: 40.3675931
                                  total: 58ms
                                                   remaining: 7.19s
8:
        learn: 38.2574052
                                  total: 65.2ms
                                                   remaining: 7.18s
9:
        learn: 36.2528543
                                  total: 72.5ms
                                                   remaining: 7.18s
        learn: 34.3911142
                                  total: 79.8ms
10:
                                                   remaining: 7.17s
        learn: 32.6235764
                                  total: 86.9ms
11:
                                                   remaining: 7.16s
12:
        learn: 30.9607042
                                  total: 90.5ms
                                                   remaining: 6.87s
13:
        learn: 29.3993709
                                  total: 95ms
                                                   remaining: 6.69s
14:
        learn: 27.8916511
                                  total: 101ms
                                                   remaining: 6.62s
        learn: 26.4913694
15:
                                  total: 108ms
                                                   remaining: 6.63s
16:
        learn: 25.1754761
                                  total: 115ms
                                                   remaining: 6.65s
17:
        learn: 23.9163168
                                  total: 121ms
                                                   remaining: 6.58s
18:
        learn: 22.7468269
                                  total: 128ms
                                                   remaining: 6.59s
19:
        learn: 21.6923512
                                  total: 134ms
                                                   remaining: 6.56s
20:
        learn: 20.6635219
                                  total: 141ms
                                                   remaining: 6.58s
21:
        learn: 19.6877400
                                  total: 149ms
                                                   remaining: 6.61s
22:
        learn: 18.7833324
                                  total: 156ms
                                                   remaining: 6.61s
        learn: 17.8751436
23:
                                  total: 163ms
                                                   remaining: 6.63s
24:
        learn: 17.0303029
                                  total: 170ms
                                                   remaining: 6.63s
25:
        learn: 16.2429936
                                  total: 177ms
                                                   remaining: 6.64s
26:
        learn: 15.4687683
                                  total: 182ms
                                                   remaining: 6.55s
27:
        learn: 14.7768526
                                  total: 189ms
                                                   remaining: 6.56s
28:
        learn: 14.1384855
                                  total: 196ms
                                                   remaining: 6.56s
29:
        learn: 13.5103905
                                  total: 200ms
                                                   remaining: 6.46s
30:
        learn: 12.9199805
                                  total: 203ms
                                                   remaining: 6.36s
31:
        learn: 12.3572286
                                  total: 207ms
                                                   remaining: 6.26s
32:
        learn: 11.8300991
                                  total: 212ms
                                                   remaining: 6.2s
33:
        learn: 11.3541473
                                  total: 218ms
                                                   remaining: 6.2s
34:
        learn: 10.9005272
                                  total: 225ms
                                                   remaining: 6.21s
35:
        learn: 10.4779974
                                  total: 230ms
                                                   remaining: 6.17s
36:
        learn: 10.0579436
                                  total: 236ms
                                                   remaining: 6.15s
37:
        learn: 9.6841530
                                  total: 244ms
                                                   remaining: 6.17s
        learn: 9.3072530
                                  total: 251ms
38:
                                                   remaining: 6.18s
39:
        learn: 8.9471297
                                  total: 258ms
                                                   remaining: 6.2s
                                  total: 265ms
40:
        learn: 8.6405504
                                                   remaining: 6.21s
        learn: 8.3268798
                                  total: 273ms
41:
                                                   remaining: 6.22s
42:
        learn: 8.0727858
                                  total: 278ms
                                                   remaining: 6.18s
43:
        learn: 7.7802849
                                  total: 285ms
                                                   remaining: 6.19s
44:
        learn: 7.5169414
                                  total: 290ms
                                                   remaining: 6.15s
45:
        learn: 7.2744847
                                  total: 297ms
                                                   remaining: 6.16s
46:
        learn: 7.0328398
                                  total: 304ms
                                                   remaining: 6.17s
47:
        learn: 6.8096679
                                  total: 312ms
                                                   remaining: 6.18s
48:
        learn: 6.6043135
                                  total: 319ms
                                                   remaining: 6.18s
49:
        learn: 6.4197414
                                  total: 324ms
                                                   remaining: 6.16s
50:
        learn: 6.2277687
                                  total: 331ms
                                                   remaining: 6.16s
51:
        learn: 6.0478561
                                  total: 337ms
                                                   remaining: 6.15s
52:
        learn: 5.8851268
                                  total: 345ms
                                                   remaining: 6.17s
53:
        learn: 5.7166957
                                  total: 352ms
                                                   remaining: 6.17s
54:
        learn: 5.5653219
                                  total: 359ms
                                                   remaining: 6.17s
55:
        learn: 5.4413470
                                  total: 366ms
                                                   remaining: 6.18s
```

```
56:
        learn: 5.3111502
                                  total: 372ms
                                                   remaining: 6.16s
57:
        learn: 5.1950983
                                  total: 379ms
                                                   remaining: 6.16s
                                  total: 387ms
58:
        learn: 5.0650176
                                                   remaining: 6.17s
                                  total: 395ms
59:
        learn: 4.9402127
                                                   remaining: 6.18s
60:
        learn: 4.8370320
                                  total: 404ms
                                                   remaining: 6.21s
61:
        learn: 4.7324683
                                  total: 407ms
                                                   remaining: 6.16s
62:
        learn: 4.6413112
                                  total: 411ms
                                                   remaining: 6.11s
63:
        learn: 4.5532035
                                  total: 414ms
                                                   remaining: 6.06s
64:
        learn: 4.4596840
                                  total: 419ms
                                                   remaining: 6.03s
65:
        learn: 4.3759813
                                  total: 426ms
                                                   remaining: 6.03s
66:
        learn: 4.3060610
                                  total: 432ms
                                                   remaining: 6.01s
67:
        learn: 4.2312611
                                  total: 439ms
                                                   remaining: 6.02s
68:
        learn: 4.1683363
                                  total: 446ms
                                                   remaining: 6.02s
69:
        learn: 4.1020277
                                  total: 451ms
                                                   remaining: 6s
        learn: 4.0333438
70:
                                  total: 459ms
                                                   remaining: 6s
71:
        learn: 3.9642727
                                  total: 465ms
                                                   remaining: 5.99s
72:
        learn: 3.9045418
                                  total: 472ms
                                                   remaining: 5.99s
73:
        learn: 3.8552200
                                  total: 479ms
                                                   remaining: 6s
74:
        learn: 3.8028643
                                  total: 485ms
                                                   remaining: 5.99s
        learn: 3.7540168
75:
                                  total: 493ms
                                                   remaining: 5.99s
76:
        learn: 3.7008071
                                  total: 500ms
                                                   remaining: 5.99s
77:
        learn: 3.6536161
                                  total: 507ms
                                                   remaining: 5.99s
78:
        learn: 3.6080269
                                  total: 512ms
                                                   remaining: 5.97s
79:
        learn: 3.5682376
                                  total: 519ms
                                                   remaining: 5.97s
:08
        learn: 3.5317322
                                  total: 526ms
                                                   remaining: 5.97s
81:
        learn: 3.4799933
                                  total: 533ms
                                                   remaining: 5.97s
82:
        learn: 3.4424187
                                  total: 540ms
                                                   remaining: 5.97s
        learn: 3.4004323
83:
                                  total: 547ms
                                                   remaining: 5.97s
84:
        learn: 3.3674342
                                  total: 554ms
                                                   remaining: 5.97s
85:
        learn: 3.3336338
                                  total: 560ms
                                                   remaining: 5.96s
86:
        learn: 3.3035136
                                  total: 567ms
                                                   remaining: 5.95s
87:
        learn: 3.2717710
                                  total: 575ms
                                                   remaining: 5.96s
        learn: 3.2433420
88:
                                  total: 582ms
                                                   remaining: 5.95s
89:
        learn: 3.2172233
                                  total: 589ms
                                                   remaining: 5.96s
90:
        learn: 3.1813485
                                  total: 597ms
                                                   remaining: 5.96s
91:
        learn: 3.1519741
                                  total: 604ms
                                                   remaining: 5.96s
92:
        learn: 3.1229148
                                  total: 609ms
                                                   remaining: 5.94s
93:
        learn: 3.1025599
                                  total: 612ms
                                                   remaining: 5.9s
        learn: 3.0849325
94:
                                  total: 615ms
                                                   remaining: 5.86s
95:
        learn: 3.0631513
                                  total: 618ms
                                                   remaining: 5.82s
96:
        learn: 3.0363474
                                  total: 623ms
                                                   remaining: 5.8s
97:
        learn: 3.0062392
                                  total: 630ms
                                                   remaining: 5.8s
98:
        learn: 2.9823248
                                  total: 636ms
                                                   remaining: 5.79s
99:
        learn: 2.9643215
                                  total: 643ms
                                                   remaining: 5.79s
100:
        learn: 2.9440373
                                  total: 651ms
                                                   remaining: 5.79s
101:
        learn: 2.9210101
                                  total: 658ms
                                                   remaining: 5.79s
102:
        learn: 2.9018776
                                  total: 665ms
                                                   remaining: 5.79s
103:
        learn: 2.8847024
                                  total: 672ms
                                                   remaining: 5.79s
104:
        learn: 2.8617653
                                  total: 680ms
                                                   remaining: 5.8s
105:
                                  total: 688ms
        learn: 2.8350010
                                                   remaining: 5.8s
106:
        learn: 2.8176567
                                  total: 696ms
                                                   remaining: 5.81s
107:
        learn: 2.8023015
                                  total: 703ms
                                                   remaining: 5.81s
108:
        learn: 2.7746798
                                  total: 707ms
                                                   remaining: 5.78s
109:
        learn: 2.7568018
                                  total: 715ms
                                                   remaining: 5.78s
110:
        learn: 2.7337413
                                  total: 726ms
                                                   remaining: 5.81s
111:
        learn: 2.7212678
                                  total: 734ms
                                                   remaining: 5.82s
112:
        learn: 2.6999657
                                  total: 741ms
                                                   remaining: 5.82s
113:
        learn: 2.6809768
                                  total: 746ms
                                                   remaining: 5.8s
114:
        learn: 2.6661970
                                  total: 752ms
                                                   remaining: 5.79s
115:
        learn: 2.6537166
                                  total: 759ms
                                                   remaining: 5.78s
```

```
116:
        learn: 2.6394278
                                  total: 764ms
                                                   remaining: 5.76s
117:
        learn: 2.6218724
                                  total: 771ms
                                                   remaining: 5.76s
        learn: 2.6019636
                                  total: 778ms
118:
                                                   remaining: 5.76s
                                  total: 784ms
119:
        learn: 2.5816718
                                                   remaining: 5.75s
120:
        learn: 2.5653821
                                  total: 787ms
                                                   remaining: 5.72s
121:
        learn: 2.5485387
                                  total: 791ms
                                                   remaining: 5.69s
122:
        learn: 2.5273673
                                  total: 796ms
                                                   remaining: 5.67s
123:
        learn: 2.5117980
                                  total: 800ms
                                                   remaining: 5.65s
124:
        learn: 2.4960391
                                  total: 808ms
                                                   remaining: 5.65s
125:
        learn: 2.4772538
                                  total: 815ms
                                                   remaining: 5.65s
126:
        learn: 2.4672907
                                  total: 821ms
                                                   remaining: 5.64s
127:
        learn: 2.4516647
                                  total: 827ms
                                                   remaining: 5.63s
128:
        learn: 2.4353997
                                  total: 833ms
                                                   remaining: 5.62s
129:
        learn: 2.4265547
                                  total: 840ms
                                                   remaining: 5.62s
130:
        learn: 2.4189285
                                  total: 848ms
                                                   remaining: 5.62s
        learn: 2.4067831
131:
                                  total: 854ms
                                                   remaining: 5.62s
132:
        learn: 2.3926843
                                  total: 860ms
                                                   remaining: 5.61s
133:
        learn: 2.3822286
                                  total: 868ms
                                                   remaining: 5.61s
134:
        learn: 2.3676773
                                  total: 875ms
                                                   remaining: 5.6s
        learn: 2.3603637
135:
                                  total: 881ms
                                                   remaining: 5.6s
136:
        learn: 2.3474408
                                  total: 888ms
                                                   remaining: 5.59s
137:
        learn: 2.3326190
                                  total: 893ms
                                                   remaining: 5.58s
138:
        learn: 2.3171371
                                  total: 900ms
                                                   remaining: 5.58s
139:
                                  total: 907ms
        learn: 2.3050028
                                                   remaining: 5.57s
140:
        learn: 2.2897380
                                  total: 914ms
                                                   remaining: 5.57s
141:
        learn: 2.2685302
                                  total: 921ms
                                                   remaining: 5.57s
        learn: 2.2531488
142:
                                  total: 929ms
                                                   remaining: 5.57s
143:
        learn: 2.2371124
                                  total: 936ms
                                                   remaining: 5.56s
        learn: 2.2247345
144:
                                  total: 944ms
                                                   remaining: 5.56s
145:
        learn: 2.2107603
                                  total: 952ms
                                                   remaining: 5.57s
146:
        learn: 2.1965902
                                  total: 959ms
                                                   remaining: 5.56s
147:
        learn: 2.1856694
                                  total: 966ms
                                                   remaining: 5.56s
148:
        learn: 2.1753101
                                  total: 973ms
                                                   remaining: 5.56s
149:
        learn: 2.1676316
                                  total: 982ms
                                                   remaining: 5.56s
        learn: 2.1555875
                                  total: 985ms
                                                   remaining: 5.54s
150:
151:
        learn: 2.1393115
                                  total: 988ms
                                                   remaining: 5.51s
152:
        learn: 2.1268644
                                  total: 991ms
                                                   remaining: 5.49s
153:
        learn: 2.1181137
                                  total: 995ms
                                                   remaining: 5.46s
        learn: 2.1041325
154:
                                  total: 999ms
                                                   remaining: 5.44s
155:
        learn: 2.0940352
                                  total: 1s
                                                   remaining: 5.43s
156:
        learn: 2.0811722
                                  total: 1.01s
                                                   remaining: 5.43s
157:
        learn: 2.0729713
                                  total: 1.02s
                                                   remaining: 5.42s
158:
        learn: 2.0638337
                                  total: 1.02s
                                                   remaining: 5.41s
159:
        learn: 2.0539230
                                  total: 1.03s
                                                   remaining: 5.41s
160:
        learn: 2.0382880
                                  total: 1.03s
                                                   remaining: 5.4s
161:
        learn: 2.0271831
                                  total: 1.04s
                                                   remaining: 5.39s
162:
        learn: 2.0172437
                                  total: 1.05s
                                                   remaining: 5.39s
163:
        learn: 2.0091494
                                  total: 1.05s
                                                   remaining: 5.38s
        learn: 1.9997159
                                  total: 1.06s
164:
                                                   remaining: 5.38s
165:
        learn: 1.9911870
                                  total: 1.07s
                                                   remaining: 5.38s
166:
        learn: 1.9844912
                                  total: 1.08s
                                                   remaining: 5.37s
167:
        learn: 1.9751037
                                  total: 1.08s
                                                   remaining: 5.36s
168:
        learn: 1.9656581
                                  total: 1.09s
                                                   remaining: 5.36s
169:
        learn: 1.9597475
                                  total: 1.09s
                                                   remaining: 5.35s
170:
        learn: 1.9528910
                                  total: 1.1s
                                                   remaining: 5.34s
171:
        learn: 1.9420920
                                  total: 1.11s
                                                   remaining: 5.34s
172:
        learn: 1.9303603
                                  total: 1.12s
                                                   remaining: 5.34s
173:
        learn: 1.9236452
                                  total: 1.12s
                                                   remaining: 5.33s
174:
        learn: 1.9106407
                                  total: 1.13s
                                                   remaining: 5.33s
175:
        learn: 1.9017042
                                  total: 1.14s
                                                   remaining: 5.33s
```

```
176:
        learn: 1.8941635
                                  total: 1.14s
                                                   remaining: 5.32s
177:
        learn: 1.8828501
                                  total: 1.15s
                                                   remaining: 5.32s
178:
        learn: 1.8750192
                                  total: 1.16s
                                                   remaining: 5.31s
179:
        learn: 1.8656681
                                  total: 1.17s
                                                   remaining: 5.31s
180:
        learn: 1.8578206
                                  total: 1.17s
                                                   remaining: 5.31s
181:
        learn: 1.8508122
                                  total: 1.18s
                                                   remaining: 5.3s
182:
        learn: 1.8440530
                                  total: 1.19s
                                                   remaining: 5.3s
183:
        learn: 1.8377599
                                  total: 1.19s
                                                   remaining: 5.28s
184:
        learn: 1.8302374
                                  total: 1.19s
                                                   remaining: 5.26s
185:
        learn: 1.8227508
                                  total: 1.2s
                                                   remaining: 5.24s
186:
        learn: 1.8101799
                                  total: 1.2s
                                                   remaining: 5.23s
187:
        learn: 1.8054338
                                  total: 1.21s
                                                   remaining: 5.22s
188:
        learn: 1.7964646
                                  total: 1.22s
                                                   remaining: 5.22s
189:
        learn: 1.7903750
                                  total: 1.22s
                                                   remaining: 5.21s
190:
        learn: 1.7824677
                                  total: 1.23s
                                                   remaining: 5.2s
        learn: 1.7743416
                                  total: 1.24s
191:
                                                   remaining: 5.2s
192:
        learn: 1.7647627
                                  total: 1.24s
                                                   remaining: 5.19s
193:
        learn: 1.7596029
                                  total: 1.25s
                                                   remaining: 5.18s
194:
        learn: 1.7529018
                                  total: 1.25s
                                                   remaining: 5.17s
195:
        learn: 1.7477986
                                  total: 1.26s
                                                   remaining: 5.16s
196:
        learn: 1.7375238
                                  total: 1.26s
                                                   remaining: 5.15s
197:
        learn: 1.7309692
                                  total: 1.27s
                                                   remaining: 5.14s
198:
        learn: 1.7262141
                                  total: 1.28s
                                                   remaining: 5.14s
199:
        learn: 1.7183362
                                  total: 1.28s
                                                   remaining: 5.13s
200:
        learn: 1.7127921
                                  total: 1.29s
                                                   remaining: 5.13s
201:
        learn: 1.7072373
                                  total: 1.3s
                                                   remaining: 5.12s
202:
        learn: 1.6951182
                                  total: 1.3s
                                                   remaining: 5.12s
203:
        learn: 1.6884084
                                  total: 1.31s
                                                   remaining: 5.12s
        learn: 1.6830527
                                  total: 1.32s
204:
                                                   remaining: 5.11s
205:
        learn: 1.6780105
                                  total: 1.32s
                                                   remaining: 5.11s
206:
        learn: 1.6724782
                                  total: 1.33s
                                                   remaining: 5.1s
207:
        learn: 1.6689817
                                  total: 1.34s
                                                   remaining: 5.1s
208:
        learn: 1.6639443
                                  total: 1.34s
                                                   remaining: 5.09s
209:
        learn: 1.6563106
                                  total: 1.35s
                                                   remaining: 5.09s
210:
        learn: 1.6461980
                                  total: 1.36s
                                                   remaining: 5.09s
211:
        learn: 1.6390025
                                  total: 1.37s
                                                   remaining: 5.08s
212:
        learn: 1.6345722
                                  total: 1.37s
                                                   remaining: 5.08s
213:
        learn: 1.6299785
                                  total: 1.38s
                                                   remaining: 5.07s
214:
        learn: 1.6260303
                                  total: 1.39s
                                                   remaining: 5.07s
215:
        learn: 1.6209255
                                  total: 1.4s
                                                   remaining: 5.07s
216:
        learn: 1.6127882
                                  total: 1.4s
                                                   remaining: 5.05s
217:
        learn: 1.6076705
                                  total: 1.4s
                                                   remaining: 5.03s
218:
        learn: 1.6020025
                                  total: 1.41s
                                                   remaining: 5.01s
219:
        learn: 1.5965515
                                  total: 1.41s
                                                   remaining: 5s
220:
        learn: 1.5916686
                                  total: 1.42s
                                                   remaining: 5s
221:
        learn: 1.5852057
                                  total: 1.42s
                                                   remaining: 4.99s
222:
        learn: 1.5782208
                                  total: 1.43s
                                                   remaining: 4.98s
223:
        learn: 1.5712966
                                  total: 1.44s
                                                   remaining: 4.98s
224:
        learn: 1.5646085
                                  total: 1.44s
                                                   remaining: 4.97s
225:
                                  total: 1.45s
        learn: 1.5585070
                                                   remaining: 4.97s
226:
        learn: 1.5500759
                                  total: 1.46s
                                                   remaining: 4.96s
227:
        learn: 1.5444528
                                  total: 1.46s
                                                   remaining: 4.96s
228:
        learn: 1.5389892
                                  total: 1.47s
                                                   remaining: 4.95s
229:
        learn: 1.5343270
                                  total: 1.48s
                                                   remaining: 4.95s
230:
        learn: 1.5297030
                                  total: 1.48s
                                                   remaining: 4.94s
231:
        learn: 1.5268768
                                  total: 1.49s
                                                   remaining: 4.94s
        learn: 1.5227768
232:
                                  total: 1.5s
                                                   remaining: 4.93s
233:
        learn: 1.5192661
                                  total: 1.5s
                                                   remaining: 4.93s
234:
        learn: 1.5160143
                                  total: 1.51s
                                                   remaining: 4.92s
235:
        learn: 1.5094051
                                  total: 1.52s
                                                   remaining: 4.92s
```

```
236:
        learn: 1.5050242
                                  total: 1.53s
                                                   remaining: 4.92s
237:
        learn: 1.4991687
                                  total: 1.53s
                                                   remaining: 4.91s
238:
        learn: 1.4948822
                                  total: 1.54s
                                                   remaining: 4.91s
        learn: 1.4880759
                                  total: 1.55s
239:
                                                   remaining: 4.91s
240:
        learn: 1.4834946
                                  total: 1.56s
                                                   remaining: 4.9s
241:
        learn: 1.4807722
                                  total: 1.56s
                                                   remaining: 4.9s
242:
        learn: 1.4739640
                                  total: 1.57s
                                                   remaining: 4.89s
243:
        learn: 1.4678999
                                  total: 1.58s
                                                   remaining: 4.89s
244:
        learn: 1.4618144
                                  total: 1.58s
                                                   remaining: 4.88s
245:
        learn: 1.4582839
                                  total: 1.59s
                                                   remaining: 4.88s
246:
        learn: 1.4541020
                                  total: 1.6s
                                                   remaining: 4.88s
247:
        learn: 1.4494911
                                  total: 1.6s
                                                   remaining: 4.86s
248:
        learn: 1.4450065
                                  total: 1.61s
                                                   remaining: 4.84s
249:
        learn: 1.4411895
                                  total: 1.61s
                                                   remaining: 4.83s
250:
        learn: 1.4368809
                                  total: 1.61s
                                                   remaining: 4.82s
251:
        learn: 1.4316057
                                  total: 1.62s
                                                   remaining: 4.8s
252:
        learn: 1.4260601
                                  total: 1.63s
                                                   remaining: 4.8s
253:
        learn: 1.4214267
                                  total: 1.63s
                                                   remaining: 4.79s
254:
        learn: 1.4158918
                                  total: 1.64s
                                                   remaining: 4.78s
255:
        learn: 1.4115966
                                  total: 1.64s
                                                   remaining: 4.78s
256:
        learn: 1.4080855
                                  total: 1.65s
                                                   remaining: 4.77s
257:
        learn: 1.4057962
                                  total: 1.66s
                                                   remaining: 4.77s
258:
        learn: 1.4024181
                                  total: 1.66s
                                                   remaining: 4.76s
259:
        learn: 1.3997058
                                  total: 1.67s
                                                   remaining: 4.75s
260:
        learn: 1.3933698
                                  total: 1.68s
                                                   remaining: 4.75s
        learn: 1.3890749
                                  total: 1.68s
261:
                                                   remaining: 4.74s
262:
                                  total: 1.69s
        learn: 1.3846143
                                                   remaining: 4.72s
263:
        learn: 1.3795899
                                  total: 1.69s
                                                   remaining: 4.71s
                                  total: 1.69s
        learn: 1.3734600
264:
                                                   remaining: 4.7s
265:
        learn: 1.3702036
                                  total: 1.7s
                                                   remaining: 4.69s
266:
        learn: 1.3650744
                                  total: 1.7s
                                                   remaining: 4.67s
267:
        learn: 1.3619738
                                  total: 1.71s
                                                   remaining: 4.67s
268:
        learn: 1.3594643
                                  total: 1.71s
                                                   remaining: 4.65s
269:
        learn: 1.3562909
                                  total: 1.72s
                                                   remaining: 4.64s
270:
        learn: 1.3534719
                                  total: 1.72s
                                                   remaining: 4.63s
271:
        learn: 1.3496550
                                  total: 1.73s
                                                   remaining: 4.63s
272:
        learn: 1.3456506
                                  total: 1.74s
                                                   remaining: 4.63s
273:
        learn: 1.3410407
                                  total: 1.75s
                                                   remaining: 4.63s
274:
        learn: 1.3382957
                                  total: 1.75s
                                                   remaining: 4.62s
275:
        learn: 1.3354250
                                  total: 1.76s
                                                   remaining: 4.61s
276:
        learn: 1.3309500
                                  total: 1.76s
                                                   remaining: 4.61s
277:
        learn: 1.3274585
                                  total: 1.77s
                                                   remaining: 4.6s
278:
        learn: 1.3225469
                                  total: 1.78s
                                                   remaining: 4.59s
279:
        learn: 1.3175179
                                  total: 1.78s
                                                   remaining: 4.59s
280:
        learn: 1.3130598
                                  total: 1.79s
                                                   remaining: 4.58s
281:
        learn: 1.3093575
                                  total: 1.8s
                                                   remaining: 4.58s
282:
        learn: 1.3054578
                                  total: 1.8s
                                                   remaining: 4.57s
283:
        learn: 1.3028645
                                  total: 1.81s
                                                   remaining: 4.56s
284:
        learn: 1.3015458
                                  total: 1.81s
                                                   remaining: 4.55s
                                  total: 1.82s
285:
        learn: 1.2983269
                                                   remaining: 4.53s
286:
        learn: 1.2930719
                                  total: 1.82s
                                                   remaining: 4.52s
287:
        learn: 1.2891144
                                  total: 1.82s
                                                   remaining: 4.51s
288:
        learn: 1.2853808
                                  total: 1.83s
                                                   remaining: 4.5s
289:
        learn: 1.2792891
                                  total: 1.83s
                                                   remaining: 4.49s
290:
        learn: 1.2729871
                                  total: 1.84s
                                                   remaining: 4.49s
291:
        learn: 1.2697802
                                  total: 1.84s
                                                   remaining: 4.47s
292:
        learn: 1.2670229
                                  total: 1.85s
                                                   remaining: 4.47s
293:
        learn: 1.2648673
                                  total: 1.85s
                                                   remaining: 4.45s
294:
        learn: 1.2624151
                                  total: 1.86s
                                                   remaining: 4.45s
295:
        learn: 1.2587323
                                  total: 1.87s
                                                   remaining: 4.44s
```

```
296:
        learn: 1.2552468
                                  total: 1.88s
                                                   remaining: 4.44s
297:
        learn: 1.2512663
                                  total: 1.88s
                                                   remaining: 4.43s
        learn: 1.2489349
                                  total: 1.89s
298:
                                                   remaining: 4.43s
                                  total: 1.9s
299:
        learn: 1.2462028
                                                   remaining: 4.42s
300:
        learn: 1.2440601
                                  total: 1.9s
                                                   remaining: 4.42s
301:
        learn: 1.2415352
                                  total: 1.91s
                                                   remaining: 4.42s
302:
        learn: 1.2381568
                                  total: 1.92s
                                                   remaining: 4.41s
303:
        learn: 1.2345463
                                  total: 1.92s
                                                   remaining: 4.41s
304:
        learn: 1.2321099
                                  total: 1.93s
                                                   remaining: 4.4s
305:
        learn: 1.2297751
                                  total: 1.94s
                                                   remaining: 4.39s
                                  total: 1.95s
306:
        learn: 1.2267875
                                                   remaining: 4.39s
307:
        learn: 1.2227418
                                  total: 1.95s
                                                   remaining: 4.38s
308:
        learn: 1.2202087
                                  total: 1.95s
                                                   remaining: 4.37s
309:
        learn: 1.2177123
                                  total: 1.96s
                                                   remaining: 4.36s
310:
        learn: 1.2143360
                                  total: 1.97s
                                                   remaining: 4.36s
        learn: 1.2111647
                                  total: 1.97s
311:
                                                   remaining: 4.35s
312:
        learn: 1.2088503
                                  total: 1.98s
                                                   remaining: 4.34s
313:
        learn: 1.2052580
                                  total: 1.99s
                                                   remaining: 4.34s
        learn: 1.2033968
                                  total: 1.99s
314:
                                                   remaining: 4.33s
315:
        learn: 1.1995182
                                  total: 2s
                                                   remaining: 4.33s
316:
        learn: 1.1971657
                                  total: 2.01s
                                                   remaining: 4.32s
317:
        learn: 1.1939886
                                  total: 2.01s
                                                   remaining: 4.31s
318:
        learn: 1.1917979
                                  total: 2.02s
                                                   remaining: 4.31s
319:
        learn: 1.1898441
                                  total: 2.02s
                                                   remaining: 4.3s
320:
        learn: 1.1874217
                                  total: 2.03s
                                                   remaining: 4.29s
        learn: 1.1850049
                                  total: 2.03s
321:
                                                   remaining: 4.28s
322:
        learn: 1.1801727
                                  total: 2.04s
                                                   remaining: 4.26s
323:
        learn: 1.1758347
                                  total: 2.04s
                                                   remaining: 4.25s
        learn: 1.1730437
324:
                                  total: 2.04s
                                                   remaining: 4.24s
325:
        learn: 1.1684278
                                  total: 2.05s
                                                   remaining: 4.23s
                                  total: 2.05s
326:
        learn: 1.1664471
                                                   remaining: 4.22s
327:
        learn: 1.1632576
                                  total: 2.06s
                                                   remaining: 4.21s
        learn: 1.1595559
328:
                                  total: 2.06s
                                                   remaining: 4.21s
329:
        learn: 1.1567533
                                  total: 2.07s
                                                   remaining: 4.2s
        learn: 1.1538580
                                  total: 2.08s
330:
                                                   remaining: 4.2s
331:
        learn: 1.1515012
                                  total: 2.08s
                                                   remaining: 4.19s
332:
        learn: 1.1493702
                                  total: 2.09s
                                                   remaining: 4.19s
333:
        learn: 1.1452856
                                  total: 2.1s
                                                   remaining: 4.18s
334:
        learn: 1.1434111
                                  total: 2.1s
                                                   remaining: 4.18s
335:
        learn: 1.1407964
                                  total: 2.11s
                                                   remaining: 4.17s
336:
        learn: 1.1380800
                                  total: 2.12s
                                                   remaining: 4.17s
337:
        learn: 1.1349920
                                  total: 2.13s
                                                   remaining: 4.16s
338:
        learn: 1.1326562
                                  total: 2.13s
                                                   remaining: 4.16s
339:
        learn: 1.1299231
                                  total: 2.14s
                                                   remaining: 4.15s
340:
        learn: 1.1276330
                                  total: 2.15s
                                                   remaining: 4.15s
341:
        learn: 1.1242612
                                  total: 2.15s
                                                   remaining: 4.15s
342:
        learn: 1.1212786
                                  total: 2.16s
                                                   remaining: 4.14s
343:
        learn: 1.1190099
                                  total: 2.17s
                                                   remaining: 4.14s
344:
        learn: 1.1159596
                                  total: 2.18s
                                                   remaining: 4.14s
                                  total: 2.19s
345:
        learn: 1.1126712
                                                   remaining: 4.13s
346:
        learn: 1.1097086
                                  total: 2.19s
                                                   remaining: 4.13s
347:
        learn: 1.1076058
                                  total: 2.2s
                                                   remaining: 4.13s
348:
        learn: 1.1053540
                                  total: 2.21s
                                                   remaining: 4.12s
349:
        learn: 1.1031570
                                  total: 2.22s
                                                   remaining: 4.12s
350:
        learn: 1.1005651
                                  total: 2.22s
                                                   remaining: 4.11s
351:
        learn: 1.0966165
                                  total: 2.23s
                                                   remaining: 4.1s
352:
        learn: 1.0954263
                                  total: 2.23s
                                                   remaining: 4.09s
353:
        learn: 1.0933812
                                  total: 2.23s
                                                   remaining: 4.08s
354:
        learn: 1.0899665
                                  total: 2.24s
                                                   remaining: 4.07s
355:
        learn: 1.0876601
                                  total: 2.25s
                                                   remaining: 4.06s
```

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356:
        learn: 1.0857564
                                  total: 2.25s
                                                   remaining: 4.06s
357:
        learn: 1.0816842
                                  total: 2.26s
                                                   remaining: 4.05s
358:
        learn: 1.0793965
                                  total: 2.27s
                                                   remaining: 4.04s
                                  total: 2.27s
359:
        learn: 1.0757309
                                                   remaining: 4.04s
360:
        learn: 1.0738974
                                  total: 2.28s
                                                   remaining: 4.03s
361:
        learn: 1.0720577
                                  total: 2.29s
                                                   remaining: 4.03s
362:
        learn: 1.0696631
                                  total: 2.29s
                                                   remaining: 4.02s
363:
        learn: 1.0680679
                                  total: 2.3s
                                                   remaining: 4.01s
364:
        learn: 1.0652946
                                  total: 2.31s
                                                   remaining: 4.01s
365:
        learn: 1.0636744
                                  total: 2.31s
                                                   remaining: 4s
                                  total: 2.32s
366:
        learn: 1.0620063
                                                   remaining: 4s
367:
        learn: 1.0601805
                                  total: 2.32s
                                                   remaining: 3.99s
368:
        learn: 1.0587271
                                  total: 2.33s
                                                   remaining: 3.98s
369:
        learn: 1.0563933
                                  total: 2.34s
                                                   remaining: 3.98s
370:
        learn: 1.0546256
                                  total: 2.34s
                                                   remaining: 3.97s
371:
        learn: 1.0534019
                                  total: 2.35s
                                                   remaining: 3.96s
372:
        learn: 1.0517405
                                  total: 2.36s
                                                   remaining: 3.96s
373:
        learn: 1.0500590
                                  total: 2.36s
                                                   remaining: 3.96s
374:
        learn: 1.0469200
                                  total: 2.37s
                                                   remaining: 3.95s
375:
        learn: 1.0452727
                                  total: 2.38s
                                                   remaining: 3.94s
376:
        learn: 1.0442858
                                  total: 2.38s
                                                   remaining: 3.94s
377:
        learn: 1.0426518
                                  total: 2.39s
                                                   remaining: 3.93s
378:
        learn: 1.0402953
                                  total: 2.4s
                                                   remaining: 3.93s
379:
        learn: 1.0380697
                                  total: 2.41s
                                                   remaining: 3.92s
380:
        learn: 1.0351288
                                  total: 2.41s
                                                   remaining: 3.92s
        learn: 1.0323930
                                  total: 2.42s
381:
                                                   remaining: 3.91s
382:
                                  total: 2.42s
        learn: 1.0311998
                                                   remaining: 3.9s
383:
        learn: 1.0305629
                                  total: 2.42s
                                                   remaining: 3.89s
        learn: 1.0290100
384:
                                  total: 2.43s
                                                   remaining: 3.88s
385:
        learn: 1.0267148
                                  total: 2.43s
                                                   remaining: 3.87s
                                  total: 2.44s
386:
        learn: 1.0246947
                                                   remaining: 3.86s
387:
        learn: 1.0223404
                                  total: 2.45s
                                                   remaining: 3.86s
388:
        learn: 1.0212674
                                  total: 2.45s
                                                   remaining: 3.85s
389:
        learn: 1.0202594
                                  total: 2.46s
                                                   remaining: 3.84s
        learn: 1.0181256
                                  total: 2.46s
390:
                                                   remaining: 3.84s
391:
        learn: 1.0154519
                                  total: 2.47s
                                                   remaining: 3.83s
392:
        learn: 1.0134350
                                  total: 2.48s
                                                   remaining: 3.82s
393:
        learn: 1.0122209
                                  total: 2.48s
                                                   remaining: 3.82s
394:
        learn: 1.0113609
                                  total: 2.49s
                                                   remaining: 3.81s
395:
        learn: 1.0098586
                                  total: 2.5s
                                                   remaining: 3.81s
396:
        learn: 1.0086936
                                  total: 2.5s
                                                   remaining: 3.8s
397:
        learn: 1.0070130
                                  total: 2.51s
                                                   remaining: 3.8s
        learn: 1.0047241
398:
                                  total: 2.52s
                                                   remaining: 3.79s
399:
        learn: 1.0026811
                                  total: 2.52s
                                                   remaining: 3.79s
400:
        learn: 1.0001782
                                  total: 2.53s
                                                   remaining: 3.78s
        learn: 0.9983805
401:
                                  total: 2.54s
                                                   remaining: 3.77s
402:
        learn: 0.9964836
                                  total: 2.54s
                                                   remaining: 3.77s
        learn: 0.9950612
                                  total: 2.55s
403:
                                                   remaining: 3.77s
404:
        learn: 0.9937755
                                  total: 2.56s
                                                   remaining: 3.76s
405:
                                  total: 2.57s
        learn: 0.9909482
                                                   remaining: 3.75s
406:
        learn: 0.9900799
                                  total: 2.57s
                                                   remaining: 3.75s
407:
        learn: 0.9888048
                                  total: 2.58s
                                                   remaining: 3.74s
408:
        learn: 0.9868851
                                  total: 2.59s
                                                   remaining: 3.74s
409:
                                  total: 2.59s
        learn: 0.9854650
                                                   remaining: 3.73s
410:
        learn: 0.9829783
                                  total: 2.6s
                                                   remaining: 3.73s
        learn: 0.9810084
411:
                                  total: 2.61s
                                                   remaining: 3.72s
412:
        learn: 0.9788039
                                  total: 2.62s
                                                   remaining: 3.72s
413:
                                  total: 2.62s
        learn: 0.9776892
                                                   remaining: 3.71s
414:
        learn: 0.9750232
                                  total: 2.63s
                                                   remaining: 3.7s
415:
        learn: 0.9723077
                                  total: 2.63s
                                                   remaining: 3.69s
```

```
416:
        learn: 0.9701472
                                  total: 2.63s
                                                   remaining: 3.68s
417:
        learn: 0.9687214
                                  total: 2.64s
                                                   remaining: 3.67s
418:
        learn: 0.9665727
                                  total: 2.64s
                                                   remaining: 3.67s
                                  total: 2.65s
419:
        learn: 0.9648138
                                                   remaining: 3.66s
420:
        learn: 0.9621418
                                  total: 2.66s
                                                   remaining: 3.65s
421:
        learn: 0.9591388
                                  total: 2.66s
                                                   remaining: 3.65s
422:
        learn: 0.9576121
                                  total: 2.67s
                                                   remaining: 3.64s
423:
        learn: 0.9556623
                                  total: 2.68s
                                                   remaining: 3.64s
424:
        learn: 0.9533653
                                  total: 2.69s
                                                   remaining: 3.64s
425:
        learn: 0.9522839
                                  total: 2.69s
                                                   remaining: 3.63s
426:
        learn: 0.9488300
                                  total: 2.7s
                                                   remaining: 3.62s
427:
        learn: 0.9470048
                                  total: 2.71s
                                                   remaining: 3.62s
428:
        learn: 0.9441467
                                  total: 2.71s
                                                   remaining: 3.61s
429:
        learn: 0.9429371
                                  total: 2.72s
                                                   remaining: 3.61s
430:
        learn: 0.9412378
                                  total: 2.73s
                                                   remaining: 3.6s
431:
        learn: 0.9390127
                                  total: 2.74s
                                                   remaining: 3.6s
432:
        learn: 0.9371075
                                  total: 2.74s
                                                   remaining: 3.59s
433:
        learn: 0.9349841
                                  total: 2.75s
                                                   remaining: 3.58s
                                  total: 2.75s
434:
        learn: 0.9336961
                                                   remaining: 3.58s
435:
        learn: 0.9317315
                                  total: 2.76s
                                                   remaining: 3.57s
436:
        learn: 0.9289865
                                  total: 2.76s
                                                   remaining: 3.56s
437:
        learn: 0.9279126
                                  total: 2.77s
                                                   remaining: 3.56s
438:
        learn: 0.9265936
                                  total: 2.78s
                                                   remaining: 3.55s
439:
        learn: 0.9253209
                                  total: 2.78s
                                                   remaining: 3.54s
440:
        learn: 0.9229607
                                  total: 2.79s
                                                   remaining: 3.54s
                                  total: 2.79s
441:
        learn: 0.9212669
                                                   remaining: 3.53s
442:
        learn: 0.9199113
                                  total: 2.8s
                                                   remaining: 3.52s
443:
        learn: 0.9189270
                                  total: 2.81s
                                                   remaining: 3.52s
444:
        learn: 0.9176433
                                  total: 2.82s
                                                   remaining: 3.52s
445:
        learn: 0.9161530
                                  total: 2.83s
                                                   remaining: 3.51s
446:
        learn: 0.9148741
                                  total: 2.83s
                                                   remaining: 3.5s
447:
        learn: 0.9129098
                                  total: 2.84s
                                                   remaining: 3.5s
448:
        learn: 0.9119958
                                  total: 2.84s
                                                   remaining: 3.49s
449:
        learn: 0.9110810
                                  total: 2.85s
                                                   remaining: 3.48s
        learn: 0.9093734
450:
                                  total: 2.86s
                                                   remaining: 3.48s
451:
        learn: 0.9071533
                                  total: 2.86s
                                                   remaining: 3.47s
452:
        learn: 0.9056490
                                  total: 2.87s
                                                   remaining: 3.46s
453:
        learn: 0.9040209
                                  total: 2.88s
                                                   remaining: 3.46s
454:
        learn: 0.9031759
                                  total: 2.88s
                                                   remaining: 3.45s
455:
        learn: 0.9022945
                                  total: 2.89s
                                                   remaining: 3.45s
456:
        learn: 0.9011024
                                  total: 2.89s
                                                   remaining: 3.44s
457:
        learn: 0.8986870
                                  total: 2.9s
                                                   remaining: 3.43s
        learn: 0.8973017
458:
                                  total: 2.9s
                                                   remaining: 3.42s
459:
        learn: 0.8958791
                                  total: 2.91s
                                                   remaining: 3.42s
460:
        learn: 0.8946032
                                  total: 2.91s
                                                   remaining: 3.41s
461:
        learn: 0.8935326
                                  total: 2.92s
                                                   remaining: 3.4s
462:
        learn: 0.8916220
                                  total: 2.92s
                                                   remaining: 3.39s
        learn: 0.8908211
                                  total: 2.93s
463:
                                                   remaining: 3.38s
464:
        learn: 0.8889766
                                  total: 2.93s
                                                   remaining: 3.37s
465:
        learn: 0.8877092
                                  total: 2.94s
                                                   remaining: 3.37s
        learn: 0.8870221
                                  total: 2.94s
466:
                                                   remaining: 3.36s
467:
        learn: 0.8857391
                                  total: 2.95s
                                                   remaining: 3.35s
468:
        learn: 0.8837398
                                  total: 2.95s
                                                   remaining: 3.34s
469:
        learn: 0.8827497
                                  total: 2.95s
                                                   remaining: 3.33s
470:
        learn: 0.8818788
                                  total: 2.96s
                                                   remaining: 3.32s
        learn: 0.8806259
471:
                                  total: 2.96s
                                                   remaining: 3.31s
472:
        learn: 0.8792329
                                  total: 2.97s
                                                   remaining: 3.31s
473:
                                  total: 2.97s
        learn: 0.8779534
                                                   remaining: 3.3s
                                  total: 2.98s
474:
        learn: 0.8760967
                                                   remaining: 3.29s
475:
        learn: 0.8752575
                                  total: 2.98s
                                                   remaining: 3.29s
```

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476:
        learn: 0.8740681
                                  total: 2.99s
                                                   remaining: 3.28s
477:
        learn: 0.8724268
                                  total: 3s
                                                   remaining: 3.27s
478:
        learn: 0.8710631
                                  total: 3s
                                                   remaining: 3.27s
479:
        learn: 0.8701057
                                  total: 3.01s
                                                   remaining: 3.26s
480:
        learn: 0.8688019
                                  total: 3.02s
                                                   remaining: 3.25s
481:
        learn: 0.8678088
                                  total: 3.02s
                                                   remaining: 3.25s
482:
        learn: 0.8660419
                                  total: 3.03s
                                                   remaining: 3.25s
483:
        learn: 0.8651249
                                  total: 3.04s
                                                   remaining: 3.24s
484:
        learn: 0.8638273
                                  total: 3.04s
                                                   remaining: 3.23s
485:
        learn: 0.8621117
                                  total: 3.05s
                                                   remaining: 3.22s
486:
        learn: 0.8609087
                                  total: 3.05s
                                                   remaining: 3.21s
487:
        learn: 0.8585602
                                  total: 3.05s
                                                   remaining: 3.2s
488:
        learn: 0.8570359
                                  total: 3.06s
                                                   remaining: 3.19s
489:
        learn: 0.8561016
                                  total: 3.06s
                                                   remaining: 3.19s
490:
        learn: 0.8545332
                                  total: 3.07s
                                                   remaining: 3.18s
491:
        learn: 0.8530837
                                  total: 3.07s
                                                   remaining: 3.17s
                                  total: 3.08s
492:
        learn: 0.8509595
                                                   remaining: 3.17s
493:
        learn: 0.8494824
                                  total: 3.08s
                                                   remaining: 3.16s
                                  total: 3.09s
494:
        learn: 0.8467290
                                                   remaining: 3.15s
495:
        learn: 0.8450351
                                  total: 3.1s
                                                   remaining: 3.15s
496:
        learn: 0.8442638
                                  total: 3.1s
                                                   remaining: 3.14s
497:
        learn: 0.8426306
                                  total: 3.11s
                                                   remaining: 3.13s
498:
        learn: 0.8411517
                                  total: 3.11s
                                                   remaining: 3.12s
499:
        learn: 0.8402097
                                  total: 3.12s
                                                   remaining: 3.12s
500:
        learn: 0.8391568
                                  total: 3.12s
                                                   remaining: 3.11s
        learn: 0.8382306
501:
                                  total: 3.13s
                                                   remaining: 3.1s
502:
        learn: 0.8375225
                                  total: 3.13s
                                                   remaining: 3.09s
503:
        learn: 0.8366909
                                  total: 3.14s
                                                   remaining: 3.09s
504:
        learn: 0.8357708
                                  total: 3.14s
                                                   remaining: 3.08s
505:
        learn: 0.8352947
                                  total: 3.14s
                                                   remaining: 3.07s
506:
        learn: 0.8342226
                                  total: 3.15s
                                                   remaining: 3.06s
507:
        learn: 0.8328379
                                  total: 3.15s
                                                   remaining: 3.05s
508:
        learn: 0.8313394
                                  total: 3.16s
                                                   remaining: 3.05s
509:
        learn: 0.8304022
                                  total: 3.16s
                                                   remaining: 3.04s
        learn: 0.8293791
510:
                                  total: 3.17s
                                                   remaining: 3.03s
511:
        learn: 0.8286169
                                  total: 3.17s
                                                   remaining: 3.02s
512:
        learn: 0.8277666
                                  total: 3.17s
                                                   remaining: 3.01s
513:
        learn: 0.8261337
                                  total: 3.18s
                                                   remaining: 3.01s
514:
        learn: 0.8249912
                                  total: 3.19s
                                                   remaining: 3s
515:
        learn: 0.8240505
                                  total: 3.19s
                                                   remaining: 2.99s
516:
        learn: 0.8231942
                                  total: 3.2s
                                                   remaining: 2.99s
517:
        learn: 0.8219342
                                  total: 3.2s
                                                   remaining: 2.98s
        learn: 0.8212005
518:
                                  total: 3.21s
                                                   remaining: 2.97s
519:
        learn: 0.8201847
                                  total: 3.21s
                                                   remaining: 2.97s
520:
        learn: 0.8186618
                                  total: 3.22s
                                                   remaining: 2.96s
521:
        learn: 0.8176617
                                  total: 3.22s
                                                   remaining: 2.95s
522:
        learn: 0.8161609
                                  total: 3.23s
                                                   remaining: 2.95s
523:
        learn: 0.8143615
                                  total: 3.23s
                                                   remaining: 2.94s
524:
        learn: 0.8130590
                                  total: 3.24s
                                                   remaining: 2.93s
525:
                                  total: 3.24s
        learn: 0.8121412
                                                   remaining: 2.92s
526:
        learn: 0.8107844
                                  total: 3.25s
                                                   remaining: 2.91s
527:
        learn: 0.8091389
                                  total: 3.25s
                                                   remaining: 2.91s
528:
        learn: 0.8084472
                                  total: 3.26s
                                                   remaining: 2.9s
529:
        learn: 0.8079402
                                  total: 3.26s
                                                   remaining: 2.89s
530:
        learn: 0.8066261
                                  total: 3.27s
                                                   remaining: 2.88s
        learn: 0.8057903
531:
                                  total: 3.27s
                                                   remaining: 2.88s
532:
        learn: 0.8045105
                                  total: 3.27s
                                                   remaining: 2.87s
533:
        learn: 0.8033889
                                  total: 3.28s
                                                   remaining: 2.86s
                                  total: 3.28s
534:
        learn: 0.8022463
                                                   remaining: 2.85s
535:
        learn: 0.8014522
                                  total: 3.29s
                                                   remaining: 2.85s
```

```
536:
        learn: 0.8005038
                                  total: 3.29s
                                                   remaining: 2.84s
537:
        learn: 0.7996298
                                  total: 3.3s
                                                   remaining: 2.83s
538:
        learn: 0.7979205
                                  total: 3.3s
                                                   remaining: 2.82s
                                  total: 3.31s
539:
        learn: 0.7969663
                                                   remaining: 2.82s
540:
        learn: 0.7960123
                                  total: 3.31s
                                                   remaining: 2.81s
541:
        learn: 0.7949011
                                  total: 3.32s
                                                   remaining: 2.8s
542:
        learn: 0.7935723
                                  total: 3.32s
                                                   remaining: 2.8s
543:
        learn: 0.7915221
                                  total: 3.33s
                                                   remaining: 2.79s
544:
        learn: 0.7902258
                                  total: 3.33s
                                                   remaining: 2.78s
545:
        learn: 0.7886101
                                  total: 3.34s
                                                   remaining: 2.78s
546:
        learn: 0.7874607
                                  total: 3.34s
                                                   remaining: 2.77s
547:
        learn: 0.7857525
                                  total: 3.35s
                                                   remaining: 2.76s
548:
        learn: 0.7848752
                                  total: 3.35s
                                                   remaining: 2.75s
549:
        learn: 0.7839131
                                  total: 3.36s
                                                   remaining: 2.75s
550:
        learn: 0.7821764
                                  total: 3.36s
                                                   remaining: 2.74s
551:
        learn: 0.7814622
                                  total: 3.37s
                                                   remaining: 2.73s
552:
        learn: 0.7805849
                                  total: 3.38s
                                                   remaining: 2.73s
553:
        learn: 0.7798618
                                  total: 3.38s
                                                   remaining: 2.72s
554:
        learn: 0.7782318
                                  total: 3.38s
                                                   remaining: 2.71s
555:
        learn: 0.7769615
                                  total: 3.39s
                                                   remaining: 2.71s
556:
        learn: 0.7761300
                                  total: 3.4s
                                                   remaining: 2.7s
557:
        learn: 0.7749129
                                  total: 3.4s
                                                   remaining: 2.69s
558:
        learn: 0.7742448
                                  total: 3.41s
                                                   remaining: 2.69s
559:
        learn: 0.7731320
                                  total: 3.41s
                                                   remaining: 2.68s
560:
        learn: 0.7728984
                                  total: 3.41s
                                                   remaining: 2.67s
561:
        learn: 0.7723018
                                  total: 3.42s
                                                   remaining: 2.66s
562:
        learn: 0.7711689
                                  total: 3.42s
                                                   remaining: 2.66s
563:
        learn: 0.7702322
                                  total: 3.43s
                                                   remaining: 2.65s
        learn: 0.7690406
564:
                                  total: 3.43s
                                                   remaining: 2.64s
565:
        learn: 0.7686502
                                  total: 3.44s
                                                   remaining: 2.63s
566:
        learn: 0.7680453
                                  total: 3.44s
                                                   remaining: 2.63s
567:
        learn: 0.7673768
                                  total: 3.44s
                                                   remaining: 2.62s
568:
        learn: 0.7667425
                                  total: 3.45s
                                                   remaining: 2.61s
569:
        learn: 0.7656957
                                  total: 3.46s
                                                   remaining: 2.61s
570:
        learn: 0.7645935
                                  total: 3.46s
                                                   remaining: 2.6s
571:
        learn: 0.7635826
                                  total: 3.47s
                                                   remaining: 2.59s
        learn: 0.7625889
572:
                                  total: 3.47s
                                                   remaining: 2.59s
573:
        learn: 0.7617913
                                  total: 3.48s
                                                   remaining: 2.58s
574:
        learn: 0.7611061
                                  total: 3.48s
                                                   remaining: 2.57s
575:
        learn: 0.7597363
                                  total: 3.48s
                                                   remaining: 2.56s
576:
        learn: 0.7582683
                                  total: 3.49s
                                                   remaining: 2.56s
577:
        learn: 0.7570564
                                  total: 3.49s
                                                   remaining: 2.55s
        learn: 0.7558987
578:
                                  total: 3.5s
                                                   remaining: 2.54s
579:
        learn: 0.7546387
                                  total: 3.5s
                                                   remaining: 2.54s
580:
        learn: 0.7535731
                                  total: 3.5s
                                                   remaining: 2.53s
581:
        learn: 0.7529649
                                  total: 3.51s
                                                   remaining: 2.52s
582:
        learn: 0.7520755
                                  total: 3.51s
                                                   remaining: 2.51s
583:
        learn: 0.7514670
                                  total: 3.52s
                                                   remaining: 2.5s
584:
        learn: 0.7506301
                                  total: 3.52s
                                                   remaining: 2.5s
585:
                                  total: 3.53s
        learn: 0.7499331
                                                   remaining: 2.49s
586:
        learn: 0.7490499
                                  total: 3.53s
                                                   remaining: 2.48s
587:
        learn: 0.7480158
                                  total: 3.54s
                                                   remaining: 2.48s
588:
        learn: 0.7471821
                                  total: 3.54s
                                                   remaining: 2.47s
589:
        learn: 0.7459870
                                  total: 3.55s
                                                   remaining: 2.46s
590:
        learn: 0.7451736
                                  total: 3.55s
                                                   remaining: 2.46s
        learn: 0.7442661
591:
                                  total: 3.56s
                                                   remaining: 2.45s
592:
        learn: 0.7435720
                                  total: 3.56s
                                                   remaining: 2.44s
593:
        learn: 0.7427545
                                  total: 3.57s
                                                   remaining: 2.44s
                                  total: 3.57s
594:
        learn: 0.7413635
                                                   remaining: 2.43s
595:
        learn: 0.7402691
                                  total: 3.58s
                                                   remaining: 2.43s
```

```
596:
        learn: 0.7395705
                                  total: 3.59s
                                                   remaining: 2.42s
597:
        learn: 0.7387249
                                  total: 3.59s
                                                   remaining: 2.42s
598:
        learn: 0.7381571
                                  total: 3.6s
                                                   remaining: 2.41s
599:
        learn: 0.7375373
                                  total: 3.6s
                                                   remaining: 2.4s
600:
        learn: 0.7368162
                                  total: 3.6s
                                                   remaining: 2.39s
601:
        learn: 0.7363066
                                  total: 3.61s
                                                   remaining: 2.38s
602:
        learn: 0.7352653
                                  total: 3.61s
                                                   remaining: 2.38s
603:
        learn: 0.7342637
                                  total: 3.62s
                                                   remaining: 2.37s
604:
        learn: 0.7333408
                                  total: 3.62s
                                                   remaining: 2.37s
605:
        learn: 0.7328531
                                  total: 3.63s
                                                   remaining: 2.36s
606:
        learn: 0.7319338
                                  total: 3.63s
                                                   remaining: 2.35s
607:
        learn: 0.7306169
                                  total: 3.64s
                                                   remaining: 2.35s
608:
        learn: 0.7299278
                                  total: 3.64s
                                                   remaining: 2.34s
609:
        learn: 0.7295127
                                  total: 3.65s
                                                   remaining: 2.33s
610:
        learn: 0.7290640
                                  total: 3.65s
                                                   remaining: 2.33s
        learn: 0.7281892
                                  total: 3.66s
611:
                                                   remaining: 2.32s
612:
        learn: 0.7268940
                                  total: 3.66s
                                                   remaining: 2.31s
613:
        learn: 0.7262053
                                  total: 3.67s
                                                   remaining: 2.31s
        learn: 0.7251213
614:
                                  total: 3.67s
                                                   remaining: 2.3s
615:
        learn: 0.7244833
                                  total: 3.68s
                                                   remaining: 2.29s
616:
        learn: 0.7237019
                                  total: 3.68s
                                                   remaining: 2.28s
617:
        learn: 0.7231784
                                  total: 3.68s
                                                   remaining: 2.28s
                                  total: 3.69s
618:
        learn: 0.7224516
                                                   remaining: 2.27s
619:
        learn: 0.7213872
                                  total: 3.69s
                                                   remaining: 2.27s
620:
        learn: 0.7206704
                                  total: 3.7s
                                                   remaining: 2.26s
        learn: 0.7195522
                                  total: 3.71s
621:
                                                   remaining: 2.25s
        learn: 0.7190558
                                  total: 3.71s
622:
                                                   remaining: 2.25s
623:
        learn: 0.7178444
                                  total: 3.72s
                                                   remaining: 2.24s
624:
        learn: 0.7173487
                                  total: 3.73s
                                                   remaining: 2.24s
625:
        learn: 0.7167953
                                  total: 3.74s
                                                   remaining: 2.23s
626:
        learn: 0.7161902
                                  total: 3.74s
                                                   remaining: 2.23s
627:
        learn: 0.7152719
                                  total: 3.75s
                                                   remaining: 2.22s
628:
        learn: 0.7142232
                                  total: 3.75s
                                                   remaining: 2.21s
629:
        learn: 0.7133759
                                  total: 3.76s
                                                   remaining: 2.21s
        learn: 0.7129368
                                  total: 3.76s
630:
                                                   remaining: 2.2s
                                  total: 3.77s
631:
        learn: 0.7121855
                                                   remaining: 2.19s
632:
        learn: 0.7111638
                                  total: 3.77s
                                                   remaining: 2.19s
633:
        learn: 0.7101912
                                  total: 3.78s
                                                   remaining: 2.18s
634:
        learn: 0.7090843
                                  total: 3.79s
                                                   remaining: 2.18s
635:
        learn: 0.7083782
                                  total: 3.79s
                                                   remaining: 2.17s
636:
        learn: 0.7070516
                                  total: 3.8s
                                                   remaining: 2.17s
637:
        learn: 0.7063180
                                  total: 3.8s
                                                   remaining: 2.16s
        learn: 0.7052972
638:
                                  total: 3.81s
                                                   remaining: 2.15s
639:
        learn: 0.7045728
                                  total: 3.81s
                                                   remaining: 2.14s
640:
        learn: 0.7039543
                                  total: 3.82s
                                                   remaining: 2.14s
641:
        learn: 0.7029965
                                  total: 3.82s
                                                   remaining: 2.13s
642:
        learn: 0.7015849
                                  total: 3.83s
                                                   remaining: 2.13s
643:
        learn: 0.7007142
                                  total: 3.83s
                                                   remaining: 2.12s
644:
        learn: 0.7001970
                                  total: 3.84s
                                                   remaining: 2.11s
645:
        learn: 0.6992002
                                  total: 3.85s
                                                   remaining: 2.11s
646:
        learn: 0.6981102
                                  total: 3.85s
                                                   remaining: 2.1s
647:
        learn: 0.6968614
                                  total: 3.86s
                                                   remaining: 2.1s
648:
        learn: 0.6958915
                                  total: 3.87s
                                                   remaining: 2.09s
649:
        learn: 0.6950074
                                  total: 3.87s
                                                   remaining: 2.08s
650:
        learn: 0.6943251
                                  total: 3.88s
                                                   remaining: 2.08s
        learn: 0.6938388
651:
                                  total: 3.88s
                                                   remaining: 2.07s
652:
        learn: 0.6930581
                                  total: 3.89s
                                                   remaining: 2.07s
653:
                                  total: 3.9s
        learn: 0.6925413
                                                   remaining: 2.06s
                                  total: 3.91s
654:
        learn: 0.6921289
                                                   remaining: 2.06s
655:
        learn: 0.6915801
                                  total: 3.91s
                                                   remaining: 2.05s
```

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656:
        learn: 0.6910775
                                  total: 3.92s
                                                   remaining: 2.05s
657:
        learn: 0.6906251
                                  total: 3.93s
                                                   remaining: 2.04s
658:
        learn: 0.6898517
                                  total: 3.94s
                                                   remaining: 2.04s
                                  total: 3.94s
659:
        learn: 0.6893087
                                                   remaining: 2.03s
660:
        learn: 0.6886200
                                  total: 3.95s
                                                   remaining: 2.02s
661:
        learn: 0.6879622
                                  total: 3.96s
                                                   remaining: 2.02s
662:
        learn: 0.6869457
                                  total: 3.97s
                                                   remaining: 2.02s
663:
        learn: 0.6862201
                                  total: 3.97s
                                                   remaining: 2.01s
664:
        learn: 0.6853881
                                  total: 3.98s
                                                   remaining: 2.01s
665:
        learn: 0.6847716
                                  total: 3.99s
                                                   remaining: 2s
666:
        learn: 0.6843222
                                  total: 4s
                                                   remaining: 2s
667:
        learn: 0.6835357
                                  total: 4.01s
                                                   remaining: 1.99s
668:
        learn: 0.6831437
                                  total: 4.01s
                                                   remaining: 1.98s
669:
        learn: 0.6819831
                                  total: 4.01s
                                                   remaining: 1.98s
670:
        learn: 0.6811411
                                  total: 4.02s
                                                   remaining: 1.97s
671:
        learn: 0.6803458
                                  total: 4.02s
                                                   remaining: 1.96s
672:
        learn: 0.6793098
                                  total: 4.03s
                                                   remaining: 1.96s
673:
        learn: 0.6781960
                                  total: 4.04s
                                                   remaining: 1.95s
674:
        learn: 0.6775603
                                  total: 4.04s
                                                   remaining: 1.95s
675:
        learn: 0.6771141
                                  total: 4.05s
                                                   remaining: 1.94s
676:
        learn: 0.6764332
                                  total: 4.05s
                                                   remaining: 1.93s
677:
        learn: 0.6759519
                                  total: 4.06s
                                                   remaining: 1.93s
                                  total: 4.07s
678:
        learn: 0.6753170
                                                   remaining: 1.92s
679:
                                  total: 4.07s
        learn: 0.6745920
                                                   remaining: 1.92s
680:
        learn: 0.6742743
                                  total: 4.08s
                                                   remaining: 1.91s
681:
        learn: 0.6738471
                                  total: 4.08s
                                                   remaining: 1.91s
682:
                                  total: 4.09s
        learn: 0.6735108
                                                   remaining: 1.9s
683:
        learn: 0.6727037
                                  total: 4.1s
                                                   remaining: 1.89s
684:
        learn: 0.6718821
                                  total: 4.1s
                                                   remaining: 1.89s
685:
        learn: 0.6714249
                                  total: 4.11s
                                                   remaining: 1.88s
686:
        learn: 0.6705925
                                  total: 4.12s
                                                   remaining: 1.88s
687:
        learn: 0.6702539
                                  total: 4.12s
                                                   remaining: 1.87s
688:
        learn: 0.6697208
                                  total: 4.13s
                                                   remaining: 1.86s
689:
        learn: 0.6688500
                                  total: 4.14s
                                                   remaining: 1.86s
        learn: 0.6678500
690:
                                  total: 4.14s
                                                   remaining: 1.85s
691:
        learn: 0.6669716
                                  total: 4.15s
                                                   remaining: 1.85s
692:
        learn: 0.6660641
                                  total: 4.16s
                                                   remaining: 1.84s
693:
        learn: 0.6652844
                                  total: 4.17s
                                                   remaining: 1.84s
694:
        learn: 0.6646796
                                  total: 4.17s
                                                   remaining: 1.83s
695:
        learn: 0.6643128
                                  total: 4.18s
                                                   remaining: 1.82s
696:
        learn: 0.6637467
                                  total: 4.19s
                                                   remaining: 1.82s
697:
        learn: 0.6633220
                                  total: 4.19s
                                                   remaining: 1.81s
        learn: 0.6626811
698:
                                  total: 4.2s
                                                   remaining: 1.81s
699:
        learn: 0.6621887
                                  total: 4.2s
                                                   remaining: 1.8s
700:
        learn: 0.6618413
                                  total: 4.2s
                                                   remaining: 1.79s
701:
        learn: 0.6609582
                                  total: 4.21s
                                                   remaining: 1.79s
702:
        learn: 0.6605457
                                  total: 4.21s
                                                   remaining: 1.78s
703:
        learn: 0.6600313
                                  total: 4.22s
                                                   remaining: 1.77s
                                  total: 4.22s
704:
        learn: 0.6589688
                                                   remaining: 1.77s
705:
                                  total: 4.23s
        learn: 0.6580437
                                                   remaining: 1.76s
706:
        learn: 0.6575008
                                  total: 4.24s
                                                   remaining: 1.75s
707:
        learn: 0.6566946
                                  total: 4.24s
                                                   remaining: 1.75s
708:
        learn: 0.6561191
                                  total: 4.25s
                                                   remaining: 1.74s
709:
        learn: 0.6555677
                                  total: 4.25s
                                                   remaining: 1.74s
710:
        learn: 0.6549137
                                  total: 4.25s
                                                   remaining: 1.73s
        learn: 0.6545755
711:
                                  total: 4.26s
                                                   remaining: 1.72s
712:
        learn: 0.6540780
                                  total: 4.27s
                                                   remaining: 1.72s
713:
                                  total: 4.27s
        learn: 0.6534726
                                                   remaining: 1.71s
714:
        learn: 0.6530815
                                  total: 4.28s
                                                   remaining: 1.71s
715:
        learn: 0.6527478
                                  total: 4.29s
                                                   remaining: 1.7s
```

```
716:
        learn: 0.6520486
                                  total: 4.29s
                                                   remaining: 1.69s
717:
        learn: 0.6514454
                                  total: 4.3s
                                                   remaining: 1.69s
718:
        learn: 0.6509817
                                  total: 4.3s
                                                   remaining: 1.68s
                                  total: 4.3s
719:
        learn: 0.6502831
                                                   remaining: 1.67s
720:
        learn: 0.6497034
                                  total: 4.31s
                                                   remaining: 1.67s
721:
        learn: 0.6492006
                                  total: 4.32s
                                                   remaining: 1.66s
722:
        learn: 0.6488017
                                  total: 4.32s
                                                   remaining: 1.66s
723:
        learn: 0.6483123
                                  total: 4.33s
                                                   remaining: 1.65s
724:
        learn: 0.6478058
                                  total: 4.33s
                                                   remaining: 1.64s
725:
        learn: 0.6474612
                                  total: 4.34s
                                                   remaining: 1.64s
726:
        learn: 0.6473145
                                  total: 4.35s
                                                   remaining: 1.63s
727:
        learn: 0.6466575
                                  total: 4.35s
                                                   remaining: 1.63s
728:
        learn: 0.6463104
                                  total: 4.36s
                                                   remaining: 1.62s
729:
        learn: 0.6458904
                                  total: 4.37s
                                                   remaining: 1.61s
730:
        learn: 0.6450553
                                  total: 4.37s
                                                   remaining: 1.61s
731:
        learn: 0.6446566
                                  total: 4.38s
                                                   remaining: 1.6s
732:
        learn: 0.6438132
                                  total: 4.38s
                                                   remaining: 1.6s
733:
        learn: 0.6429777
                                  total: 4.39s
                                                   remaining: 1.59s
734:
        learn: 0.6423352
                                  total: 4.39s
                                                   remaining: 1.58s
735:
        learn: 0.6421281
                                  total: 4.4s
                                                   remaining: 1.58s
736:
        learn: 0.6413847
                                  total: 4.4s
                                                   remaining: 1.57s
737:
        learn: 0.6406271
                                  total: 4.41s
                                                   remaining: 1.56s
                                  total: 4.41s
738:
        learn: 0.6403483
                                                   remaining: 1.56s
739:
        learn: 0.6399631
                                  total: 4.42s
                                                   remaining: 1.55s
740:
        learn: 0.6396284
                                  total: 4.42s
                                                   remaining: 1.55s
741:
        learn: 0.6391700
                                  total: 4.43s
                                                   remaining: 1.54s
742:
        learn: 0.6382836
                                  total: 4.44s
                                                   remaining: 1.53s
        learn: 0.6378165
743:
                                  total: 4.45s
                                                   remaining: 1.53s
744:
        learn: 0.6370756
                                  total: 4.45s
                                                   remaining: 1.52s
745:
        learn: 0.6363094
                                  total: 4.46s
                                                   remaining: 1.52s
                                  total: 4.46s
746:
        learn: 0.6356987
                                                   remaining: 1.51s
747:
        learn: 0.6353440
                                  total: 4.47s
                                                   remaining: 1.51s
748:
        learn: 0.6343705
                                  total: 4.48s
                                                   remaining: 1.5s
749:
        learn: 0.6335104
                                  total: 4.49s
                                                   remaining: 1.5s
750:
        learn: 0.6331543
                                  total: 4.49s
                                                   remaining: 1.49s
751:
        learn: 0.6329202
                                  total: 4.5s
                                                   remaining: 1.48s
752:
        learn: 0.6325565
                                  total: 4.5s
                                                   remaining: 1.48s
753:
        learn: 0.6321810
                                  total: 4.51s
                                                   remaining: 1.47s
754:
        learn: 0.6316641
                                  total: 4.51s
                                                   remaining: 1.46s
755:
        learn: 0.6311251
                                  total: 4.52s
                                                   remaining: 1.46s
756:
        learn: 0.6305730
                                  total: 4.52s
                                                   remaining: 1.45s
757:
        learn: 0.6301425
                                  total: 4.53s
                                                   remaining: 1.45s
758:
        learn: 0.6295606
                                  total: 4.53s
                                                   remaining: 1.44s
759:
        learn: 0.6287519
                                  total: 4.54s
                                                   remaining: 1.43s
760:
        learn: 0.6281855
                                  total: 4.55s
                                                   remaining: 1.43s
761:
        learn: 0.6273700
                                  total: 4.55s
                                                   remaining: 1.42s
762:
        learn: 0.6267399
                                  total: 4.56s
                                                   remaining: 1.42s
763:
        learn: 0.6262426
                                  total: 4.56s
                                                   remaining: 1.41s
764:
        learn: 0.6257700
                                  total: 4.57s
                                                   remaining: 1.4s
                                  total: 4.57s
765:
        learn: 0.6252154
                                                   remaining: 1.4s
766:
        learn: 0.6247750
                                  total: 4.58s
                                                   remaining: 1.39s
767:
        learn: 0.6244150
                                  total: 4.58s
                                                   remaining: 1.38s
768:
        learn: 0.6239629
                                  total: 4.58s
                                                   remaining: 1.38s
769:
        learn: 0.6233233
                                  total: 4.59s
                                                   remaining: 1.37s
770:
        learn: 0.6227439
                                  total: 4.6s
                                                   remaining: 1.36s
        learn: 0.6222320
771:
                                  total: 4.6s
                                                   remaining: 1.36s
772:
        learn: 0.6217418
                                  total: 4.61s
                                                   remaining: 1.35s
773:
        learn: 0.6212769
                                  total: 4.61s
                                                   remaining: 1.35s
774:
        learn: 0.6208122
                                  total: 4.62s
                                                   remaining: 1.34s
775:
        learn: 0.6203680
                                  total: 4.63s
                                                   remaining: 1.33s
```

```
776:
        learn: 0.6201258
                                  total: 4.63s
                                                   remaining: 1.33s
777:
        learn: 0.6196836
                                  total: 4.64s
                                                   remaining: 1.32s
778:
        learn: 0.6192922
                                  total: 4.65s
                                                   remaining: 1.32s
779:
        learn: 0.6189741
                                  total: 4.66s
                                                   remaining: 1.31s
780:
        learn: 0.6182809
                                  total: 4.66s
                                                   remaining: 1.31s
781:
        learn: 0.6176630
                                  total: 4.67s
                                                   remaining: 1.3s
782:
        learn: 0.6172148
                                  total: 4.67s
                                                   remaining: 1.29s
783:
        learn: 0.6167133
                                  total: 4.68s
                                                   remaining: 1.29s
784:
        learn: 0.6161655
                                  total: 4.68s
                                                   remaining: 1.28s
785:
        learn: 0.6155548
                                  total: 4.69s
                                                   remaining: 1.28s
786:
        learn: 0.6145207
                                  total: 4.7s
                                                   remaining: 1.27s
787:
        learn: 0.6139860
                                  total: 4.7s
                                                   remaining: 1.26s
788:
        learn: 0.6136428
                                  total: 4.71s
                                                   remaining: 1.26s
789:
        learn: 0.6132315
                                  total: 4.71s
                                                   remaining: 1.25s
790:
        learn: 0.6128408
                                  total: 4.72s
                                                   remaining: 1.25s
791:
        learn: 0.6122078
                                  total: 4.72s
                                                   remaining: 1.24s
792:
        learn: 0.6118651
                                  total: 4.73s
                                                   remaining: 1.23s
793:
        learn: 0.6115645
                                  total: 4.73s
                                                   remaining: 1.23s
794:
        learn: 0.6109336
                                  total: 4.74s
                                                   remaining: 1.22s
795:
        learn: 0.6101906
                                  total: 4.75s
                                                   remaining: 1.22s
796:
        learn: 0.6097955
                                  total: 4.75s
                                                   remaining: 1.21s
797:
        learn: 0.6091520
                                  total: 4.75s
                                                   remaining: 1.2s
798:
        learn: 0.6090131
                                  total: 4.76s
                                                   remaining: 1.2s
799:
        learn: 0.6086395
                                  total: 4.76s
                                                   remaining: 1.19s
:008
        learn: 0.6081525
                                  total: 4.77s
                                                   remaining: 1.18s
801:
        learn: 0.6076401
                                  total: 4.77s
                                                   remaining: 1.18s
802:
        learn: 0.6071802
                                  total: 4.78s
                                                   remaining: 1.17s
        learn: 0.6070208
803:
                                  total: 4.78s
                                                   remaining: 1.17s
        learn: 0.6061895
804:
                                  total: 4.79s
                                                   remaining: 1.16s
805:
        learn: 0.6057527
                                  total: 4.79s
                                                   remaining: 1.15s
806:
        learn: 0.6054550
                                  total: 4.8s
                                                   remaining: 1.15s
807:
        learn: 0.6049032
                                  total: 4.8s
                                                   remaining: 1.14s
808:
        learn: 0.6044843
                                  total: 4.81s
                                                   remaining: 1.13s
809:
        learn: 0.6039252
                                  total: 4.81s
                                                   remaining: 1.13s
        learn: 0.6036039
810:
                                  total: 4.82s
                                                   remaining: 1.12s
811:
        learn: 0.6026713
                                  total: 4.82s
                                                   remaining: 1.12s
        learn: 0.6022317
812:
                                  total: 4.83s
                                                   remaining: 1.11s
813:
        learn: 0.6016268
                                  total: 4.83s
                                                   remaining: 1.1s
814:
        learn: 0.6011683
                                  total: 4.83s
                                                   remaining: 1.1s
815:
        learn: 0.6007049
                                  total: 4.84s
                                                   remaining: 1.09s
816:
        learn: 0.6002297
                                  total: 4.85s
                                                   remaining: 1.08s
817:
        learn: 0.5995671
                                  total: 4.85s
                                                   remaining: 1.08s
        learn: 0.5989291
818:
                                  total: 4.86s
                                                   remaining: 1.07s
819:
        learn: 0.5987149
                                  total: 4.86s
                                                   remaining: 1.07s
820:
        learn: 0.5981932
                                  total: 4.87s
                                                   remaining: 1.06s
        learn: 0.5976453
821:
                                  total: 4.87s
                                                   remaining: 1.05s
822:
        learn: 0.5967162
                                  total: 4.88s
                                                   remaining: 1.05s
823:
        learn: 0.5961757
                                  total: 4.88s
                                                   remaining: 1.04s
824:
        learn: 0.5957616
                                  total: 4.89s
                                                   remaining: 1.04s
825:
                                  total: 4.89s
        learn: 0.5951138
                                                   remaining: 1.03s
826:
        learn: 0.5945112
                                  total: 4.9s
                                                   remaining: 1.02s
827:
        learn: 0.5941203
                                  total: 4.9s
                                                   remaining: 1.02s
828:
        learn: 0.5938216
                                  total: 4.91s
                                                   remaining: 1.01s
829:
        learn: 0.5933704
                                  total: 4.92s
                                                   remaining: 1.01s
830:
        learn: 0.5929573
                                  total: 4.92s
                                                   remaining: 1s
831:
        learn: 0.5925714
                                  total: 4.93s
                                                   remaining: 996ms
832:
        learn: 0.5919974
                                  total: 4.94s
                                                   remaining: 990ms
833:
        learn: 0.5915857
                                  total: 4.95s
                                                   remaining: 984ms
                                  total: 4.95s
834:
        learn: 0.5912209
                                                   remaining: 978ms
835:
        learn: 0.5906385
                                  total: 4.96s
                                                   remaining: 972ms
```

```
836:
        learn: 0.5902622
                                  total: 4.96s
                                                   remaining: 966ms
837:
        learn: 0.5896432
                                  total: 4.96s
                                                   remaining: 959ms
        learn: 0.5891946
                                  total: 4.96s
838:
                                                   remaining: 953ms
                                  total: 4.97s
839:
        learn: 0.5886863
                                                   remaining: 947ms
840:
        learn: 0.5881988
                                  total: 4.98s
                                                   remaining: 941ms
841:
        learn: 0.5878957
                                  total: 4.98s
                                                   remaining: 935ms
842:
        learn: 0.5875226
                                  total: 4.99s
                                                   remaining: 929ms
843:
        learn: 0.5875117
                                  total: 4.99s
                                                   remaining: 923ms
                                  total: 5s
844:
        learn: 0.5867801
                                                   remaining: 917ms
845:
        learn: 0.5863658
                                  total: 5s
                                                   remaining: 911ms
846:
        learn: 0.5856960
                                  total: 5.01s
                                                   remaining: 905ms
847:
        learn: 0.5853086
                                  total: 5.01s
                                                   remaining: 899ms
848:
        learn: 0.5847940
                                  total: 5.02s
                                                   remaining: 893ms
849:
        learn: 0.5845262
                                  total: 5.03s
                                                   remaining: 887ms
850:
        learn: 0.5840887
                                  total: 5.04s
                                                   remaining: 882ms
851:
        learn: 0.5836974
                                  total: 5.04s
                                                   remaining: 876ms
                                  total: 5.05s
852:
        learn: 0.5831250
                                                   remaining: 871ms
853:
        learn: 0.5826109
                                  total: 5.06s
                                                   remaining: 865ms
854:
        learn: 0.5823387
                                  total: 5.06s
                                                   remaining: 859ms
855:
        learn: 0.5817847
                                  total: 5.07s
                                                   remaining: 853ms
856:
        learn: 0.5812620
                                  total: 5.08s
                                                   remaining: 847ms
857:
        learn: 0.5808082
                                  total: 5.09s
                                                   remaining: 842ms
                                  total: 5.09s
858:
        learn: 0.5805269
                                                   remaining: 836ms
859:
        learn: 0.5801859
                                  total: 5.1s
                                                   remaining: 830ms
860:
        learn: 0.5799193
                                  total: 5.1s
                                                   remaining: 824ms
861:
        learn: 0.5795195
                                  total: 5.11s
                                                   remaining: 818ms
862:
        learn: 0.5789687
                                  total: 5.12s
                                                   remaining: 812ms
863:
        learn: 0.5788196
                                  total: 5.12s
                                                   remaining: 806ms
864:
        learn: 0.5785002
                                  total: 5.13s
                                                   remaining: 801ms
865:
        learn: 0.5778756
                                  total: 5.13s
                                                   remaining: 795ms
866:
        learn: 0.5776599
                                  total: 5.14s
                                                   remaining: 789ms
867:
        learn: 0.5771938
                                  total: 5.15s
                                                   remaining: 783ms
868:
        learn: 0.5767448
                                  total: 5.16s
                                                   remaining: 778ms
869:
        learn: 0.5761010
                                  total: 5.17s
                                                   remaining: 772ms
        learn: 0.5758073
                                                   remaining: 766ms
870:
                                  total: 5.17s
        learn: 0.5755716
871:
                                  total: 5.17s
                                                   remaining: 759ms
872:
        learn: 0.5752368
                                  total: 5.18s
                                                   remaining: 754ms
873:
        learn: 0.5749384
                                  total: 5.18s
                                                   remaining: 747ms
874:
        learn: 0.5743445
                                  total: 5.19s
                                                   remaining: 742ms
875:
        learn: 0.5739066
                                  total: 5.2s
                                                   remaining: 736ms
876:
        learn: 0.5734488
                                  total: 5.21s
                                                   remaining: 730ms
877:
        learn: 0.5729980
                                  total: 5.21s
                                                   remaining: 724ms
        learn: 0.5725892
878:
                                  total: 5.22s
                                                   remaining: 719ms
879:
        learn: 0.5722891
                                  total: 5.23s
                                                   remaining: 713ms
880:
        learn: 0.5718868
                                  total: 5.23s
                                                   remaining: 707ms
881:
        learn: 0.5717262
                                  total: 5.24s
                                                   remaining: 701ms
882:
        learn: 0.5708986
                                  total: 5.25s
                                                   remaining: 695ms
        learn: 0.5704442
                                                   remaining: 689ms
883:
                                  total: 5.25s
                                  total: 5.26s
884:
        learn: 0.5701355
                                                   remaining: 683ms
885:
        learn: 0.5695251
                                  total: 5.27s
                                                   remaining: 678ms
886:
        learn: 0.5690927
                                  total: 5.27s
                                                   remaining: 672ms
887:
        learn: 0.5686440
                                  total: 5.28s
                                                   remaining: 666ms
888:
        learn: 0.5681444
                                  total: 5.29s
                                                   remaining: 660ms
889:
                                  total: 5.29s
        learn: 0.5675947
                                                   remaining: 654ms
890:
        learn: 0.5671573
                                  total: 5.3s
                                                   remaining: 648ms
        learn: 0.5668072
891:
                                  total: 5.3s
                                                   remaining: 642ms
892:
        learn: 0.5664698
                                  total: 5.31s
                                                   remaining: 636ms
893:
        learn: 0.5658348
                                  total: 5.31s
                                                   remaining: 630ms
                                  total: 5.32s
894:
        learn: 0.5654777
                                                   remaining: 624ms
895:
        learn: 0.5652560
                                  total: 5.33s
                                                   remaining: 618ms
```

```
896:
        learn: 0.5647882
                                  total: 5.33s
                                                   remaining: 612ms
897:
        learn: 0.5644122
                                  total: 5.34s
                                                   remaining: 606ms
        learn: 0.5641609
                                  total: 5.34s
898:
                                                   remaining: 600ms
                                  total: 5.35s
899:
        learn: 0.5637838
                                                   remaining: 594ms
900:
        learn: 0.5631470
                                  total: 5.35s
                                                   remaining: 588ms
901:
        learn: 0.5629128
                                  total: 5.36s
                                                   remaining: 583ms
902:
        learn: 0.5627750
                                  total: 5.37s
                                                   remaining: 577ms
903:
        learn: 0.5622746
                                  total: 5.37s
                                                   remaining: 570ms
904:
        learn: 0.5616603
                                  total: 5.37s
                                                   remaining: 564ms
905:
        learn: 0.5613686
                                  total: 5.38s
                                                   remaining: 558ms
906:
        learn: 0.5611615
                                  total: 5.38s
                                                   remaining: 552ms
                                                   remaining: 546ms
907:
        learn: 0.5608373
                                  total: 5.39s
908:
        learn: 0.5601624
                                  total: 5.39s
                                                   remaining: 540ms
909:
        learn: 0.5596046
                                  total: 5.4s
                                                   remaining: 534ms
910:
        learn: 0.5592624
                                  total: 5.4s
                                                   remaining: 528ms
        learn: 0.5589878
911:
                                  total: 5.41s
                                                   remaining: 522ms
                                  total: 5.42s
912:
        learn: 0.5587555
                                                   remaining: 516ms
913:
        learn: 0.5584445
                                  total: 5.42s
                                                   remaining: 510ms
914:
        learn: 0.5580505
                                  total: 5.43s
                                                   remaining: 504ms
915:
        learn: 0.5578454
                                  total: 5.43s
                                                   remaining: 498ms
916:
        learn: 0.5576924
                                  total: 5.44s
                                                   remaining: 492ms
917:
        learn: 0.5575056
                                  total: 5.44s
                                                   remaining: 486ms
                                  total: 5.45s
918:
        learn: 0.5571615
                                                   remaining: 480ms
        learn: 0.5568117
919:
                                  total: 5.45s
                                                   remaining: 474ms
920:
        learn: 0.5565628
                                  total: 5.46s
                                                   remaining: 468ms
921:
        learn: 0.5562498
                                  total: 5.46s
                                                   remaining: 462ms
                                  total: 5.47s
922:
        learn: 0.5558052
                                                   remaining: 456ms
923:
        learn: 0.5554430
                                  total: 5.47s
                                                   remaining: 450ms
924:
        learn: 0.5551568
                                  total: 5.48s
                                                   remaining: 444ms
925:
        learn: 0.5546599
                                  total: 5.48s
                                                   remaining: 438ms
926:
        learn: 0.5543421
                                  total: 5.49s
                                                   remaining: 433ms
927:
        learn: 0.5540088
                                  total: 5.5s
                                                   remaining: 427ms
928:
        learn: 0.5535494
                                  total: 5.5s
                                                   remaining: 421ms
929:
        learn: 0.5535309
                                  total: 5.51s
                                                   remaining: 415ms
        learn: 0.5529505
930:
                                  total: 5.51s
                                                   remaining: 409ms
931:
        learn: 0.5527170
                                  total: 5.52s
                                                   remaining: 403ms
        learn: 0.5525374
932:
                                  total: 5.53s
                                                   remaining: 397ms
933:
        learn: 0.5521102
                                  total: 5.53s
                                                   remaining: 391ms
934:
        learn: 0.5519090
                                  total: 5.54s
                                                   remaining: 385ms
935:
        learn: 0.5515821
                                  total: 5.54s
                                                   remaining: 379ms
936:
        learn: 0.5509951
                                  total: 5.55s
                                                   remaining: 373ms
937:
        learn: 0.5504940
                                  total: 5.56s
                                                   remaining: 367ms
        learn: 0.5503770
938:
                                  total: 5.56s
                                                   remaining: 361ms
939:
        learn: 0.5500075
                                  total: 5.57s
                                                   remaining: 356ms
940:
        learn: 0.5495177
                                  total: 5.57s
                                                   remaining: 349ms
941:
        learn: 0.5489726
                                  total: 5.58s
                                                   remaining: 343ms
942:
        learn: 0.5483889
                                  total: 5.58s
                                                   remaining: 337ms
        learn: 0.5478664
943:
                                  total: 5.59s
                                                   remaining: 332ms
                                  total: 5.6s
944:
        learn: 0.5475803
                                                   remaining: 326ms
945:
        learn: 0.5472859
                                  total: 5.61s
                                                   remaining: 320ms
946:
        learn: 0.5465774
                                  total: 5.61s
                                                   remaining: 314ms
947:
        learn: 0.5462049
                                  total: 5.62s
                                                   remaining: 308ms
948:
        learn: 0.5459528
                                  total: 5.62s
                                                   remaining: 302ms
949:
                                  total: 5.63s
        learn: 0.5455483
                                                   remaining: 296ms
950:
        learn: 0.5450270
                                  total: 5.63s
                                                   remaining: 290ms
        learn: 0.5443262
951:
                                  total: 5.64s
                                                   remaining: 284ms
952:
        learn: 0.5439595
                                  total: 5.64s
                                                   remaining: 278ms
953:
                                  total: 5.65s
        learn: 0.5433611
                                                   remaining: 272ms
                                  total: 5.66s
954:
        learn: 0.5430054
                                                   remaining: 267ms
955:
        learn: 0.5427592
                                  total: 5.66s
                                                   remaining: 261ms
```

```
956:
        learn: 0.5425799
                                  total: 5.67s
                                                   remaining: 255ms
957:
        learn: 0.5422280
                                  total: 5.67s
                                                   remaining: 249ms
958:
        learn: 0.5417586
                                  total: 5.68s
                                                   remaining: 243ms
                                  total: 5.68s
959:
        learn: 0.5415079
                                                   remaining: 237ms
960:
        learn: 0.5411484
                                  total: 5.69s
                                                   remaining: 231ms
961:
        learn: 0.5408361
                                  total: 5.7s
                                                   remaining: 225ms
962:
        learn: 0.5406482
                                  total: 5.7s
                                                   remaining: 219ms
963:
        learn: 0.5404961
                                  total: 5.71s
                                                   remaining: 213ms
964:
        learn: 0.5399372
                                  total: 5.71s
                                                   remaining: 207ms
965:
        learn: 0.5396562
                                  total: 5.72s
                                                   remaining: 201ms
966:
        learn: 0.5392356
                                  total: 5.72s
                                                   remaining: 195ms
967:
        learn: 0.5390989
                                  total: 5.73s
                                                   remaining: 189ms
968:
        learn: 0.5386260
                                  total: 5.73s
                                                   remaining: 183ms
969:
        learn: 0.5382144
                                  total: 5.74s
                                                   remaining: 178ms
970:
        learn: 0.5378783
                                  total: 5.74s
                                                   remaining: 172ms
971:
        learn: 0.5377163
                                  total: 5.75s
                                                   remaining: 166ms
972:
        learn: 0.5371285
                                  total: 5.75s
                                                   remaining: 160ms
973:
        learn: 0.5366888
                                  total: 5.76s
                                                   remaining: 154ms
974:
        learn: 0.5361364
                                  total: 5.77s
                                                   remaining: 148ms
975:
        learn: 0.5358335
                                  total: 5.77s
                                                   remaining: 142ms
976:
        learn: 0.5353350
                                  total: 5.77s
                                                   remaining: 136ms
977:
        learn: 0.5351113
                                  total: 5.78s
                                                   remaining: 130ms
                                  total: 5.78s
978:
        learn: 0.5347862
                                                   remaining: 124ms
979:
        learn: 0.5344143
                                  total: 5.79s
                                                   remaining: 118ms
980:
        learn: 0.5340758
                                  total: 5.79s
                                                   remaining: 112ms
981:
        learn: 0.5335870
                                  total: 5.8s
                                                   remaining: 106ms
982:
        learn: 0.5333224
                                  total: 5.8s
                                                   remaining: 100ms
        learn: 0.5328066
983:
                                  total: 5.81s
                                                   remaining: 94.5ms
        learn: 0.5324093
984:
                                  total: 5.81s
                                                   remaining: 88.5ms
985:
        learn: 0.5320486
                                  total: 5.82s
                                                   remaining: 82.6ms
986:
        learn: 0.5317669
                                  total: 5.82s
                                                   remaining: 76.7ms
987:
        learn: 0.5314932
                                  total: 5.83s
                                                   remaining: 70.8ms
988:
        learn: 0.5313156
                                  total: 5.84s
                                                   remaining: 64.9ms
989:
        learn: 0.5309729
                                  total: 5.84s
                                                   remaining: 59ms
        learn: 0.5304709
990:
                                  total: 5.85s
                                                   remaining: 53.1ms
                                  total: 5.85s
991:
        learn: 0.5303410
                                                   remaining: 47.2ms
992:
        learn: 0.5298248
                                  total: 5.86s
                                                   remaining: 41.3ms
993:
        learn: 0.5296816
                                  total: 5.87s
                                                   remaining: 35.4ms
994:
        learn: 0.5293912
                                  total: 5.87s
                                                   remaining: 29.5ms
995:
        learn: 0.5288965
                                  total: 5.88s
                                                   remaining: 23.6ms
996:
        learn: 0.5287647
                                  total: 5.88s
                                                   remaining: 17.7ms
997:
        learn: 0.5281523
                                  total: 5.89s
                                                   remaining: 11.8ms
998:
        learn: 0.5277273
                                  total: 5.9s
                                                   remaining: 5.9ms
999:
        learn: 0.5274847
                                  total: 5.9s
                                                   remaining: Ous
Learning rate set to 0.06063
        learn: 59.0449638
                                  total: 4.95ms
0:
                                                   remaining: 4.95s
1:
        learn: 55.8614989
                                  total: 11.1ms
                                                   remaining: 5.53s
2:
        learn: 52.7980482
                                  total: 18.6ms
                                                   remaining: 6.19s
3:
        learn: 49.9369500
                                  total: 24.5ms
                                                   remaining: 6.1s
4:
        learn: 47.2908899
                                  total: 33.5ms
                                                   remaining: 6.67s
5:
        learn: 44.8023608
                                  total: 38.4ms
                                                   remaining: 6.36s
                                  total: 47.3ms
6:
        learn: 42.3740210
                                                   remaining: 6.71s
7:
        learn: 40.2166675
                                  total: 52ms
                                                   remaining: 6.44s
8:
        learn: 38.1257475
                                  total: 59.4ms
                                                   remaining: 6.54s
9:
        learn: 36.1134431
                                  total: 69.1ms
                                                   remaining: 6.84s
        learn: 34.2888336
10:
                                  total: 76.2ms
                                                   remaining: 6.85s
11:
        learn: 32.5314325
                                  total: 84.6ms
                                                   remaining: 6.96s
12:
        learn: 30.8718643
                                  total: 92.5ms
                                                   remaining: 7.02s
13:
        learn: 29.3159476
                                  total: 99.9ms
                                                   remaining: 7.04s
14:
        learn: 27.8063989
                                  total: 108ms
                                                   remaining: 7.12s
```

```
15:
        learn: 26.4182999
                                  total: 113ms
                                                   remaining: 6.94s
16:
        learn: 25.0605426
                                  total: 120ms
                                                   remaining: 6.95s
17:
        learn: 23.8123265
                                  total: 127ms
                                                   remaining: 6.94s
18:
        learn: 22.6189677
                                  total: 135ms
                                                   remaining: 6.95s
19:
        learn: 21.5520758
                                  total: 141ms
                                                   remaining: 6.9s
20:
        learn: 20.5107299
                                  total: 148ms
                                                   remaining: 6.88s
21:
        learn: 19.5490627
                                  total: 155ms
                                                   remaining: 6.89s
22:
        learn: 18.6496334
                                  total: 161ms
                                                   remaining: 6.85s
23:
        learn: 17.7563195
                                  total: 168ms
                                                   remaining: 6.84s
24:
        learn: 16.9316750
                                  total: 176ms
                                                   remaining: 6.88s
25:
        learn: 16.1234689
                                  total: 184ms
                                                   remaining: 6.88s
26:
        learn: 15.4091222
                                  total: 192ms
                                                   remaining: 6.92s
27:
        learn: 14.7146816
                                  total: 195ms
                                                   remaining: 6.78s
28:
        learn: 14.0697125
                                  total: 198ms
                                                   remaining: 6.64s
29:
        learn: 13.4532155
                                  total: 204ms
                                                   remaining: 6.58s
        learn: 12.8937042
                                  total: 208ms
30:
                                                   remaining: 6.5s
31:
        learn: 12.3256015
                                  total: 215ms
                                                   remaining: 6.51s
32:
        learn: 11.7925287
                                  total: 221ms
                                                   remaining: 6.48s
33:
        learn: 11.3110768
                                  total: 225ms
                                                   remaining: 6.39s
34:
        learn: 10.8525837
                                  total: 230ms
                                                   remaining: 6.34s
35:
        learn: 10.4221291
                                  total: 236ms
                                                   remaining: 6.32s
36:
        learn: 10.0145314
                                  total: 240ms
                                                   remaining: 6.24s
37:
        learn: 9.6392724
                                  total: 247ms
                                                   remaining: 6.25s
38:
        learn: 9.2567840
                                  total: 252ms
                                                   remaining: 6.2s
39:
        learn: 8.8890666
                                  total: 256ms
                                                   remaining: 6.13s
40:
        learn: 8.5732719
                                  total: 262ms
                                                   remaining: 6.14s
41:
        learn: 8.2784094
                                  total: 267ms
                                                   remaining: 6.09s
42:
        learn: 7.9946982
                                  total: 271ms
                                                   remaining: 6.03s
        learn: 7.7106886
                                  total: 279ms
43:
                                                   remaining: 6.05s
44:
        learn: 7.4389059
                                  total: 284ms
                                                   remaining: 6.03s
                                                   remaining: 5.98s
45:
        learn: 7.1918745
                                  total: 288ms
46:
        learn: 6.9569237
                                  total: 294ms
                                                   remaining: 5.97s
47:
                                  total: 302ms
        learn: 6.7347691
                                                   remaining: 5.99s
48:
        learn: 6.5368786
                                  total: 309ms
                                                   remaining: 6s
49:
        learn: 6.3559341
                                  total: 316ms
                                                   remaining: 6.01s
        learn: 6.1658660
                                                   remaining: 6s
50:
                                  total: 322ms
51:
        learn: 5.9920748
                                  total: 326ms
                                                   remaining: 5.95s
52:
        learn: 5.8433019
                                  total: 332ms
                                                   remaining: 5.92s
53:
        learn: 5.6875418
                                  total: 336ms
                                                   remaining: 5.89s
54:
        learn: 5.5426573
                                  total: 341ms
                                                   remaining: 5.86s
55:
        learn: 5.4125146
                                  total: 347ms
                                                   remaining: 5.85s
56:
        learn: 5.2731711
                                  total: 351ms
                                                   remaining: 5.81s
57:
        learn: 5.1588455
                                  total: 357ms
                                                   remaining: 5.8s
58:
        learn: 5.0336955
                                  total: 363ms
                                                   remaining: 5.79s
59:
        learn: 4.9145991
                                  total: 368ms
                                                   remaining: 5.76s
        learn: 4.8209403
60:
                                  total: 371ms
                                                   remaining: 5.72s
61:
        learn: 4.7208051
                                  total: 378ms
                                                   remaining: 5.71s
62:
        learn: 4.6327148
                                  total: 381ms
                                                   remaining: 5.67s
63:
        learn: 4.5346768
                                  total: 386ms
                                                   remaining: 5.64s
64:
        learn: 4.4367329
                                  total: 395ms
                                                   remaining: 5.68s
65:
        learn: 4.3572278
                                  total: 399ms
                                                   remaining: 5.65s
66:
        learn: 4.2754138
                                  total: 405ms
                                                   remaining: 5.64s
67:
        learn: 4.1972672
                                  total: 410ms
                                                   remaining: 5.61s
68:
        learn: 4.1198120
                                  total: 413ms
                                                   remaining: 5.58s
69:
        learn: 4.0592220
                                  total: 416ms
                                                   remaining: 5.53s
70:
        learn: 3.9959676
                                  total: 420ms
                                                   remaining: 5.5s
71:
        learn: 3.9290689
                                  total: 425ms
                                                   remaining: 5.48s
72:
        learn: 3.8664744
                                  total: 429ms
                                                   remaining: 5.45s
73:
        learn: 3.8143554
                                  total: 433ms
                                                   remaining: 5.42s
74:
        learn: 3.7574616
                                  total: 440ms
                                                   remaining: 5.42s
```

```
75:
        learn: 3.7099357
                                  total: 443ms
                                                   remaining: 5.39s
76:
        learn: 3.6562756
                                  total: 451ms
                                                   remaining: 5.4s
77:
        learn: 3.6041159
                                  total: 456ms
                                                   remaining: 5.38s
78:
        learn: 3.5526135
                                  total: 460ms
                                                   remaining: 5.36s
79:
        learn: 3.5158007
                                  total: 466ms
                                                   remaining: 5.36s
80:
        learn: 3.4774892
                                  total: 481ms
                                                   remaining: 5.45s
81:
        learn: 3.4334812
                                  total: 486ms
                                                   remaining: 5.44s
82:
        learn: 3.3990396
                                  total: 490ms
                                                   remaining: 5.41s
                                  total: 496ms
83:
        learn: 3.3633530
                                                   remaining: 5.4s
84:
        learn: 3.3301014
                                  total: 500ms
                                                   remaining: 5.38s
85:
        learn: 3.2965329
                                  total: 504ms
                                                   remaining: 5.36s
86:
        learn: 3.2656824
                                  total: 508ms
                                                   remaining: 5.33s
87:
        learn: 3.2358767
                                  total: 513ms
                                                   remaining: 5.31s
88:
        learn: 3.2002649
                                  total: 520ms
                                                   remaining: 5.32s
89:
        learn: 3.1688705
                                  total: 524ms
                                                   remaining: 5.29s
        learn: 3.1411285
90:
                                  total: 528ms
                                                   remaining: 5.27s
91:
        learn: 3.1202180
                                  total: 534ms
                                                   remaining: 5.27s
92:
        learn: 3.0882249
                                  total: 537ms
                                                   remaining: 5.24s
93:
        learn: 3.0667493
                                  total: 541ms
                                                   remaining: 5.22s
        learn: 3.0485381
94:
                                  total: 545ms
                                                   remaining: 5.19s
95:
        learn: 3.0302387
                                  total: 551ms
                                                   remaining: 5.18s
96:
        learn: 3.0054904
                                  total: 554ms
                                                   remaining: 5.16s
97:
        learn: 2.9818431
                                  total: 558ms
                                                   remaining: 5.14s
98:
        learn: 2.9648334
                                  total: 566ms
                                                   remaining: 5.15s
99:
        learn: 2.9432380
                                  total: 569ms
                                                   remaining: 5.12s
100:
        learn: 2.9223240
                                  total: 573ms
                                                   remaining: 5.1s
101:
        learn: 2.9005857
                                  total: 580ms
                                                   remaining: 5.11s
102:
        learn: 2.8860897
                                  total: 583ms
                                                   remaining: 5.08s
103:
        learn: 2.8601717
                                  total: 587ms
                                                   remaining: 5.06s
104:
        learn: 2.8408766
                                  total: 593ms
                                                   remaining: 5.05s
105:
        learn: 2.8227560
                                  total: 599ms
                                                   remaining: 5.05s
106:
        learn: 2.8078352
                                  total: 604ms
                                                   remaining: 5.04s
107:
        learn: 2.7889886
                                  total: 611ms
                                                   remaining: 5.04s
108:
        learn: 2.7619249
                                  total: 614ms
                                                   remaining: 5.02s
109:
        learn: 2.7484750
                                  total: 617ms
                                                   remaining: 4.99s
110:
        learn: 2.7253931
                                  total: 620ms
                                                   remaining: 4.96s
111:
        learn: 2.7098050
                                  total: 623ms
                                                   remaining: 4.94s
112:
        learn: 2.6873481
                                  total: 628ms
                                                   remaining: 4.93s
        learn: 2.6674088
113:
                                  total: 632ms
                                                   remaining: 4.91s
        learn: 2.6541776
114:
                                  total: 636ms
                                                   remaining: 4.89s
115:
        learn: 2.6417183
                                  total: 642ms
                                                   remaining: 4.89s
116:
        learn: 2.6240968
                                  total: 647ms
                                                   remaining: 4.88s
        learn: 2.6059076
                                  total: 654ms
117:
                                                   remaining: 4.89s
                                                   remaining: 4.88s
118:
        learn: 2.5867276
                                  total: 660ms
119:
        learn: 2.5671308
                                  total: 666ms
                                                   remaining: 4.88s
120:
        learn: 2.5533812
                                  total: 673ms
                                                   remaining: 4.89s
121:
        learn: 2.5369553
                                  total: 676ms
                                                   remaining: 4.87s
122:
        learn: 2.5203894
                                  total: 681ms
                                                   remaining: 4.86s
123:
        learn: 2.4994110
                                  total: 685ms
                                                   remaining: 4.84s
124:
        learn: 2.4810367
                                  total: 690ms
                                                   remaining: 4.83s
125:
        learn: 2.4647236
                                  total: 694ms
                                                   remaining: 4.81s
126:
        learn: 2.4514344
                                  total: 699ms
                                                   remaining: 4.81s
127:
        learn: 2.4354153
                                  total: 705ms
                                                   remaining: 4.8s
128:
        learn: 2.4184617
                                  total: 709ms
                                                   remaining: 4.79s
129:
        learn: 2.4063033
                                  total: 714ms
                                                   remaining: 4.78s
130:
        learn: 2.3922749
                                  total: 721ms
                                                   remaining: 4.78s
131:
        learn: 2.3824408
                                  total: 724ms
                                                   remaining: 4.76s
132:
        learn: 2.3706070
                                  total: 729ms
                                                   remaining: 4.75s
133:
        learn: 2.3563818
                                  total: 735ms
                                                   remaining: 4.75s
134:
        learn: 2.3427873
                                  total: 739ms
                                                   remaining: 4.73s
```

```
135:
        learn: 2.3315861
                                  total: 743ms
                                                   remaining: 4.72s
136:
        learn: 2.3198189
                                  total: 748ms
                                                   remaining: 4.71s
                                  total: 754ms
137:
        learn: 2.3057484
                                                   remaining: 4.71s
                                  total: 758ms
138:
        learn: 2.2869111
                                                   remaining: 4.69s
139:
        learn: 2.2724356
                                  total: 765ms
                                                   remaining: 4.7s
140:
        learn: 2.2587541
                                  total: 769ms
                                                   remaining: 4.68s
141:
        learn: 2.2425819
                                  total: 773ms
                                                   remaining: 4.67s
142:
        learn: 2.2313161
                                  total: 780ms
                                                   remaining: 4.68s
143:
        learn: 2.2177034
                                  total: 785ms
                                                   remaining: 4.67s
144:
        learn: 2.2082893
                                  total: 789ms
                                                   remaining: 4.65s
145:
        learn: 2.1991247
                                  total: 795ms
                                                   remaining: 4.65s
146:
        learn: 2.1854392
                                  total: 802ms
                                                   remaining: 4.66s
147:
        learn: 2.1669150
                                  total: 807ms
                                                   remaining: 4.64s
148:
        learn: 2.1584721
                                  total: 814ms
                                                   remaining: 4.65s
149:
        learn: 2.1520110
                                  total: 817ms
                                                   remaining: 4.63s
        learn: 2.1411600
150:
                                  total: 821ms
                                                   remaining: 4.61s
151:
        learn: 2.1280178
                                  total: 824ms
                                                   remaining: 4.6s
152:
        learn: 2.1172561
                                  total: 828ms
                                                   remaining: 4.58s
153:
        learn: 2.1084883
                                  total: 833ms
                                                   remaining: 4.58s
        learn: 2.0979106
154:
                                  total: 836ms
                                                   remaining: 4.56s
155:
        learn: 2.0845640
                                  total: 842ms
                                                   remaining: 4.55s
156:
        learn: 2.0674094
                                  total: 848ms
                                                   remaining: 4.55s
157:
        learn: 2.0602654
                                  total: 851ms
                                                   remaining: 4.54s
158:
        learn: 2.0494056
                                  total: 855ms
                                                   remaining: 4.52s
159:
        learn: 2.0376749
                                  total: 858ms
                                                   remaining: 4.51s
160:
        learn: 2.0261067
                                  total: 866ms
                                                   remaining: 4.51s
        learn: 2.0145923
161:
                                  total: 873ms
                                                   remaining: 4.51s
162:
        learn: 2.0076833
                                  total: 880ms
                                                   remaining: 4.52s
163:
                                  total: 886ms
        learn: 1.9953812
                                                   remaining: 4.52s
164:
        learn: 1.9871216
                                  total: 894ms
                                                   remaining: 4.53s
165:
        learn: 1.9724267
                                  total: 902ms
                                                   remaining: 4.53s
166:
        learn: 1.9644014
                                  total: 910ms
                                                   remaining: 4.54s
        learn: 1.9527092
167:
                                  total: 917ms
                                                   remaining: 4.54s
168:
        learn: 1.9440649
                                  total: 926ms
                                                   remaining: 4.55s
169:
        learn: 1.9311681
                                  total: 933ms
                                                   remaining: 4.55s
170:
        learn: 1.9222550
                                  total: 937ms
                                                   remaining: 4.54s
171:
        learn: 1.9151553
                                  total: 944ms
                                                   remaining: 4.54s
172:
        learn: 1.9047339
                                  total: 948ms
                                                   remaining: 4.53s
173:
        learn: 1.8986644
                                  total: 954ms
                                                   remaining: 4.53s
174:
        learn: 1.8844253
                                  total: 959ms
                                                   remaining: 4.52s
175:
        learn: 1.8771615
                                  total: 963ms
                                                   remaining: 4.51s
176:
        learn: 1.8688539
                                  total: 972ms
                                                   remaining: 4.52s
                                  total: 976ms
177:
        learn: 1.8615178
                                                   remaining: 4.5s
178:
        learn: 1.8492895
                                  total: 980ms
                                                   remaining: 4.49s
179:
        learn: 1.8384960
                                  total: 986ms
                                                   remaining: 4.49s
180:
        learn: 1.8311520
                                  total: 989ms
                                                   remaining: 4.48s
181:
        learn: 1.8239093
                                  total: 993ms
                                                   remaining: 4.46s
182:
        learn: 1.8134163
                                  total: 996ms
                                                   remaining: 4.45s
183:
        learn: 1.8027665
                                  total: 1000ms
                                                   remaining: 4.43s
184:
        learn: 1.7973423
                                  total: 1s
                                                   remaining: 4.43s
185:
        learn: 1.7858288
                                  total: 1.01s
                                                   remaining: 4.42s
186:
        learn: 1.7794204
                                  total: 1.01s
                                                   remaining: 4.41s
187:
        learn: 1.7723415
                                  total: 1.02s
                                                   remaining: 4.41s
188:
        learn: 1.7672758
                                  total: 1.02s
                                                   remaining: 4.4s
189:
        learn: 1.7587420
                                  total: 1.03s
                                                   remaining: 4.39s
190:
        learn: 1.7526205
                                  total: 1.04s
                                                   remaining: 4.39s
        learn: 1.7447382
191:
                                  total: 1.04s
                                                   remaining: 4.38s
192:
        learn: 1.7337295
                                  total: 1.04s
                                                   remaining: 4.37s
193:
        learn: 1.7254278
                                  total: 1.05s
                                                   remaining: 4.37s
194:
        learn: 1.7169178
                                  total: 1.06s
                                                   remaining: 4.36s
```

```
195:
        learn: 1.7117589
                                  total: 1.06s
                                                   remaining: 4.36s
196:
        learn: 1.7037884
                                  total: 1.07s
                                                   remaining: 4.35s
197:
        learn: 1.6997088
                                  total: 1.07s
                                                   remaining: 4.34s
198:
        learn: 1.6880745
                                  total: 1.08s
                                                   remaining: 4.35s
199:
        learn: 1.6820663
                                  total: 1.09s
                                                   remaining: 4.34s
200:
        learn: 1.6741577
                                  total: 1.09s
                                                   remaining: 4.35s
201:
        learn: 1.6691916
                                  total: 1.1s
                                                   remaining: 4.34s
202:
        learn: 1.6606978
                                  total: 1.11s
                                                   remaining: 4.35s
203:
        learn: 1.6529302
                                  total: 1.11s
                                                   remaining: 4.35s
204:
        learn: 1.6485542
                                  total: 1.12s
                                                   remaining: 4.34s
205:
        learn: 1.6454987
                                  total: 1.13s
                                                   remaining: 4.35s
206:
        learn: 1.6351005
                                  total: 1.13s
                                                   remaining: 4.33s
207:
        learn: 1.6273339
                                  total: 1.14s
                                                   remaining: 4.33s
208:
        learn: 1.6221795
                                  total: 1.15s
                                                   remaining: 4.34s
209:
        learn: 1.6161161
                                  total: 1.15s
                                                   remaining: 4.33s
210:
        learn: 1.6121284
                                  total: 1.16s
                                                   remaining: 4.34s
211:
        learn: 1.6059812
                                  total: 1.17s
                                                   remaining: 4.34s
212:
        learn: 1.6023457
                                  total: 1.18s
                                                   remaining: 4.35s
213:
        learn: 1.5973552
                                  total: 1.18s
                                                   remaining: 4.35s
214:
        learn: 1.5888201
                                  total: 1.19s
                                                   remaining: 4.35s
215:
        learn: 1.5816733
                                  total: 1.19s
                                                   remaining: 4.33s
216:
        learn: 1.5739478
                                  total: 1.2s
                                                   remaining: 4.32s
217:
        learn: 1.5656948
                                  total: 1.2s
                                                   remaining: 4.31s
218:
        learn: 1.5575456
                                  total: 1.21s
                                                   remaining: 4.32s
219:
        learn: 1.5500519
                                  total: 1.22s
                                                   remaining: 4.32s
220:
        learn: 1.5448701
                                  total: 1.23s
                                                   remaining: 4.33s
                                  total: 1.24s
221:
        learn: 1.5388469
                                                   remaining: 4.33s
222:
        learn: 1.5312418
                                  total: 1.24s
                                                   remaining: 4.32s
223:
        learn: 1.5280095
                                  total: 1.25s
                                                   remaining: 4.32s
224:
        learn: 1.5213617
                                  total: 1.25s
                                                   remaining: 4.32s
225:
        learn: 1.5145212
                                  total: 1.26s
                                                   remaining: 4.32s
226:
        learn: 1.5068924
                                  total: 1.27s
                                                   remaining: 4.33s
227:
        learn: 1.5036495
                                  total: 1.28s
                                                   remaining: 4.32s
228:
        learn: 1.4971632
                                  total: 1.28s
                                                   remaining: 4.32s
229:
        learn: 1.4911154
                                  total: 1.29s
                                                   remaining: 4.32s
230:
        learn: 1.4847649
                                  total: 1.3s
                                                   remaining: 4.33s
231:
        learn: 1.4798064
                                  total: 1.31s
                                                   remaining: 4.33s
232:
        learn: 1.4757960
                                  total: 1.31s
                                                   remaining: 4.32s
233:
        learn: 1.4699912
                                  total: 1.32s
                                                   remaining: 4.32s
234:
        learn: 1.4669792
                                  total: 1.33s
                                                   remaining: 4.32s
235:
        learn: 1.4618419
                                  total: 1.34s
                                                   remaining: 4.33s
236:
        learn: 1.4569867
                                  total: 1.34s
                                                   remaining: 4.32s
237:
        learn: 1.4499749
                                  total: 1.35s
                                                   remaining: 4.33s
238:
        learn: 1.4426642
                                  total: 1.36s
                                                   remaining: 4.33s
239:
        learn: 1.4380641
                                  total: 1.37s
                                                   remaining: 4.33s
240:
        learn: 1.4338572
                                  total: 1.37s
                                                   remaining: 4.33s
241:
        learn: 1.4288290
                                  total: 1.39s
                                                   remaining: 4.36s
242:
        learn: 1.4253073
                                  total: 1.4s
                                                   remaining: 4.35s
        learn: 1.4203299
243:
                                  total: 1.4s
                                                   remaining: 4.34s
        learn: 1.4157733
244:
                                  total: 1.4s
                                                   remaining: 4.33s
245:
        learn: 1.4118639
                                  total: 1.41s
                                                   remaining: 4.32s
246:
        learn: 1.4096742
                                  total: 1.41s
                                                   remaining: 4.31s
247:
        learn: 1.4045724
                                  total: 1.42s
                                                   remaining: 4.3s
248:
        learn: 1.3998100
                                  total: 1.43s
                                                   remaining: 4.3s
249:
        learn: 1.3959758
                                  total: 1.43s
                                                   remaining: 4.29s
250:
        learn: 1.3915566
                                  total: 1.44s
                                                   remaining: 4.29s
                                  total: 1.44s
251:
        learn: 1.3884021
                                                   remaining: 4.29s
252:
        learn: 1.3830610
                                  total: 1.45s
                                                   remaining: 4.28s
253:
        learn: 1.3812261
                                  total: 1.46s
                                                   remaining: 4.27s
254:
        learn: 1.3756916
                                  total: 1.46s
                                                   remaining: 4.27s
```

```
255:
        learn: 1.3708257
                                  total: 1.47s
                                                   remaining: 4.27s
256:
        learn: 1.3674907
                                  total: 1.48s
                                                   remaining: 4.28s
257:
        learn: 1.3609764
                                  total: 1.48s
                                                   remaining: 4.27s
                                  total: 1.49s
258:
        learn: 1.3560036
                                                   remaining: 4.27s
259:
        learn: 1.3541068
                                  total: 1.5s
                                                   remaining: 4.26s
260:
        learn: 1.3493729
                                  total: 1.5s
                                                   remaining: 4.25s
261:
        learn: 1.3441806
                                  total: 1.51s
                                                   remaining: 4.25s
262:
        learn: 1.3402825
                                  total: 1.51s
                                                   remaining: 4.24s
263:
        learn: 1.3356098
                                  total: 1.52s
                                                   remaining: 4.24s
264:
        learn: 1.3316343
                                  total: 1.53s
                                                   remaining: 4.24s
265:
        learn: 1.3284032
                                  total: 1.53s
                                                   remaining: 4.23s
266:
        learn: 1.3246278
                                  total: 1.54s
                                                   remaining: 4.23s
267:
        learn: 1.3200983
                                  total: 1.55s
                                                   remaining: 4.22s
268:
        learn: 1.3139870
                                  total: 1.55s
                                                   remaining: 4.22s
269:
        learn: 1.3108043
                                  total: 1.56s
                                                   remaining: 4.22s
        learn: 1.3074786
270:
                                  total: 1.57s
                                                   remaining: 4.22s
271:
        learn: 1.3042331
                                  total: 1.57s
                                                   remaining: 4.21s
272:
        learn: 1.2981558
                                  total: 1.58s
                                                   remaining: 4.21s
273:
        learn: 1.2956604
                                  total: 1.59s
                                                   remaining: 4.21s
274:
        learn: 1.2932538
                                  total: 1.59s
                                                   remaining: 4.2s
275:
        learn: 1.2912831
                                  total: 1.6s
                                                   remaining: 4.2s
276:
        learn: 1.2871932
                                  total: 1.6s
                                                   remaining: 4.19s
277:
        learn: 1.2825129
                                  total: 1.61s
                                                   remaining: 4.18s
278:
        learn: 1.2788261
                                  total: 1.64s
                                                   remaining: 4.23s
279:
        learn: 1.2764098
                                  total: 1.64s
                                                   remaining: 4.23s
280:
        learn: 1.2727315
                                  total: 1.65s
                                                   remaining: 4.22s
281:
        learn: 1.2688497
                                  total: 1.65s
                                                   remaining: 4.21s
282:
        learn: 1.2660038
                                  total: 1.66s
                                                   remaining: 4.2s
        learn: 1.2605714
283:
                                  total: 1.66s
                                                   remaining: 4.18s
284:
        learn: 1.2549423
                                  total: 1.67s
                                                   remaining: 4.18s
285:
        learn: 1.2505471
                                  total: 1.67s
                                                   remaining: 4.17s
286:
        learn: 1.2457531
                                  total: 1.67s
                                                   remaining: 4.16s
        learn: 1.2421328
287:
                                  total: 1.68s
                                                   remaining: 4.16s
288:
        learn: 1.2381123
                                  total: 1.69s
                                                   remaining: 4.15s
289:
        learn: 1.2355037
                                  total: 1.7s
                                                   remaining: 4.15s
290:
        learn: 1.2315032
                                  total: 1.7s
                                                   remaining: 4.14s
291:
        learn: 1.2282752
                                  total: 1.71s
                                                   remaining: 4.14s
292:
        learn: 1.2235702
                                  total: 1.72s
                                                   remaining: 4.14s
293:
        learn: 1.2209909
                                  total: 1.72s
                                                   remaining: 4.14s
294:
        learn: 1.2163830
                                  total: 1.73s
                                                   remaining: 4.14s
295:
        learn: 1.2123250
                                  total: 1.74s
                                                   remaining: 4.13s
296:
        learn: 1.2080351
                                  total: 1.74s
                                                   remaining: 4.13s
297:
        learn: 1.2048489
                                  total: 1.75s
                                                   remaining: 4.12s
298:
        learn: 1.2015999
                                  total: 1.75s
                                                   remaining: 4.11s
299:
        learn: 1.1994032
                                  total: 1.76s
                                                   remaining: 4.11s
300:
        learn: 1.1947729
                                  total: 1.76s
                                                   remaining: 4.1s
301:
        learn: 1.1927429
                                  total: 1.77s
                                                   remaining: 4.09s
302:
        learn: 1.1902508
                                  total: 1.78s
                                                   remaining: 4.09s
                                  total: 1.78s
303:
        learn: 1.1881936
                                                   remaining: 4.08s
                                  total: 1.79s
304:
        learn: 1.1853457
                                                   remaining: 4.08s
305:
        learn: 1.1820169
                                  total: 1.79s
                                                   remaining: 4.07s
306:
        learn: 1.1779956
                                  total: 1.8s
                                                   remaining: 4.07s
307:
        learn: 1.1750713
                                  total: 1.81s
                                                   remaining: 4.06s
308:
        learn: 1.1734583
                                  total: 1.81s
                                                   remaining: 4.05s
309:
        learn: 1.1693299
                                  total: 1.81s
                                                   remaining: 4.04s
310:
        learn: 1.1660640
                                  total: 1.82s
                                                   remaining: 4.03s
311:
        learn: 1.1638684
                                  total: 1.82s
                                                   remaining: 4.02s
312:
        learn: 1.1615805
                                  total: 1.83s
                                                   remaining: 4.01s
313:
        learn: 1.1577812
                                  total: 1.84s
                                                   remaining: 4.01s
314:
        learn: 1.1550548
                                  total: 1.84s
                                                   remaining: 4s
```

```
315:
        learn: 1.1525316
                                  total: 1.84s
                                                   remaining: 3.99s
316:
        learn: 1.1504428
                                  total: 1.85s
                                                   remaining: 3.99s
317:
        learn: 1.1466793
                                  total: 1.86s
                                                   remaining: 3.98s
        learn: 1.1437000
318:
                                  total: 1.86s
                                                   remaining: 3.98s
319:
        learn: 1.1400425
                                  total: 1.87s
                                                   remaining: 3.97s
320:
        learn: 1.1381689
                                  total: 1.88s
                                                   remaining: 3.97s
321:
        learn: 1.1354904
                                  total: 1.88s
                                                   remaining: 3.97s
322:
        learn: 1.1331864
                                  total: 1.89s
                                                   remaining: 3.96s
323:
        learn: 1.1297979
                                  total: 1.9s
                                                   remaining: 3.96s
324:
        learn: 1.1269062
                                  total: 1.91s
                                                   remaining: 3.96s
325:
        learn: 1.1236792
                                  total: 1.91s
                                                   remaining: 3.96s
326:
        learn: 1.1211547
                                  total: 1.92s
                                                   remaining: 3.95s
327:
        learn: 1.1184646
                                  total: 1.93s
                                                   remaining: 3.95s
328:
        learn: 1.1148791
                                  total: 1.93s
                                                   remaining: 3.94s
329:
        learn: 1.1133752
                                  total: 1.94s
                                                   remaining: 3.94s
        learn: 1.1107732
330:
                                  total: 1.95s
                                                   remaining: 3.93s
331:
        learn: 1.1078591
                                  total: 1.95s
                                                   remaining: 3.92s
332:
        learn: 1.1057560
                                  total: 1.96s
                                                   remaining: 3.92s
333:
        learn: 1.1032674
                                  total: 1.97s
                                                   remaining: 3.92s
334:
        learn: 1.1003922
                                  total: 1.97s
                                                   remaining: 3.92s
335:
        learn: 1.0969815
                                  total: 1.98s
                                                   remaining: 3.91s
336:
        learn: 1.0947166
                                  total: 1.99s
                                                   remaining: 3.91s
337:
        learn: 1.0926761
                                  total: 2s
                                                   remaining: 3.91s
338:
        learn: 1.0913520
                                  total: 2s
                                                   remaining: 3.91s
339:
        learn: 1.0899210
                                  total: 2.01s
                                                   remaining: 3.9s
340:
                                  total: 2.01s
        learn: 1.0873600
                                                   remaining: 3.89s
        learn: 1.0849080
                                  total: 2.02s
341:
                                                   remaining: 3.88s
342:
        learn: 1.0821530
                                  total: 2.02s
                                                   remaining: 3.87s
        learn: 1.0802314
343:
                                  total: 2.03s
                                                   remaining: 3.87s
344:
        learn: 1.0789448
                                  total: 2.03s
                                                   remaining: 3.86s
345:
        learn: 1.0751238
                                  total: 2.04s
                                                   remaining: 3.85s
346:
        learn: 1.0727046
                                  total: 2.04s
                                                   remaining: 3.84s
347:
        learn: 1.0694970
                                  total: 2.05s
                                                   remaining: 3.84s
348:
        learn: 1.0681337
                                  total: 2.05s
                                                   remaining: 3.83s
        learn: 1.0654420
349:
                                  total: 2.06s
                                                   remaining: 3.83s
350:
        learn: 1.0638712
                                  total: 2.07s
                                                   remaining: 3.82s
351:
        learn: 1.0624771
                                  total: 2.07s
                                                   remaining: 3.82s
352:
        learn: 1.0593641
                                  total: 2.08s
                                                   remaining: 3.81s
353:
        learn: 1.0579672
                                  total: 2.09s
                                                   remaining: 3.81s
354:
        learn: 1.0560658
                                  total: 2.09s
                                                   remaining: 3.81s
355:
        learn: 1.0547495
                                  total: 2.1s
                                                   remaining: 3.8s
356:
        learn: 1.0532751
                                  total: 2.11s
                                                   remaining: 3.8s
        learn: 1.0513973
357:
                                  total: 2.12s
                                                   remaining: 3.79s
358:
        learn: 1.0504060
                                  total: 2.12s
                                                   remaining: 3.79s
359:
        learn: 1.0480967
                                  total: 2.13s
                                                   remaining: 3.78s
360:
        learn: 1.0454959
                                  total: 2.13s
                                                   remaining: 3.78s
361:
        learn: 1.0445578
                                  total: 2.14s
                                                   remaining: 3.77s
362:
        learn: 1.0423558
                                  total: 2.14s
                                                   remaining: 3.76s
363:
        learn: 1.0408023
                                  total: 2.15s
                                                   remaining: 3.76s
364:
        learn: 1.0387466
                                  total: 2.16s
                                                   remaining: 3.76s
365:
        learn: 1.0374499
                                  total: 2.17s
                                                   remaining: 3.76s
366:
        learn: 1.0356782
                                  total: 2.17s
                                                   remaining: 3.75s
367:
        learn: 1.0323538
                                  total: 2.18s
                                                   remaining: 3.75s
368:
                                  total: 2.19s
        learn: 1.0292421
                                                   remaining: 3.74s
369:
        learn: 1.0282541
                                  total: 2.2s
                                                   remaining: 3.75s
370:
        learn: 1.0248753
                                  total: 2.21s
                                                   remaining: 3.74s
371:
        learn: 1.0234022
                                  total: 2.21s
                                                   remaining: 3.74s
372:
        learn: 1.0209480
                                  total: 2.22s
                                                   remaining: 3.73s
                                  total: 2.22s
373:
        learn: 1.0177020
                                                   remaining: 3.72s
374:
        learn: 1.0158336
                                  total: 2.23s
                                                   remaining: 3.71s
```

```
375:
        learn: 1.0139457
                                  total: 2.23s
                                                   remaining: 3.7s
376:
        learn: 1.0119715
                                  total: 2.23s
                                                   remaining: 3.69s
377:
        learn: 1.0097591
                                  total: 2.24s
                                                   remaining: 3.69s
                                  total: 2.25s
        learn: 1.0076299
378:
                                                   remaining: 3.68s
379:
        learn: 1.0065719
                                  total: 2.25s
                                                   remaining: 3.67s
380:
        learn: 1.0045940
                                  total: 2.26s
                                                   remaining: 3.67s
381:
        learn: 1.0018879
                                  total: 2.26s
                                                   remaining: 3.66s
382:
        learn: 1.0005986
                                  total: 2.27s
                                                   remaining: 3.65s
383:
        learn: 0.9985757
                                  total: 2.28s
                                                   remaining: 3.65s
384:
        learn: 0.9972149
                                  total: 2.28s
                                                   remaining: 3.64s
385:
        learn: 0.9941972
                                  total: 2.29s
                                                   remaining: 3.64s
386:
        learn: 0.9914999
                                  total: 2.29s
                                                   remaining: 3.63s
387:
        learn: 0.9892565
                                  total: 2.3s
                                                   remaining: 3.63s
388:
        learn: 0.9865163
                                  total: 2.31s
                                                   remaining: 3.63s
389:
        learn: 0.9827731
                                  total: 2.32s
                                                   remaining: 3.63s
390:
        learn: 0.9801619
                                  total: 2.33s
                                                   remaining: 3.63s
391:
        learn: 0.9792171
                                  total: 2.33s
                                                   remaining: 3.62s
392:
        learn: 0.9762842
                                  total: 2.34s
                                                   remaining: 3.61s
393:
        learn: 0.9749325
                                  total: 2.35s
                                                   remaining: 3.61s
394:
        learn: 0.9731516
                                  total: 2.35s
                                                   remaining: 3.61s
395:
        learn: 0.9720498
                                  total: 2.36s
                                                   remaining: 3.6s
396:
        learn: 0.9693225
                                  total: 2.37s
                                                   remaining: 3.6s
397:
        learn: 0.9675642
                                  total: 2.38s
                                                   remaining: 3.59s
398:
        learn: 0.9652325
                                  total: 2.38s
                                                   remaining: 3.59s
399:
        learn: 0.9636879
                                  total: 2.39s
                                                   remaining: 3.58s
        learn: 0.9619031
                                  total: 2.39s
400:
                                                   remaining: 3.57s
401:
        learn: 0.9600810
                                  total: 2.39s
                                                   remaining: 3.56s
402:
        learn: 0.9579540
                                  total: 2.4s
                                                   remaining: 3.56s
403:
        learn: 0.9561988
                                  total: 2.4s
                                                   remaining: 3.55s
404:
        learn: 0.9527253
                                  total: 2.41s
                                                   remaining: 3.54s
                                  total: 2.42s
405:
        learn: 0.9505010
                                                   remaining: 3.54s
406:
        learn: 0.9493797
                                  total: 2.42s
                                                   remaining: 3.53s
407:
        learn: 0.9474394
                                  total: 2.43s
                                                   remaining: 3.53s
408:
        learn: 0.9447484
                                  total: 2.44s
                                                   remaining: 3.52s
409:
        learn: 0.9433157
                                  total: 2.45s
                                                   remaining: 3.52s
410:
        learn: 0.9418504
                                  total: 2.45s
                                                   remaining: 3.51s
411:
        learn: 0.9391080
                                  total: 2.46s
                                                   remaining: 3.51s
412:
        learn: 0.9382461
                                  total: 2.46s
                                                   remaining: 3.5s
413:
        learn: 0.9362956
                                  total: 2.47s
                                                   remaining: 3.5s
414:
        learn: 0.9347027
                                  total: 2.48s
                                                   remaining: 3.5s
415:
        learn: 0.9330122
                                  total: 2.49s
                                                   remaining: 3.49s
416:
        learn: 0.9320912
                                  total: 2.5s
                                                   remaining: 3.49s
        learn: 0.9302976
417:
                                  total: 2.5s
                                                   remaining: 3.48s
418:
        learn: 0.9289462
                                  total: 2.51s
                                                   remaining: 3.48s
419:
        learn: 0.9270319
                                  total: 2.52s
                                                   remaining: 3.47s
420:
        learn: 0.9242500
                                  total: 2.52s
                                                   remaining: 3.47s
421:
        learn: 0.9226898
                                  total: 2.53s
                                                   remaining: 3.46s
422:
        learn: 0.9206106
                                  total: 2.53s
                                                   remaining: 3.46s
423:
        learn: 0.9192430
                                  total: 2.54s
                                                   remaining: 3.45s
                                  total: 2.55s
424:
        learn: 0.9171095
                                                   remaining: 3.45s
425:
        learn: 0.9162241
                                  total: 2.56s
                                                   remaining: 3.45s
426:
        learn: 0.9137635
                                  total: 2.57s
                                                   remaining: 3.44s
427:
        learn: 0.9126189
                                  total: 2.58s
                                                   remaining: 3.44s
428:
                                  total: 2.58s
        learn: 0.9114668
                                                   remaining: 3.44s
429:
        learn: 0.9089308
                                  total: 2.59s
                                                   remaining: 3.43s
430:
        learn: 0.9066104
                                  total: 2.59s
                                                   remaining: 3.42s
431:
        learn: 0.9047230
                                  total: 2.6s
                                                   remaining: 3.42s
432:
                                  total: 2.6s
        learn: 0.9034493
                                                   remaining: 3.41s
433:
        learn: 0.9015399
                                  total: 2.61s
                                                   remaining: 3.4s
434:
        learn: 0.8998280
                                  total: 2.61s
                                                   remaining: 3.39s
```

```
435:
        learn: 0.8989957
                                  total: 2.62s
                                                   remaining: 3.39s
436:
        learn: 0.8975676
                                  total: 2.63s
                                                   remaining: 3.38s
437:
        learn: 0.8963797
                                  total: 2.63s
                                                   remaining: 3.38s
438:
        learn: 0.8953894
                                  total: 2.64s
                                                   remaining: 3.37s
439:
        learn: 0.8936181
                                  total: 2.64s
                                                   remaining: 3.37s
440:
        learn: 0.8915820
                                  total: 2.65s
                                                   remaining: 3.36s
441:
        learn: 0.8905277
                                  total: 2.66s
                                                   remaining: 3.36s
442:
        learn: 0.8887003
                                  total: 2.67s
                                                   remaining: 3.35s
443:
        learn: 0.8865655
                                  total: 2.67s
                                                   remaining: 3.35s
444:
        learn: 0.8846169
                                  total: 2.68s
                                                   remaining: 3.34s
                                  total: 2.69s
445:
        learn: 0.8835240
                                                   remaining: 3.34s
446:
        learn: 0.8810049
                                  total: 2.69s
                                                   remaining: 3.33s
447:
        learn: 0.8800846
                                  total: 2.7s
                                                   remaining: 3.33s
448:
        learn: 0.8779214
                                  total: 2.71s
                                                   remaining: 3.32s
449:
        learn: 0.8764974
                                  total: 2.71s
                                                   remaining: 3.31s
450:
        learn: 0.8751537
                                  total: 2.72s
                                                   remaining: 3.31s
451:
        learn: 0.8730434
                                  total: 2.73s
                                                   remaining: 3.3s
452:
        learn: 0.8711039
                                  total: 2.73s
                                                   remaining: 3.3s
453:
                                  total: 2.74s
        learn: 0.8692487
                                                   remaining: 3.29s
454:
        learn: 0.8678423
                                  total: 2.75s
                                                   remaining: 3.29s
455:
        learn: 0.8656502
                                  total: 2.75s
                                                   remaining: 3.28s
456:
        learn: 0.8628846
                                  total: 2.76s
                                                   remaining: 3.28s
457:
        learn: 0.8617796
                                  total: 2.77s
                                                   remaining: 3.27s
458:
        learn: 0.8602857
                                  total: 2.77s
                                                   remaining: 3.27s
459:
        learn: 0.8586115
                                  total: 2.78s
                                                   remaining: 3.26s
460:
        learn: 0.8573821
                                  total: 2.78s
                                                   remaining: 3.25s
        learn: 0.8565536
461:
                                  total: 2.78s
                                                   remaining: 3.24s
462:
        learn: 0.8552768
                                  total: 2.79s
                                                   remaining: 3.23s
463:
        learn: 0.8534507
                                  total: 2.8s
                                                   remaining: 3.23s
464:
        learn: 0.8518549
                                  total: 2.8s
                                                   remaining: 3.22s
465:
        learn: 0.8507106
                                  total: 2.8s
                                                   remaining: 3.21s
466:
        learn: 0.8489867
                                  total: 2.81s
                                                   remaining: 3.21s
467:
        learn: 0.8470311
                                  total: 2.82s
                                                   remaining: 3.21s
468:
        learn: 0.8462458
                                  total: 2.83s
                                                   remaining: 3.2s
469:
        learn: 0.8447736
                                  total: 2.83s
                                                   remaining: 3.19s
470:
        learn: 0.8431166
                                  total: 2.84s
                                                   remaining: 3.19s
471:
        learn: 0.8414255
                                  total: 2.85s
                                                   remaining: 3.18s
472:
        learn: 0.8402226
                                  total: 2.85s
                                                   remaining: 3.18s
473:
        learn: 0.8389610
                                  total: 2.86s
                                                   remaining: 3.17s
474:
        learn: 0.8382090
                                  total: 2.87s
                                                   remaining: 3.17s
475:
        learn: 0.8369177
                                  total: 2.88s
                                                   remaining: 3.17s
476:
        learn: 0.8355283
                                  total: 2.88s
                                                   remaining: 3.16s
        learn: 0.8345191
477:
                                  total: 2.89s
                                                   remaining: 3.16s
478:
        learn: 0.8332243
                                  total: 2.89s
                                                   remaining: 3.15s
479:
        learn: 0.8314480
                                  total: 2.9s
                                                   remaining: 3.14s
480:
        learn: 0.8296918
                                  total: 2.91s
                                                   remaining: 3.14s
481:
        learn: 0.8285408
                                  total: 2.91s
                                                   remaining: 3.13s
482:
        learn: 0.8268443
                                  total: 2.92s
                                                   remaining: 3.13s
483:
        learn: 0.8248840
                                  total: 2.93s
                                                   remaining: 3.12s
484:
        learn: 0.8235652
                                  total: 2.94s
                                                   remaining: 3.12s
485:
        learn: 0.8222079
                                  total: 2.94s
                                                   remaining: 3.11s
486:
        learn: 0.8213506
                                  total: 2.95s
                                                   remaining: 3.1s
487:
        learn: 0.8206171
                                  total: 2.96s
                                                   remaining: 3.1s
488:
                                  total: 2.96s
        learn: 0.8192902
                                                   remaining: 3.1s
489:
        learn: 0.8185773
                                  total: 2.97s
                                                   remaining: 3.09s
        learn: 0.8171901
490:
                                  total: 2.98s
                                                   remaining: 3.09s
491:
        learn: 0.8158494
                                  total: 2.98s
                                                   remaining: 3.08s
492:
                                  total: 2.99s
        learn: 0.8148677
                                                   remaining: 3.07s
493:
        learn: 0.8140070
                                  total: 2.99s
                                                   remaining: 3.06s
494:
        learn: 0.8127567
                                  total: 3s
                                                   remaining: 3.06s
```

```
495:
        learn: 0.8114646
                                  total: 3s
                                                   remaining: 3.05s
496:
        learn: 0.8103194
                                  total: 3.01s
                                                   remaining: 3.04s
497:
        learn: 0.8088366
                                  total: 3.01s
                                                   remaining: 3.04s
498:
        learn: 0.8079832
                                  total: 3.02s
                                                   remaining: 3.03s
499:
        learn: 0.8066914
                                  total: 3.02s
                                                   remaining: 3.02s
500:
        learn: 0.8049207
                                  total: 3.03s
                                                   remaining: 3.02s
501:
        learn: 0.8038938
                                  total: 3.04s
                                                   remaining: 3.02s
502:
        learn: 0.8029293
                                  total: 3.05s
                                                   remaining: 3.01s
503:
        learn: 0.8020643
                                  total: 3.05s
                                                   remaining: 3s
504:
        learn: 0.8004997
                                  total: 3.06s
                                                   remaining: 3s
505:
        learn: 0.7990519
                                  total: 3.07s
                                                   remaining: 3s
506:
        learn: 0.7975424
                                  total: 3.08s
                                                   remaining: 2.99s
507:
        learn: 0.7964195
                                  total: 3.09s
                                                   remaining: 2.99s
508:
        learn: 0.7956738
                                  total: 3.09s
                                                   remaining: 2.98s
509:
        learn: 0.7942007
                                  total: 3.1s
                                                   remaining: 2.98s
510:
        learn: 0.7919757
                                  total: 3.1s
                                                   remaining: 2.97s
511:
        learn: 0.7913647
                                  total: 3.11s
                                                   remaining: 2.97s
512:
        learn: 0.7904768
                                  total: 3.12s
                                                   remaining: 2.96s
513:
        learn: 0.7893309
                                  total: 3.13s
                                                   remaining: 2.96s
514:
        learn: 0.7886538
                                  total: 3.13s
                                                   remaining: 2.95s
515:
        learn: 0.7876009
                                  total: 3.13s
                                                   remaining: 2.94s
516:
        learn: 0.7868793
                                  total: 3.14s
                                                   remaining: 2.94s
517:
        learn: 0.7860644
                                  total: 3.15s
                                                   remaining: 2.93s
518:
        learn: 0.7849486
                                  total: 3.16s
                                                   remaining: 2.93s
519:
        learn: 0.7843967
                                  total: 3.17s
                                                   remaining: 2.92s
520:
        learn: 0.7836933
                                  total: 3.18s
                                                   remaining: 2.92s
                                  total: 3.19s
521:
        learn: 0.7829915
                                                   remaining: 2.92s
522:
        learn: 0.7825057
                                  total: 3.19s
                                                   remaining: 2.91s
523:
        learn: 0.7815223
                                  total: 3.19s
                                                   remaining: 2.9s
524:
        learn: 0.7810301
                                  total: 3.2s
                                                   remaining: 2.89s
525:
        learn: 0.7799038
                                  total: 3.2s
                                                   remaining: 2.89s
526:
        learn: 0.7787665
                                  total: 3.21s
                                                   remaining: 2.88s
527:
        learn: 0.7773596
                                  total: 3.21s
                                                   remaining: 2.87s
528:
        learn: 0.7765834
                                  total: 3.22s
                                                   remaining: 2.87s
529:
        learn: 0.7754198
                                  total: 3.22s
                                                   remaining: 2.86s
                                  total: 3.23s
530:
        learn: 0.7742577
                                                   remaining: 2.85s
531:
        learn: 0.7729556
                                  total: 3.24s
                                                   remaining: 2.85s
532:
        learn: 0.7717188
                                  total: 3.25s
                                                   remaining: 2.84s
533:
        learn: 0.7704047
                                  total: 3.25s
                                                   remaining: 2.84s
534:
        learn: 0.7690586
                                  total: 3.26s
                                                   remaining: 2.83s
535:
        learn: 0.7678913
                                  total: 3.27s
                                                   remaining: 2.83s
536:
        learn: 0.7669766
                                  total: 3.28s
                                                   remaining: 2.83s
        learn: 0.7663933
537:
                                  total: 3.28s
                                                   remaining: 2.82s
538:
        learn: 0.7656311
                                  total: 3.29s
                                                   remaining: 2.81s
539:
        learn: 0.7644591
                                  total: 3.3s
                                                   remaining: 2.81s
540:
        learn: 0.7640215
                                  total: 3.3s
                                                   remaining: 2.8s
541:
        learn: 0.7625899
                                  total: 3.31s
                                                   remaining: 2.79s
542:
        learn: 0.7614630
                                  total: 3.32s
                                                   remaining: 2.79s
                                  total: 3.32s
543:
        learn: 0.7602770
                                                   remaining: 2.79s
544:
        learn: 0.7592023
                                  total: 3.33s
                                                   remaining: 2.78s
545:
        learn: 0.7581781
                                  total: 3.34s
                                                   remaining: 2.78s
546:
        learn: 0.7573757
                                  total: 3.35s
                                                   remaining: 2.77s
547:
        learn: 0.7565566
                                  total: 3.35s
                                                   remaining: 2.77s
548:
        learn: 0.7562754
                                  total: 3.36s
                                                   remaining: 2.76s
549:
        learn: 0.7557262
                                  total: 3.37s
                                                   remaining: 2.75s
        learn: 0.7548011
550:
                                  total: 3.37s
                                                   remaining: 2.75s
551:
        learn: 0.7537466
                                  total: 3.38s
                                                   remaining: 2.75s
552:
        learn: 0.7529025
                                  total: 3.39s
                                                   remaining: 2.74s
553:
        learn: 0.7519708
                                  total: 3.4s
                                                   remaining: 2.73s
554:
        learn: 0.7506039
                                  total: 3.4s
                                                   remaining: 2.73s
```

```
555:
        learn: 0.7497333
                                  total: 3.4s
                                                   remaining: 2.72s
556:
        learn: 0.7490540
                                  total: 3.41s
                                                   remaining: 2.71s
557:
        learn: 0.7484506
                                  total: 3.41s
                                                   remaining: 2.7s
558:
        learn: 0.7471825
                                  total: 3.42s
                                                   remaining: 2.7s
559:
        learn: 0.7457056
                                  total: 3.43s
                                                   remaining: 2.69s
560:
        learn: 0.7450474
                                  total: 3.43s
                                                   remaining: 2.69s
561:
        learn: 0.7440262
                                  total: 3.44s
                                                   remaining: 2.68s
562:
        learn: 0.7431612
                                  total: 3.45s
                                                   remaining: 2.67s
563:
        learn: 0.7420152
                                  total: 3.45s
                                                   remaining: 2.67s
564:
        learn: 0.7413658
                                  total: 3.46s
                                                   remaining: 2.66s
565:
        learn: 0.7406252
                                  total: 3.46s
                                                   remaining: 2.66s
566:
        learn: 0.7399569
                                  total: 3.47s
                                                   remaining: 2.65s
567:
        learn: 0.7385871
                                  total: 3.48s
                                                   remaining: 2.65s
568:
        learn: 0.7378097
                                  total: 3.49s
                                                   remaining: 2.64s
569:
        learn: 0.7374192
                                  total: 3.5s
                                                   remaining: 2.64s
570:
        learn: 0.7367824
                                  total: 3.5s
                                                   remaining: 2.63s
571:
        learn: 0.7359473
                                  total: 3.51s
                                                   remaining: 2.63s
572:
        learn: 0.7347070
                                  total: 3.52s
                                                   remaining: 2.62s
573:
        learn: 0.7340769
                                  total: 3.53s
                                                   remaining: 2.62s
574:
        learn: 0.7336482
                                  total: 3.54s
                                                   remaining: 2.61s
575:
        learn: 0.7329661
                                  total: 3.54s
                                                   remaining: 2.61s
576:
        learn: 0.7320979
                                  total: 3.55s
                                                   remaining: 2.6s
577:
        learn: 0.7314219
                                  total: 3.56s
                                                   remaining: 2.6s
578:
        learn: 0.7309883
                                  total: 3.56s
                                                   remaining: 2.59s
579:
        learn: 0.7302576
                                  total: 3.57s
                                                   remaining: 2.59s
580:
        learn: 0.7297370
                                  total: 3.58s
                                                   remaining: 2.58s
        learn: 0.7290847
                                  total: 3.59s
581:
                                                   remaining: 2.58s
582:
        learn: 0.7281851
                                  total: 3.6s
                                                   remaining: 2.57s
        learn: 0.7278154
583:
                                  total: 3.6s
                                                   remaining: 2.56s
584:
        learn: 0.7269484
                                  total: 3.6s
                                                   remaining: 2.56s
585:
        learn: 0.7263824
                                  total: 3.61s
                                                   remaining: 2.55s
586:
        learn: 0.7253295
                                  total: 3.61s
                                                   remaining: 2.54s
587:
        learn: 0.7245918
                                  total: 3.62s
                                                   remaining: 2.53s
588:
        learn: 0.7239663
                                  total: 3.62s
                                                   remaining: 2.53s
        learn: 0.7231160
589:
                                  total: 3.63s
                                                   remaining: 2.52s
                                  total: 3.64s
590:
        learn: 0.7223158
                                                   remaining: 2.52s
591:
        learn: 0.7217635
                                  total: 3.65s
                                                   remaining: 2.51s
592:
        learn: 0.7209099
                                  total: 3.65s
                                                   remaining: 2.5s
593:
        learn: 0.7196326
                                  total: 3.66s
                                                   remaining: 2.5s
594:
        learn: 0.7192258
                                  total: 3.66s
                                                   remaining: 2.49s
595:
        learn: 0.7181825
                                  total: 3.67s
                                                   remaining: 2.49s
596:
        learn: 0.7174295
                                  total: 3.68s
                                                   remaining: 2.48s
        learn: 0.7166488
597:
                                  total: 3.68s
                                                   remaining: 2.47s
598:
        learn: 0.7151351
                                  total: 3.69s
                                                   remaining: 2.47s
599:
        learn: 0.7145649
                                  total: 3.69s
                                                   remaining: 2.46s
600:
        learn: 0.7137477
                                  total: 3.7s
                                                   remaining: 2.46s
601:
        learn: 0.7129216
                                  total: 3.71s
                                                   remaining: 2.45s
602:
        learn: 0.7119282
                                  total: 3.71s
                                                   remaining: 2.44s
603:
        learn: 0.7113325
                                  total: 3.72s
                                                   remaining: 2.44s
604:
        learn: 0.7105310
                                  total: 3.73s
                                                   remaining: 2.43s
605:
        learn: 0.7100986
                                  total: 3.73s
                                                   remaining: 2.43s
606:
        learn: 0.7092620
                                  total: 3.74s
                                                   remaining: 2.42s
607:
        learn: 0.7085344
                                  total: 3.75s
                                                   remaining: 2.42s
608:
        learn: 0.7079222
                                  total: 3.75s
                                                   remaining: 2.41s
609:
        learn: 0.7070927
                                  total: 3.76s
                                                   remaining: 2.4s
        learn: 0.7061670
610:
                                  total: 3.77s
                                                   remaining: 2.4s
611:
        learn: 0.7059103
                                  total: 3.77s
                                                   remaining: 2.39s
612:
        learn: 0.7047858
                                  total: 3.78s
                                                   remaining: 2.39s
613:
        learn: 0.7041100
                                  total: 3.79s
                                                   remaining: 2.38s
614:
        learn: 0.7034700
                                  total: 3.8s
                                                   remaining: 2.38s
```

```
615:
        learn: 0.7029596
                                  total: 3.8s
                                                   remaining: 2.37s
616:
        learn: 0.7020733
                                  total: 3.81s
                                                   remaining: 2.36s
617:
        learn: 0.7008539
                                  total: 3.81s
                                                   remaining: 2.35s
        learn: 0.7004741
618:
                                  total: 3.81s
                                                   remaining: 2.35s
619:
        learn: 0.6996280
                                  total: 3.82s
                                                   remaining: 2.34s
620:
        learn: 0.6989483
                                  total: 3.83s
                                                   remaining: 2.33s
621:
        learn: 0.6982038
                                  total: 3.83s
                                                   remaining: 2.33s
622:
        learn: 0.6977448
                                  total: 3.84s
                                                   remaining: 2.32s
623:
        learn: 0.6972538
                                  total: 3.84s
                                                   remaining: 2.32s
624:
        learn: 0.6957565
                                  total: 3.85s
                                                   remaining: 2.31s
625:
        learn: 0.6949002
                                  total: 3.86s
                                                   remaining: 2.31s
626:
        learn: 0.6936923
                                  total: 3.87s
                                                   remaining: 2.3s
627:
        learn: 0.6927571
                                  total: 3.87s
                                                   remaining: 2.29s
628:
        learn: 0.6919573
                                  total: 3.88s
                                                   remaining: 2.29s
629:
        learn: 0.6910384
                                  total: 3.89s
                                                   remaining: 2.28s
630:
        learn: 0.6903860
                                  total: 3.9s
                                                   remaining: 2.28s
                                  total: 3.9s
631:
        learn: 0.6896179
                                                   remaining: 2.27s
632:
        learn: 0.6892808
                                  total: 3.91s
                                                   remaining: 2.27s
633:
        learn: 0.6886580
                                  total: 3.92s
                                                   remaining: 2.26s
634:
        learn: 0.6879689
                                  total: 3.92s
                                                   remaining: 2.25s
635:
        learn: 0.6871117
                                  total: 3.93s
                                                   remaining: 2.25s
636:
        learn: 0.6866011
                                  total: 3.94s
                                                   remaining: 2.24s
                                  total: 3.95s
637:
        learn: 0.6858462
                                                   remaining: 2.24s
638:
        learn: 0.6851911
                                  total: 3.96s
                                                   remaining: 2.23s
639:
        learn: 0.6846364
                                  total: 3.96s
                                                   remaining: 2.23s
640:
        learn: 0.6839592
                                  total: 3.97s
                                                   remaining: 2.22s
641:
                                  total: 3.98s
        learn: 0.6833321
                                                   remaining: 2.22s
642:
        learn: 0.6826781
                                  total: 3.98s
                                                   remaining: 2.21s
643:
        learn: 0.6817166
                                  total: 3.99s
                                                   remaining: 2.21s
644:
        learn: 0.6805082
                                  total: 4s
                                                   remaining: 2.2s
645:
        learn: 0.6799931
                                  total: 4.01s
                                                   remaining: 2.2s
646:
        learn: 0.6795983
                                  total: 4.01s
                                                   remaining: 2.19s
647:
        learn: 0.6790398
                                  total: 4.02s
                                                   remaining: 2.18s
648:
        learn: 0.6788172
                                  total: 4.03s
                                                   remaining: 2.18s
        learn: 0.6782530
649:
                                  total: 4.03s
                                                   remaining: 2.17s
650:
        learn: 0.6779393
                                  total: 4.04s
                                                   remaining: 2.16s
651:
        learn: 0.6771331
                                  total: 4.04s
                                                   remaining: 2.16s
652:
        learn: 0.6762829
                                  total: 4.05s
                                                   remaining: 2.15s
653:
        learn: 0.6759359
                                  total: 4.06s
                                                   remaining: 2.15s
654:
        learn: 0.6754918
                                  total: 4.06s
                                                   remaining: 2.14s
655:
        learn: 0.6745538
                                  total: 4.07s
                                                   remaining: 2.13s
656:
        learn: 0.6739165
                                  total: 4.07s
                                                   remaining: 2.13s
        learn: 0.6734187
657:
                                  total: 4.08s
                                                   remaining: 2.12s
658:
        learn: 0.6728990
                                  total: 4.08s
                                                   remaining: 2.11s
659:
        learn: 0.6725500
                                  total: 4.09s
                                                   remaining: 2.1s
660:
        learn: 0.6725068
                                  total: 4.09s
                                                   remaining: 2.1s
661:
        learn: 0.6721116
                                  total: 4.09s
                                                   remaining: 2.09s
        learn: 0.6713574
662:
                                  total: 4.1s
                                                   remaining: 2.08s
663:
        learn: 0.6707125
                                  total: 4.11s
                                                   remaining: 2.08s
                                  total: 4.11s
664:
        learn: 0.6701032
                                                   remaining: 2.07s
665:
        learn: 0.6695050
                                  total: 4.12s
                                                   remaining: 2.06s
666:
        learn: 0.6691723
                                  total: 4.12s
                                                   remaining: 2.06s
667:
        learn: 0.6686408
                                  total: 4.13s
                                                   remaining: 2.05s
668:
        learn: 0.6683155
                                  total: 4.13s
                                                   remaining: 2.04s
669:
        learn: 0.6675892
                                  total: 4.14s
                                                   remaining: 2.04s
        learn: 0.6668482
670:
                                  total: 4.14s
                                                   remaining: 2.03s
671:
        learn: 0.6657997
                                  total: 4.15s
                                                   remaining: 2.02s
672:
        learn: 0.6650892
                                  total: 4.16s
                                                   remaining: 2.02s
                                  total: 4.16s
673:
        learn: 0.6641015
                                                   remaining: 2.01s
674:
        learn: 0.6632324
                                  total: 4.17s
                                                   remaining: 2.01s
```

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675:
        learn: 0.6623767
                                  total: 4.18s
                                                   remaining: 2s
676:
        learn: 0.6615446
                                  total: 4.18s
                                                   remaining: 2s
677:
        learn: 0.6609020
                                  total: 4.19s
                                                   remaining: 1.99s
                                  total: 4.2s
678:
        learn: 0.6599362
                                                   remaining: 1.98s
679:
        learn: 0.6592940
                                  total: 4.2s
                                                   remaining: 1.98s
680:
        learn: 0.6591567
                                  total: 4.2s
                                                   remaining: 1.97s
681:
        learn: 0.6586289
                                  total: 4.2s
                                                   remaining: 1.96s
682:
        learn: 0.6581792
                                  total: 4.21s
                                                   remaining: 1.95s
683:
        learn: 0.6577175
                                  total: 4.21s
                                                   remaining: 1.95s
684:
        learn: 0.6566253
                                  total: 4.22s
                                                   remaining: 1.94s
685:
        learn: 0.6556611
                                  total: 4.22s
                                                   remaining: 1.93s
686:
        learn: 0.6548832
                                  total: 4.23s
                                                   remaining: 1.93s
687:
        learn: 0.6539808
                                  total: 4.24s
                                                   remaining: 1.92s
688:
        learn: 0.6535228
                                  total: 4.24s
                                                   remaining: 1.91s
689:
        learn: 0.6527762
                                  total: 4.25s
                                                   remaining: 1.91s
690:
        learn: 0.6521966
                                  total: 4.25s
                                                   remaining: 1.9s
691:
        learn: 0.6515482
                                  total: 4.26s
                                                   remaining: 1.89s
692:
        learn: 0.6512019
                                  total: 4.26s
                                                   remaining: 1.89s
693:
        learn: 0.6503928
                                  total: 4.27s
                                                   remaining: 1.88s
694:
        learn: 0.6498591
                                  total: 4.28s
                                                   remaining: 1.88s
695:
        learn: 0.6493912
                                  total: 4.28s
                                                   remaining: 1.87s
696:
        learn: 0.6483776
                                  total: 4.29s
                                                   remaining: 1.86s
697:
        learn: 0.6480066
                                  total: 4.3s
                                                   remaining: 1.86s
698:
        learn: 0.6470642
                                  total: 4.3s
                                                   remaining: 1.85s
699:
        learn: 0.6466085
                                  total: 4.31s
                                                   remaining: 1.85s
700:
        learn: 0.6457643
                                  total: 4.32s
                                                   remaining: 1.84s
701:
        learn: 0.6453059
                                  total: 4.32s
                                                   remaining: 1.83s
702:
        learn: 0.6448502
                                  total: 4.33s
                                                   remaining: 1.83s
703:
        learn: 0.6441998
                                  total: 4.34s
                                                   remaining: 1.82s
704:
        learn: 0.6434092
                                  total: 4.34s
                                                   remaining: 1.82s
705:
        learn: 0.6428691
                                  total: 4.35s
                                                   remaining: 1.81s
706:
        learn: 0.6420750
                                  total: 4.36s
                                                   remaining: 1.8s
707:
        learn: 0.6413268
                                  total: 4.36s
                                                   remaining: 1.8s
708:
        learn: 0.6403926
                                  total: 4.37s
                                                   remaining: 1.79s
709:
        learn: 0.6398675
                                  total: 4.38s
                                                   remaining: 1.79s
710:
        learn: 0.6396588
                                  total: 4.39s
                                                   remaining: 1.78s
711:
        learn: 0.6393071
                                  total: 4.39s
                                                   remaining: 1.78s
712:
        learn: 0.6386397
                                  total: 4.39s
                                                   remaining: 1.77s
713:
        learn: 0.6376477
                                  total: 4.4s
                                                   remaining: 1.76s
714:
        learn: 0.6370573
                                  total: 4.4s
                                                   remaining: 1.75s
715:
        learn: 0.6362844
                                  total: 4.4s
                                                   remaining: 1.75s
716:
        learn: 0.6357398
                                  total: 4.41s
                                                   remaining: 1.74s
        learn: 0.6353945
717:
                                  total: 4.41s
                                                   remaining: 1.73s
718:
        learn: 0.6349084
                                  total: 4.42s
                                                   remaining: 1.73s
719:
        learn: 0.6342840
                                  total: 4.42s
                                                   remaining: 1.72s
720:
        learn: 0.6337956
                                  total: 4.43s
                                                   remaining: 1.71s
721:
        learn: 0.6331013
                                  total: 4.43s
                                                   remaining: 1.71s
722:
        learn: 0.6324686
                                  total: 4.43s
                                                   remaining: 1.7s
723:
        learn: 0.6321483
                                  total: 4.44s
                                                   remaining: 1.69s
                                  total: 4.45s
724:
        learn: 0.6318957
                                                   remaining: 1.69s
725:
        learn: 0.6314351
                                  total: 4.45s
                                                   remaining: 1.68s
726:
        learn: 0.6308932
                                  total: 4.46s
                                                   remaining: 1.67s
727:
        learn: 0.6303690
                                  total: 4.47s
                                                   remaining: 1.67s
728:
        learn: 0.6294944
                                  total: 4.47s
                                                   remaining: 1.66s
729:
        learn: 0.6289436
                                  total: 4.48s
                                                   remaining: 1.66s
730:
        learn: 0.6283824
                                  total: 4.49s
                                                   remaining: 1.65s
731:
        learn: 0.6277272
                                  total: 4.5s
                                                   remaining: 1.65s
732:
        learn: 0.6269952
                                  total: 4.5s
                                                   remaining: 1.64s
733:
        learn: 0.6264031
                                  total: 4.51s
                                                   remaining: 1.63s
734:
        learn: 0.6257741
                                  total: 4.52s
                                                   remaining: 1.63s
```

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735:
        learn: 0.6251185
                                  total: 4.52s
                                                   remaining: 1.62s
736:
        learn: 0.6247723
                                  total: 4.53s
                                                   remaining: 1.62s
737:
        learn: 0.6242381
                                  total: 4.54s
                                                   remaining: 1.61s
738:
        learn: 0.6236452
                                  total: 4.54s
                                                   remaining: 1.6s
739:
        learn: 0.6230616
                                  total: 4.55s
                                                   remaining: 1.6s
740:
        learn: 0.6227015
                                  total: 4.55s
                                                   remaining: 1.59s
741:
        learn: 0.6219695
                                  total: 4.56s
                                                   remaining: 1.58s
742:
        learn: 0.6217141
                                  total: 4.56s
                                                   remaining: 1.58s
743:
        learn: 0.6210819
                                  total: 4.57s
                                                   remaining: 1.57s
744:
        learn: 0.6206247
                                  total: 4.57s
                                                   remaining: 1.56s
745:
        learn: 0.6201060
                                  total: 4.58s
                                                   remaining: 1.56s
746:
        learn: 0.6197030
                                  total: 4.59s
                                                   remaining: 1.55s
747:
        learn: 0.6192684
                                  total: 4.59s
                                                   remaining: 1.55s
748:
        learn: 0.6189972
                                  total: 4.59s
                                                   remaining: 1.54s
749:
        learn: 0.6186171
                                  total: 4.6s
                                                   remaining: 1.53s
750:
        learn: 0.6181419
                                  total: 4.6s
                                                   remaining: 1.52s
751:
        learn: 0.6177145
                                  total: 4.61s
                                                   remaining: 1.52s
752:
        learn: 0.6173529
                                  total: 4.61s
                                                   remaining: 1.51s
753:
        learn: 0.6168738
                                  total: 4.62s
                                                   remaining: 1.51s
754:
        learn: 0.6161777
                                  total: 4.62s
                                                   remaining: 1.5s
755:
        learn: 0.6155072
                                  total: 4.63s
                                                   remaining: 1.49s
756:
        learn: 0.6151574
                                  total: 4.63s
                                                   remaining: 1.49s
                                  total: 4.64s
757:
        learn: 0.6147796
                                                   remaining: 1.48s
        learn: 0.6142137
758:
                                  total: 4.64s
                                                   remaining: 1.47s
759:
        learn: 0.6140005
                                  total: 4.65s
                                                   remaining: 1.47s
760:
        learn: 0.6132966
                                  total: 4.65s
                                                   remaining: 1.46s
761:
                                  total: 4.66s
        learn: 0.6128439
                                                   remaining: 1.45s
762:
        learn: 0.6123922
                                  total: 4.66s
                                                   remaining: 1.45s
763:
        learn: 0.6114623
                                  total: 4.67s
                                                   remaining: 1.44s
764:
        learn: 0.6107547
                                  total: 4.67s
                                                   remaining: 1.44s
765:
        learn: 0.6098779
                                  total: 4.68s
                                                   remaining: 1.43s
766:
        learn: 0.6092594
                                  total: 4.68s
                                                   remaining: 1.42s
767:
        learn: 0.6088165
                                  total: 4.69s
                                                   remaining: 1.42s
768:
        learn: 0.6085118
                                  total: 4.69s
                                                   remaining: 1.41s
769:
        learn: 0.6080657
                                  total: 4.7s
                                                   remaining: 1.4s
770:
        learn: 0.6075405
                                  total: 4.7s
                                                   remaining: 1.4s
771:
        learn: 0.6069268
                                  total: 4.71s
                                                   remaining: 1.39s
772:
        learn: 0.6066798
                                  total: 4.71s
                                                   remaining: 1.38s
773:
        learn: 0.6062908
                                  total: 4.71s
                                                   remaining: 1.38s
774:
        learn: 0.6057996
                                  total: 4.72s
                                                   remaining: 1.37s
775:
        learn: 0.6048856
                                  total: 4.72s
                                                   remaining: 1.36s
776:
        learn: 0.6044823
                                  total: 4.73s
                                                   remaining: 1.36s
        learn: 0.6039952
777:
                                  total: 4.73s
                                                   remaining: 1.35s
                                  total: 4.74s
778:
        learn: 0.6036935
                                                   remaining: 1.34s
779:
        learn: 0.6034041
                                  total: 4.74s
                                                   remaining: 1.34s
780:
        learn: 0.6029731
                                  total: 4.75s
                                                   remaining: 1.33s
781:
        learn: 0.6025331
                                  total: 4.75s
                                                   remaining: 1.32s
782:
        learn: 0.6016651
                                  total: 4.76s
                                                   remaining: 1.32s
                                  total: 4.76s
783:
        learn: 0.6011618
                                                   remaining: 1.31s
                                  total: 4.77s
784:
        learn: 0.6005783
                                                   remaining: 1.3s
785:
        learn: 0.5998009
                                  total: 4.77s
                                                   remaining: 1.3s
786:
        learn: 0.5992383
                                  total: 4.78s
                                                   remaining: 1.29s
787:
        learn: 0.5986858
                                  total: 4.78s
                                                   remaining: 1.29s
788:
        learn: 0.5982296
                                  total: 4.79s
                                                   remaining: 1.28s
789:
        learn: 0.5975699
                                  total: 4.79s
                                                   remaining: 1.27s
790:
        learn: 0.5970942
                                  total: 4.8s
                                                   remaining: 1.27s
791:
        learn: 0.5965102
                                  total: 4.81s
                                                   remaining: 1.26s
792:
        learn: 0.5957544
                                  total: 4.81s
                                                   remaining: 1.26s
793:
        learn: 0.5954793
                                  total: 4.82s
                                                   remaining: 1.25s
794:
        learn: 0.5950091
                                  total: 4.83s
                                                   remaining: 1.24s
```

```
795:
        learn: 0.5945246
                                  total: 4.83s
                                                   remaining: 1.24s
796:
        learn: 0.5939662
                                  total: 4.84s
                                                   remaining: 1.23s
797:
        learn: 0.5936053
                                  total: 4.85s
                                                   remaining: 1.23s
798:
        learn: 0.5932420
                                  total: 4.86s
                                                   remaining: 1.22s
799:
        learn: 0.5926742
                                  total: 4.86s
                                                   remaining: 1.22s
:008
        learn: 0.5920973
                                  total: 4.87s
                                                   remaining: 1.21s
801:
        learn: 0.5916108
                                  total: 4.88s
                                                   remaining: 1.2s
802:
        learn: 0.5910978
                                  total: 4.88s
                                                   remaining: 1.2s
803:
        learn: 0.5905838
                                  total: 4.89s
                                                   remaining: 1.19s
804:
        learn: 0.5900162
                                  total: 4.9s
                                                   remaining: 1.19s
805:
        learn: 0.5896467
                                  total: 4.9s
                                                   remaining: 1.18s
                                  total: 4.91s
806:
        learn: 0.5891637
                                                   remaining: 1.17s
807:
        learn: 0.5887676
                                  total: 4.91s
                                                   remaining: 1.17s
808:
        learn: 0.5884700
                                  total: 4.92s
                                                   remaining: 1.16s
809:
        learn: 0.5878104
                                  total: 4.93s
                                                   remaining: 1.16s
        learn: 0.5874980
810:
                                  total: 4.93s
                                                   remaining: 1.15s
811:
        learn: 0.5871338
                                  total: 4.94s
                                                   remaining: 1.14s
812:
        learn: 0.5865863
                                  total: 4.95s
                                                   remaining: 1.14s
813:
        learn: 0.5861853
                                  total: 4.95s
                                                   remaining: 1.13s
814:
        learn: 0.5856901
                                  total: 4.96s
                                                   remaining: 1.13s
815:
        learn: 0.5851371
                                  total: 4.96s
                                                   remaining: 1.12s
816:
        learn: 0.5846487
                                  total: 4.96s
                                                   remaining: 1.11s
                                  total: 4.97s
817:
        learn: 0.5841040
                                                   remaining: 1.1s
818:
        learn: 0.5837488
                                  total: 4.98s
                                                   remaining: 1.1s
819:
        learn: 0.5835724
                                  total: 4.98s
                                                   remaining: 1.09s
820:
        learn: 0.5831214
                                  total: 4.99s
                                                   remaining: 1.09s
        learn: 0.5828803
                                  total: 4.99s
821:
                                                   remaining: 1.08s
822:
        learn: 0.5824483
                                  total: 5s
                                                   remaining: 1.07s
823:
        learn: 0.5818726
                                  total: 5s
                                                   remaining: 1.07s
824:
        learn: 0.5816463
                                  total: 5.01s
                                                   remaining: 1.06s
825:
        learn: 0.5808031
                                  total: 5.02s
                                                   remaining: 1.06s
826:
        learn: 0.5803877
                                  total: 5.03s
                                                   remaining: 1.05s
827:
        learn: 0.5801432
                                  total: 5.03s
                                                   remaining: 1.04s
828:
        learn: 0.5796327
                                  total: 5.04s
                                                   remaining: 1.04s
829:
        learn: 0.5792530
                                  total: 5.04s
                                                   remaining: 1.03s
830:
        learn: 0.5789377
                                  total: 5.05s
                                                   remaining: 1.03s
831:
        learn: 0.5786875
                                  total: 5.06s
                                                   remaining: 1.02s
832:
        learn: 0.5782033
                                  total: 5.06s
                                                   remaining: 1.01s
833:
        learn: 0.5776310
                                  total: 5.07s
                                                   remaining: 1.01s
834:
        learn: 0.5772979
                                  total: 5.07s
                                                   remaining: 1s
835:
        learn: 0.5770470
                                  total: 5.08s
                                                   remaining: 996ms
836:
        learn: 0.5767623
                                  total: 5.08s
                                                   remaining: 989ms
        learn: 0.5765634
837:
                                  total: 5.09s
                                                   remaining: 983ms
838:
        learn: 0.5762129
                                  total: 5.09s
                                                   remaining: 977ms
839:
        learn: 0.5759138
                                  total: 5.09s
                                                   remaining: 970ms
840:
        learn: 0.5753983
                                  total: 5.1s
                                                   remaining: 964ms
841:
        learn: 0.5747310
                                  total: 5.11s
                                                   remaining: 958ms
842:
        learn: 0.5744005
                                                   remaining: 952ms
                                  total: 5.11s
843:
        learn: 0.5741749
                                  total: 5.11s
                                                   remaining: 945ms
844:
        learn: 0.5738246
                                  total: 5.12s
                                                   remaining: 939ms
845:
        learn: 0.5735455
                                                   remaining: 933ms
                                  total: 5.12s
846:
        learn: 0.5730397
                                  total: 5.13s
                                                   remaining: 926ms
847:
        learn: 0.5727186
                                  total: 5.13s
                                                   remaining: 920ms
848:
        learn: 0.5722505
                                  total: 5.14s
                                                   remaining: 915ms
849:
        learn: 0.5719945
                                  total: 5.15s
                                                   remaining: 909ms
        learn: 0.5711345
850:
                                  total: 5.16s
                                                   remaining: 903ms
851:
        learn: 0.5708017
                                  total: 5.16s
                                                   remaining: 896ms
852:
        learn: 0.5703296
                                  total: 5.16s
                                                   remaining: 890ms
                                  total: 5.17s
853:
        learn: 0.5698806
                                                   remaining: 884ms
854:
        learn: 0.5691631
                                  total: 5.17s
                                                   remaining: 877ms
```

```
855:
        learn: 0.5689715
                                  total: 5.18s
                                                   remaining: 871ms
856:
        learn: 0.5686784
                                  total: 5.18s
                                                   remaining: 864ms
857:
        learn: 0.5684688
                                  total: 5.18s
                                                   remaining: 858ms
        learn: 0.5681434
858:
                                  total: 5.19s
                                                   remaining: 852ms
859:
        learn: 0.5676230
                                  total: 5.19s
                                                   remaining: 845ms
860:
        learn: 0.5672474
                                  total: 5.2s
                                                   remaining: 839ms
861:
        learn: 0.5668778
                                  total: 5.2s
                                                   remaining: 833ms
862:
        learn: 0.5665793
                                  total: 5.21s
                                                   remaining: 827ms
863:
        learn: 0.5662734
                                  total: 5.21s
                                                   remaining: 820ms
864:
        learn: 0.5660358
                                  total: 5.22s
                                                   remaining: 814ms
865:
        learn: 0.5657632
                                  total: 5.22s
                                                   remaining: 808ms
866:
        learn: 0.5652920
                                  total: 5.23s
                                                   remaining: 802ms
867:
        learn: 0.5649261
                                  total: 5.23s
                                                   remaining: 795ms
868:
        learn: 0.5646336
                                  total: 5.24s
                                                   remaining: 789ms
869:
        learn: 0.5644384
                                  total: 5.24s
                                                   remaining: 783ms
870:
        learn: 0.5642562
                                  total: 5.24s
                                                   remaining: 777ms
                                  total: 5.25s
871:
        learn: 0.5640204
                                                   remaining: 770ms
872:
        learn: 0.5638326
                                  total: 5.25s
                                                   remaining: 764ms
873:
                                  total: 5.25s
        learn: 0.5634158
                                                   remaining: 758ms
874:
        learn: 0.5628504
                                  total: 5.26s
                                                   remaining: 751ms
875:
        learn: 0.5625322
                                  total: 5.27s
                                                   remaining: 746ms
876:
        learn: 0.5620452
                                  total: 5.27s
                                                   remaining: 739ms
                                  total: 5.28s
877:
        learn: 0.5616954
                                                   remaining: 733ms
878:
        learn: 0.5613801
                                  total: 5.28s
                                                   remaining: 727ms
879:
        learn: 0.5606577
                                  total: 5.29s
                                                   remaining: 721ms
                                  total: 5.29s
880:
        learn: 0.5602496
                                                   remaining: 715ms
                                  total: 5.3s
881:
        learn: 0.5599284
                                                   remaining: 709ms
882:
        learn: 0.5596323
                                  total: 5.3s
                                                   remaining: 702ms
883:
        learn: 0.5591948
                                  total: 5.31s
                                                   remaining: 696ms
884:
        learn: 0.5588556
                                  total: 5.31s
                                                   remaining: 690ms
885:
        learn: 0.5582226
                                  total: 5.32s
                                                   remaining: 684ms
886:
        learn: 0.5580531
                                  total: 5.32s
                                                   remaining: 678ms
887:
        learn: 0.5577891
                                  total: 5.33s
                                                   remaining: 672ms
888:
        learn: 0.5575170
                                  total: 5.33s
                                                   remaining: 666ms
        learn: 0.5570937
889:
                                  total: 5.34s
                                                   remaining: 660ms
                                  total: 5.34s
890:
        learn: 0.5569148
                                                   remaining: 654ms
891:
        learn: 0.5566721
                                  total: 5.35s
                                                   remaining: 648ms
892:
        learn: 0.5559615
                                  total: 5.36s
                                                   remaining: 642ms
893:
        learn: 0.5556882
                                  total: 5.36s
                                                   remaining: 636ms
894:
        learn: 0.5553442
                                  total: 5.37s
                                                   remaining: 630ms
895:
        learn: 0.5551736
                                  total: 5.37s
                                                   remaining: 624ms
896:
        learn: 0.5547860
                                  total: 5.38s
                                                   remaining: 617ms
        learn: 0.5543502
897:
                                  total: 5.38s
                                                   remaining: 611ms
898:
        learn: 0.5540466
                                  total: 5.38s
                                                   remaining: 605ms
899:
        learn: 0.5536632
                                  total: 5.39s
                                                   remaining: 599ms
900:
        learn: 0.5532020
                                  total: 5.39s
                                                   remaining: 592ms
901:
        learn: 0.5528241
                                  total: 5.4s
                                                   remaining: 586ms
        learn: 0.5525267
                                                   remaining: 580ms
902:
                                  total: 5.4s
903:
        learn: 0.5521905
                                  total: 5.41s
                                                   remaining: 574ms
904:
        learn: 0.5516488
                                  total: 5.41s
                                                   remaining: 568ms
905:
        learn: 0.5511839
                                  total: 5.42s
                                                   remaining: 562ms
906:
        learn: 0.5508889
                                  total: 5.42s
                                                   remaining: 556ms
907:
        learn: 0.5504713
                                  total: 5.42s
                                                   remaining: 550ms
908:
        learn: 0.5503366
                                  total: 5.43s
                                                   remaining: 544ms
909:
        learn: 0.5502544
                                  total: 5.44s
                                                   remaining: 538ms
        learn: 0.5498382
910:
                                  total: 5.44s
                                                   remaining: 532ms
911:
        learn: 0.5494497
                                  total: 5.45s
                                                   remaining: 526ms
912:
        learn: 0.5491925
                                  total: 5.45s
                                                   remaining: 520ms
                                  total: 5.46s
913:
        learn: 0.5489591
                                                   remaining: 513ms
914:
        learn: 0.5486087
                                  total: 5.46s
                                                   remaining: 507ms
```

```
915:
        learn: 0.5480377
                                  total: 5.47s
                                                   remaining: 501ms
916:
        learn: 0.5474998
                                  total: 5.47s
                                                   remaining: 496ms
917:
        learn: 0.5471845
                                  total: 5.48s
                                                   remaining: 490ms
        learn: 0.5469744
918:
                                  total: 5.49s
                                                   remaining: 484ms
919:
        learn: 0.5464285
                                  total: 5.49s
                                                   remaining: 477ms
920:
        learn: 0.5460885
                                  total: 5.49s
                                                   remaining: 471ms
921:
        learn: 0.5458954
                                  total: 5.5s
                                                   remaining: 465ms
922:
        learn: 0.5455127
                                  total: 5.5s
                                                   remaining: 459ms
923:
        learn: 0.5451737
                                  total: 5.5s
                                                   remaining: 453ms
924:
        learn: 0.5448347
                                  total: 5.51s
                                                   remaining: 447ms
925:
        learn: 0.5448035
                                  total: 5.51s
                                                   remaining: 441ms
926:
        learn: 0.5444974
                                  total: 5.52s
                                                   remaining: 435ms
927:
        learn: 0.5441780
                                  total: 5.52s
                                                   remaining: 429ms
928:
        learn: 0.5439522
                                  total: 5.53s
                                                   remaining: 423ms
929:
        learn: 0.5437124
                                  total: 5.53s
                                                   remaining: 416ms
        learn: 0.5433970
930:
                                  total: 5.54s
                                                   remaining: 410ms
                                  total: 5.54s
931:
        learn: 0.5428250
                                                   remaining: 404ms
932:
        learn: 0.5421800
                                  total: 5.55s
                                                   remaining: 398ms
933:
        learn: 0.5417961
                                  total: 5.55s
                                                   remaining: 392ms
934:
        learn: 0.5412302
                                  total: 5.56s
                                                   remaining: 386ms
935:
        learn: 0.5409341
                                  total: 5.57s
                                                   remaining: 381ms
936:
        learn: 0.5406184
                                  total: 5.57s
                                                   remaining: 375ms
                                  total: 5.58s
937:
        learn: 0.5401523
                                                   remaining: 369ms
938:
        learn: 0.5398684
                                  total: 5.58s
                                                   remaining: 363ms
939:
        learn: 0.5393110
                                  total: 5.58s
                                                   remaining: 356ms
940:
                                  total: 5.59s
        learn: 0.5390916
                                                   remaining: 350ms
                                  total: 5.59s
941:
        learn: 0.5386422
                                                   remaining: 345ms
942:
        learn: 0.5382358
                                  total: 5.6s
                                                   remaining: 338ms
943:
        learn: 0.5380315
                                  total: 5.61s
                                                   remaining: 333ms
944:
        learn: 0.5376862
                                  total: 5.61s
                                                   remaining: 327ms
945:
        learn: 0.5371910
                                  total: 5.62s
                                                   remaining: 321ms
946:
        learn: 0.5368088
                                  total: 5.63s
                                                   remaining: 315ms
947:
        learn: 0.5364083
                                  total: 5.63s
                                                   remaining: 309ms
948:
        learn: 0.5361124
                                  total: 5.64s
                                                   remaining: 303ms
        learn: 0.5358301
949:
                                  total: 5.64s
                                                   remaining: 297ms
950:
        learn: 0.5355308
                                  total: 5.65s
                                                   remaining: 291ms
951:
        learn: 0.5352367
                                  total: 5.66s
                                                   remaining: 285ms
952:
        learn: 0.5350453
                                  total: 5.66s
                                                   remaining: 279ms
953:
        learn: 0.5348355
                                  total: 5.67s
                                                   remaining: 273ms
954:
        learn: 0.5346880
                                  total: 5.67s
                                                   remaining: 267ms
955:
        learn: 0.5345446
                                  total: 5.68s
                                                   remaining: 261ms
956:
        learn: 0.5338185
                                  total: 5.69s
                                                   remaining: 256ms
        learn: 0.5335062
957:
                                  total: 5.69s
                                                   remaining: 250ms
958:
        learn: 0.5334406
                                  total: 5.7s
                                                   remaining: 243ms
959:
        learn: 0.5329126
                                  total: 5.7s
                                                   remaining: 238ms
960:
        learn: 0.5326645
                                  total: 5.71s
                                                   remaining: 232ms
961:
        learn: 0.5322345
                                  total: 5.71s
                                                   remaining: 226ms
        learn: 0.5317386
962:
                                  total: 5.72s
                                                   remaining: 220ms
                                  total: 5.72s
963:
        learn: 0.5315106
                                                   remaining: 214ms
964:
        learn: 0.5311935
                                  total: 5.73s
                                                   remaining: 208ms
965:
        learn: 0.5309326
                                  total: 5.74s
                                                   remaining: 202ms
966:
        learn: 0.5306650
                                  total: 5.74s
                                                   remaining: 196ms
967:
        learn: 0.5305179
                                  total: 5.75s
                                                   remaining: 190ms
                                  total: 5.75s
968:
        learn: 0.5303492
                                                   remaining: 184ms
969:
        learn: 0.5300280
                                  total: 5.76s
                                                   remaining: 178ms
970:
        learn: 0.5295738
                                  total: 5.76s
                                                   remaining: 172ms
971:
        learn: 0.5293762
                                  total: 5.77s
                                                   remaining: 166ms
972:
                                  total: 5.78s
        learn: 0.5292380
                                                   remaining: 160ms
                                  total: 5.78s
973:
        learn: 0.5290436
                                                   remaining: 154ms
974:
        learn: 0.5289432
                                  total: 5.78s
                                                   remaining: 148ms
```

```
975:
        learn: 0.5286052
                                  total: 5.79s
                                                   remaining: 142ms
976:
        learn: 0.5285820
                                  total: 5.79s
                                                   remaining: 136ms
977:
        learn: 0.5280920
                                  total: 5.79s
                                                   remaining: 130ms
                                  total: 5.8s
978:
        learn: 0.5279129
                                                   remaining: 124ms
979:
        learn: 0.5276770
                                  total: 5.8s
                                                   remaining: 118ms
980:
        learn: 0.5274115
                                  total: 5.81s
                                                   remaining: 112ms
981:
        learn: 0.5270249
                                  total: 5.81s
                                                   remaining: 107ms
982:
        learn: 0.5265989
                                  total: 5.82s
                                                   remaining: 101ms
983:
        learn: 0.5262370
                                  total: 5.83s
                                                   remaining: 94.8ms
984:
        learn: 0.5261185
                                  total: 5.83s
                                                   remaining: 88.9ms
985:
        learn: 0.5256390
                                  total: 5.84s
                                                   remaining: 83ms
986:
        learn: 0.5253714
                                  total: 5.85s
                                                   remaining: 77ms
987:
        learn: 0.5251070
                                  total: 5.86s
                                                   remaining: 71.1ms
988:
        learn: 0.5249934
                                  total: 5.86s
                                                   remaining: 65.2ms
        learn: 0.5246233
989:
                                  total: 5.87s
                                                   remaining: 59.3ms
990:
        learn: 0.5242038
                                  total: 5.88s
                                                   remaining: 53.4ms
                                  total: 5.88s
991:
        learn: 0.5238929
                                                   remaining: 47.5ms
992:
        learn: 0.5235573
                                  total: 5.89s
                                                   remaining: 41.5ms
993:
        learn: 0.5232268
                                  total: 5.9s
                                                   remaining: 35.6ms
994:
        learn: 0.5230291
                                  total: 5.91s
                                                   remaining: 29.7ms
995:
        learn: 0.5227093
                                  total: 5.92s
                                                   remaining: 23.8ms
996:
        learn: 0.5219089
                                  total: 5.92s
                                                   remaining: 17.8ms
                                  total: 5.93s
997:
        learn: 0.5213914
                                                   remaining: 11.9ms
998:
        learn: 0.5210054
                                  total: 5.94s
                                                   remaining: 5.94ms
999:
        learn: 0.5207695
                                  total: 5.94s
                                                   remaining: Ous
Learning rate set to 0.06063
        learn: 59.0812285
                                                   remaining: 7.7s
0:
                                  total: 7.71ms
1:
        learn: 55.8850383
                                  total: 12.2ms
                                                   remaining: 6.07s
2:
        learn: 52.8711126
                                  total: 16.5ms
                                                   remaining: 5.5s
3:
        learn: 49.9892908
                                  total: 22.7ms
                                                   remaining: 5.66s
4:
        learn: 47.3124783
                                  total: 30.1ms
                                                   remaining: 6s
        learn: 44.8594734
5:
                                  total: 35ms
                                                   remaining: 5.8s
        learn: 42.5958804
6:
                                  total: 41.1ms
                                                   remaining: 5.83s
7:
        learn: 40.4216576
                                  total: 48.7ms
                                                   remaining: 6.04s
8:
        learn: 38.3136662
                                  total: 54.6ms
                                                   remaining: 6.01s
9:
        learn: 36.2848726
                                  total: 62ms
                                                   remaining: 6.13s
10:
        learn: 34.4338991
                                  total: 69.5ms
                                                   remaining: 6.25s
11:
        learn: 32.6574154
                                  total: 77ms
                                                   remaining: 6.33s
12:
        learn: 30.9767409
                                  total: 84.6ms
                                                   remaining: 6.42s
13:
        learn: 29.4246742
                                  total: 91.8ms
                                                   remaining: 6.47s
14:
        learn: 27.9053498
                                  total: 97.3ms
                                                   remaining: 6.39s
15:
        learn: 26.4948526
                                  total: 105ms
                                                   remaining: 6.45s
        learn: 25.1409894
16:
                                  total: 112ms
                                                   remaining: 6.5s
17:
        learn: 23.9538536
                                  total: 120ms
                                                   remaining: 6.53s
18:
        learn: 22.7619784
                                  total: 127ms
                                                   remaining: 6.55s
19:
        learn: 21.6461475
                                  total: 134ms
                                                   remaining: 6.58s
20:
        learn: 20.5814927
                                  total: 142ms
                                                   remaining: 6.62s
21:
        learn: 19.6185752
                                  total: 150ms
                                                   remaining: 6.65s
22:
        learn: 18.7282159
                                  total: 157ms
                                                   remaining: 6.66s
23:
        learn: 17.8281696
                                  total: 164ms
                                                   remaining: 6.69s
24:
        learn: 17.0044415
                                  total: 172ms
                                                   remaining: 6.7s
25:
        learn: 16.2273038
                                  total: 179ms
                                                   remaining: 6.71s
26:
        learn: 15.5053361
                                  total: 187ms
                                                   remaining: 6.72s
27:
        learn: 14.8052256
                                  total: 193ms
                                                   remaining: 6.71s
28:
        learn: 14.1644985
                                  total: 197ms
                                                   remaining: 6.58s
29:
        learn: 13.5504665
                                  total: 200ms
                                                   remaining: 6.46s
30:
        learn: 12.9848279
                                  total: 203ms
                                                   remaining: 6.36s
31:
        learn: 12.4288060
                                  total: 207ms
                                                   remaining: 6.25s
                                  total: 211ms
32:
        learn: 11.8952742
                                                   remaining: 6.19s
33:
        learn: 11.4110109
                                  total: 218ms
                                                   remaining: 6.21s
```

```
34:
        learn: 10.9475058
                                  total: 225ms
                                                   remaining: 6.19s
35:
        learn: 10.5236193
                                  total: 232ms
                                                   remaining: 6.21s
                                  total: 239ms
36:
        learn: 10.1058592
                                                   remaining: 6.21s
                                  total: 246ms
37:
        learn: 9.6979631
                                                   remaining: 6.23s
38:
        learn: 9.3081722
                                  total: 253ms
                                                   remaining: 6.24s
39:
        learn: 8.9659857
                                  total: 257ms
                                                   remaining: 6.16s
40:
        learn: 8.6641730
                                  total: 261ms
                                                   remaining: 6.09s
41:
        learn: 8.3662765
                                  total: 267ms
                                                   remaining: 6.09s
42:
        learn: 8.1005891
                                  total: 272ms
                                                   remaining: 6.05s
43:
        learn: 7.8051718
                                  total: 276ms
                                                   remaining: 5.99s
44:
        learn: 7.5306512
                                  total: 282ms
                                                   remaining: 5.99s
45:
        learn: 7.2837109
                                  total: 287ms
                                                   remaining: 5.96s
46:
        learn: 7.0455227
                                  total: 290ms
                                                   remaining: 5.89s
47:
        learn: 6.8199083
                                  total: 297ms
                                                   remaining: 5.89s
        learn: 6.5984794
48:
                                  total: 302ms
                                                   remaining: 5.86s
49:
        learn: 6.3958223
                                  total: 305ms
                                                   remaining: 5.8s
50:
        learn: 6.2169144
                                  total: 312ms
                                                   remaining: 5.81s
51:
        learn: 6.0363832
                                  total: 317ms
                                                   remaining: 5.79s
52:
        learn: 5.8724514
                                  total: 321ms
                                                   remaining: 5.73s
        learn: 5.7201157
53:
                                  total: 328ms
                                                   remaining: 5.74s
54:
        learn: 5.5621894
                                  total: 332ms
                                                   remaining: 5.71s
55:
        learn: 5.4332412
                                  total: 339ms
                                                   remaining: 5.72s
56:
        learn: 5.2961141
                                  total: 344ms
                                                   remaining: 5.7s
57:
        learn: 5.1781172
                                  total: 354ms
                                                   remaining: 5.75s
58:
        learn: 5.0575970
                                  total: 360ms
                                                   remaining: 5.74s
59:
        learn: 4.9403764
                                  total: 364ms
                                                   remaining: 5.71s
        learn: 4.8363760
                                  total: 374ms
60:
                                                   remaining: 5.75s
        learn: 4.7378957
                                  total: 378ms
61:
                                                   remaining: 5.71s
62:
                                  total: 384ms
        learn: 4.6506038
                                                   remaining: 5.72s
63:
        learn: 4.5588171
                                  total: 389ms
                                                   remaining: 5.69s
64:
        learn: 4.4645629
                                  total: 396ms
                                                   remaining: 5.7s
65:
        learn: 4.3862557
                                  total: 402ms
                                                   remaining: 5.68s
        learn: 4.3034293
66:
                                  total: 408ms
                                                   remaining: 5.68s
67:
        learn: 4.2230673
                                  total: 415ms
                                                   remaining: 5.68s
68:
        learn: 4.1543810
                                  total: 422ms
                                                   remaining: 5.69s
69:
        learn: 4.0868816
                                  total: 425ms
                                                   remaining: 5.65s
70:
        learn: 4.0175776
                                  total: 432ms
                                                   remaining: 5.65s
71:
        learn: 3.9520445
                                  total: 436ms
                                                   remaining: 5.62s
        learn: 3.8796904
72:
                                  total: 440ms
                                                   remaining: 5.59s
73:
        learn: 3.8304255
                                  total: 446ms
                                                   remaining: 5.58s
74:
        learn: 3.7789737
                                  total: 449ms
                                                   remaining: 5.54s
75:
        learn: 3.7287071
                                  total: 453ms
                                                   remaining: 5.51s
76:
        learn: 3.6681853
                                  total: 458ms
                                                   remaining: 5.49s
77:
        learn: 3.6123854
                                  total: 463ms
                                                   remaining: 5.48s
78:
        learn: 3.5717715
                                  total: 467ms
                                                   remaining: 5.45s
79:
        learn: 3.5231055
                                  total: 471ms
                                                   remaining: 5.41s
:08
        learn: 3.4861675
                                  total: 476ms
                                                   remaining: 5.4s
81:
        learn: 3.4477197
                                  total: 481ms
                                                   remaining: 5.38s
82:
        learn: 3.4122633
                                  total: 487ms
                                                   remaining: 5.38s
83:
        learn: 3.3759825
                                  total: 492ms
                                                   remaining: 5.36s
84:
        learn: 3.3340746
                                  total: 496ms
                                                   remaining: 5.34s
85:
        learn: 3.2901473
                                  total: 502ms
                                                   remaining: 5.33s
86:
        learn: 3.2557253
                                  total: 507ms
                                                   remaining: 5.33s
87:
        learn: 3.2201181
                                  total: 514ms
                                                   remaining: 5.32s
88:
        learn: 3.1901550
                                  total: 518ms
                                                   remaining: 5.3s
89:
        learn: 3.1630528
                                  total: 523ms
                                                   remaining: 5.29s
90:
        learn: 3.1371149
                                  total: 528ms
                                                   remaining: 5.27s
91:
        learn: 3.1168860
                                  total: 535ms
                                                   remaining: 5.28s
92:
        learn: 3.0916010
                                  total: 540ms
                                                   remaining: 5.27s
93:
        learn: 3.0677399
                                  total: 546ms
                                                   remaining: 5.27s
```

```
94:
        learn: 3.0459523
                                  total: 554ms
                                                   remaining: 5.27s
95:
        learn: 3.0270220
                                  total: 559ms
                                                   remaining: 5.27s
96:
        learn: 3.0004307
                                  total: 565ms
                                                   remaining: 5.26s
97:
        learn: 2.9759962
                                  total: 570ms
                                                   remaining: 5.25s
98:
        learn: 2.9592078
                                  total: 575ms
                                                   remaining: 5.23s
99:
        learn: 2.9375383
                                  total: 579ms
                                                   remaining: 5.21s
100:
        learn: 2.9153149
                                  total: 584ms
                                                   remaining: 5.2s
101:
        learn: 2.8932453
                                  total: 588ms
                                                   remaining: 5.17s
102:
        learn: 2.8714799
                                  total: 594ms
                                                   remaining: 5.17s
103:
        learn: 2.8577318
                                  total: 601ms
                                                   remaining: 5.18s
104:
        learn: 2.8414015
                                  total: 605ms
                                                   remaining: 5.16s
105:
        learn: 2.8236273
                                  total: 609ms
                                                   remaining: 5.14s
106:
        learn: 2.8091562
                                  total: 616ms
                                                   remaining: 5.14s
107:
        learn: 2.7946160
                                  total: 620ms
                                                   remaining: 5.12s
108:
        learn: 2.7697531
                                  total: 624ms
                                                   remaining: 5.1s
        learn: 2.7455907
109:
                                  total: 630ms
                                                   remaining: 5.1s
110:
        learn: 2.7336880
                                  total: 635ms
                                                   remaining: 5.08s
111:
        learn: 2.7188959
                                  total: 638ms
                                                   remaining: 5.06s
112:
        learn: 2.7014022
                                  total: 645ms
                                                   remaining: 5.06s
        learn: 2.6791529
113:
                                  total: 650ms
                                                   remaining: 5.05s
114:
        learn: 2.6613852
                                  total: 654ms
                                                   remaining: 5.03s
115:
        learn: 2.6478750
                                  total: 659ms
                                                   remaining: 5.02s
116:
        learn: 2.6253452
                                  total: 664ms
                                                   remaining: 5.01s
117:
        learn: 2.6080654
                                  total: 667ms
                                                   remaining: 4.99s
118:
        learn: 2.5971198
                                  total: 674ms
                                                   remaining: 4.99s
119:
        learn: 2.5745730
                                  total: 678ms
                                                   remaining: 4.97s
        learn: 2.5534947
120:
                                  total: 683ms
                                                   remaining: 4.96s
        learn: 2.5384888
121:
                                  total: 689ms
                                                   remaining: 4.96s
122:
        learn: 2.5179747
                                  total: 694ms
                                                   remaining: 4.95s
123:
        learn: 2.5024704
                                  total: 700ms
                                                   remaining: 4.94s
124:
        learn: 2.4836322
                                  total: 705ms
                                                   remaining: 4.93s
125:
        learn: 2.4579995
                                  total: 711ms
                                                   remaining: 4.93s
126:
        learn: 2.4475445
                                  total: 718ms
                                                   remaining: 4.93s
127:
        learn: 2.4362061
                                  total: 724ms
                                                   remaining: 4.93s
128:
        learn: 2.4276139
                                  total: 731ms
                                                   remaining: 4.93s
129:
        learn: 2.4170810
                                  total: 736ms
                                                   remaining: 4.92s
130:
        learn: 2.4072314
                                  total: 742ms
                                                   remaining: 4.92s
131:
        learn: 2.4004222
                                  total: 747ms
                                                   remaining: 4.91s
                                  total: 752ms
132:
        learn: 2.3811437
                                                   remaining: 4.9s
133:
                                  total: 759ms
        learn: 2.3684484
                                                   remaining: 4.9s
134:
        learn: 2.3547217
                                  total: 763ms
                                                   remaining: 4.89s
135:
        learn: 2.3393289
                                  total: 768ms
                                                   remaining: 4.88s
        learn: 2.3267432
                                  total: 776ms
136:
                                                   remaining: 4.89s
137:
        learn: 2.3090154
                                  total: 781ms
                                                   remaining: 4.88s
                                  total: 784ms
138:
        learn: 2.2882306
                                                   remaining: 4.86s
139:
        learn: 2.2726784
                                  total: 790ms
                                                   remaining: 4.85s
140:
        learn: 2.2603235
                                  total: 794ms
                                                   remaining: 4.84s
141:
        learn: 2.2463810
                                  total: 799ms
                                                   remaining: 4.83s
142:
        learn: 2.2302844
                                  total: 806ms
                                                   remaining: 4.83s
143:
                                  total: 810ms
        learn: 2.2168205
                                                   remaining: 4.81s
144:
        learn: 2.2063120
                                  total: 817ms
                                                   remaining: 4.81s
145:
        learn: 2.1978829
                                  total: 823ms
                                                   remaining: 4.81s
146:
        learn: 2.1857767
                                  total: 831ms
                                                   remaining: 4.82s
147:
        learn: 2.1713352
                                  total: 837ms
                                                   remaining: 4.82s
148:
        learn: 2.1637387
                                  total: 842ms
                                                   remaining: 4.81s
149:
        learn: 2.1551960
                                  total: 849ms
                                                   remaining: 4.81s
150:
        learn: 2.1479070
                                  total: 853ms
                                                   remaining: 4.8s
151:
        learn: 2.1313057
                                  total: 858ms
                                                   remaining: 4.79s
152:
        learn: 2.1170739
                                  total: 865ms
                                                   remaining: 4.79s
153:
        learn: 2.1083447
                                  total: 871ms
                                                   remaining: 4.79s
```

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154:
        learn: 2.1009661
                                  total: 879ms
                                                   remaining: 4.79s
155:
        learn: 2.0898800
                                  total: 883ms
                                                   remaining: 4.78s
        learn: 2.0794771
156:
                                  total: 888ms
                                                   remaining: 4.77s
157:
        learn: 2.0686793
                                  total: 895ms
                                                   remaining: 4.77s
158:
        learn: 2.0584847
                                  total: 901ms
                                                   remaining: 4.76s
159:
        learn: 2.0485905
                                  total: 908ms
                                                   remaining: 4.76s
160:
        learn: 2.0336946
                                  total: 914ms
                                                   remaining: 4.76s
161:
        learn: 2.0269741
                                  total: 921ms
                                                   remaining: 4.76s
162:
        learn: 2.0183623
                                  total: 986ms
                                                   remaining: 5.06s
163:
        learn: 2.0076664
                                  total: 994ms
                                                   remaining: 5.06s
164:
        learn: 2.0024612
                                  total: 998ms
                                                   remaining: 5.05s
165:
        learn: 1.9868339
                                  total: 1s
                                                   remaining: 5.03s
166:
        learn: 1.9792571
                                  total: 1s
                                                   remaining: 5.01s
167:
        learn: 1.9719859
                                  total: 1.01s
                                                   remaining: 5s
        learn: 1.9626659
168:
                                  total: 1.02s
                                                   remaining: 5s
169:
        learn: 1.9569459
                                  total: 1.02s
                                                   remaining: 5s
170:
        learn: 1.9520412
                                  total: 1.03s
                                                   remaining: 4.99s
171:
        learn: 1.9446100
                                  total: 1.04s
                                                   remaining: 4.99s
172:
        learn: 1.9347571
                                  total: 1.04s
                                                   remaining: 4.98s
173:
        learn: 1.9284240
                                  total: 1.05s
                                                   remaining: 4.97s
174:
        learn: 1.9169651
                                  total: 1.05s
                                                   remaining: 4.97s
175:
        learn: 1.9078702
                                  total: 1.06s
                                                   remaining: 4.96s
176:
        learn: 1.9031710
                                  total: 1.07s
                                                   remaining: 4.96s
177:
        learn: 1.8921593
                                  total: 1.07s
                                                   remaining: 4.95s
178:
        learn: 1.8854216
                                  total: 1.08s
                                                   remaining: 4.95s
179:
        learn: 1.8788054
                                  total: 1.09s
                                                   remaining: 4.95s
180:
        learn: 1.8704126
                                  total: 1.09s
                                                   remaining: 4.95s
181:
        learn: 1.8606888
                                  total: 1.1s
                                                   remaining: 4.95s
182:
        learn: 1.8562604
                                  total: 1.11s
                                                   remaining: 4.94s
183:
        learn: 1.8486295
                                  total: 1.11s
                                                   remaining: 4.94s
184:
        learn: 1.8402550
                                  total: 1.12s
                                                   remaining: 4.93s
185:
        learn: 1.8355346
                                  total: 1.13s
                                                   remaining: 4.93s
186:
        learn: 1.8225921
                                  total: 1.13s
                                                   remaining: 4.93s
187:
        learn: 1.8161038
                                  total: 1.14s
                                                   remaining: 4.93s
188:
        learn: 1.8046423
                                  total: 1.15s
                                                   remaining: 4.92s
189:
        learn: 1.7965857
                                  total: 1.16s
                                                   remaining: 4.92s
190:
        learn: 1.7879766
                                  total: 1.16s
                                                   remaining: 4.92s
191:
        learn: 1.7812829
                                  total: 1.17s
                                                   remaining: 4.92s
192:
        learn: 1.7700663
                                  total: 1.18s
                                                   remaining: 4.91s
193:
        learn: 1.7642986
                                  total: 1.18s
                                                   remaining: 4.92s
194:
        learn: 1.7553742
                                  total: 1.19s
                                                   remaining: 4.91s
195:
        learn: 1.7474423
                                  total: 1.2s
                                                   remaining: 4.91s
196:
        learn: 1.7429870
                                  total: 1.2s
                                                   remaining: 4.89s
197:
        learn: 1.7345346
                                  total: 1.2s
                                                   remaining: 4.88s
198:
        learn: 1.7285793
                                  total: 1.21s
                                                   remaining: 4.88s
199:
        learn: 1.7226841
                                  total: 1.22s
                                                   remaining: 4.87s
200:
        learn: 1.7154840
                                  total: 1.22s
                                                   remaining: 4.85s
201:
        learn: 1.7086427
                                  total: 1.23s
                                                   remaining: 4.85s
202:
        learn: 1.7024885
                                  total: 1.23s
                                                   remaining: 4.84s
                                  total: 1.24s
203:
        learn: 1.6950774
                                                   remaining: 4.83s
204:
        learn: 1.6894051
                                  total: 1.24s
                                                   remaining: 4.82s
205:
        learn: 1.6815447
                                  total: 1.25s
                                                   remaining: 4.82s
206:
        learn: 1.6754732
                                  total: 1.26s
                                                   remaining: 4.81s
207:
        learn: 1.6666858
                                  total: 1.26s
                                                   remaining: 4.8s
208:
        learn: 1.6601952
                                  total: 1.27s
                                                   remaining: 4.79s
209:
        learn: 1.6539736
                                  total: 1.27s
                                                   remaining: 4.78s
        learn: 1.6489021
210:
                                  total: 1.27s
                                                   remaining: 4.77s
211:
        learn: 1.6421918
                                  total: 1.28s
                                                   remaining: 4.76s
212:
        learn: 1.6366804
                                  total: 1.29s
                                                   remaining: 4.75s
213:
        learn: 1.6307501
                                  total: 1.29s
                                                   remaining: 4.74s
```

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214:
        learn: 1.6239208
                                  total: 1.3s
                                                   remaining: 4.74s
215:
        learn: 1.6179913
                                  total: 1.3s
                                                   remaining: 4.73s
216:
        learn: 1.6113571
                                  total: 1.31s
                                                   remaining: 4.73s
        learn: 1.6053058
217:
                                  total: 1.31s
                                                   remaining: 4.72s
218:
        learn: 1.5993659
                                  total: 1.32s
                                                   remaining: 4.71s
219:
        learn: 1.5958057
                                  total: 1.33s
                                                   remaining: 4.71s
220:
        learn: 1.5917243
                                  total: 1.33s
                                                   remaining: 4.7s
221:
        learn: 1.5830842
                                  total: 1.34s
                                                   remaining: 4.69s
222:
        learn: 1.5774225
                                  total: 1.35s
                                                   remaining: 4.71s
223:
        learn: 1.5719180
                                  total: 1.36s
                                                   remaining: 4.72s
224:
        learn: 1.5681130
                                  total: 1.37s
                                                   remaining: 4.71s
225:
        learn: 1.5637189
                                  total: 1.37s
                                                   remaining: 4.71s
226:
        learn: 1.5584812
                                  total: 1.38s
                                                   remaining: 4.7s
227:
        learn: 1.5542104
                                  total: 1.38s
                                                   remaining: 4.69s
228:
        learn: 1.5470094
                                  total: 1.39s
                                                   remaining: 4.68s
                                  total: 1.39s
229:
        learn: 1.5412127
                                                   remaining: 4.67s
230:
        learn: 1.5330250
                                  total: 1.4s
                                                   remaining: 4.66s
231:
        learn: 1.5246770
                                  total: 1.41s
                                                   remaining: 4.65s
232:
        learn: 1.5160816
                                  total: 1.41s
                                                   remaining: 4.64s
233:
        learn: 1.5107277
                                  total: 1.41s
                                                   remaining: 4.63s
234:
        learn: 1.5038526
                                  total: 1.42s
                                                   remaining: 4.62s
235:
        learn: 1.5001836
                                  total: 1.42s
                                                   remaining: 4.61s
236:
        learn: 1.4953844
                                  total: 1.43s
                                                   remaining: 4.6s
237:
        learn: 1.4908258
                                  total: 1.43s
                                                   remaining: 4.59s
238:
        learn: 1.4868751
                                  total: 1.44s
                                                   remaining: 4.58s
                                  total: 1.44s
239:
        learn: 1.4815857
                                                   remaining: 4.57s
240:
        learn: 1.4769378
                                  total: 1.45s
                                                   remaining: 4.57s
241:
        learn: 1.4739509
                                  total: 1.46s
                                                   remaining: 4.57s
242:
        learn: 1.4674228
                                  total: 1.46s
                                                   remaining: 4.56s
243:
        learn: 1.4599447
                                  total: 1.47s
                                                   remaining: 4.56s
244:
        learn: 1.4526814
                                  total: 1.48s
                                                   remaining: 4.55s
245:
        learn: 1.4473943
                                  total: 1.48s
                                                   remaining: 4.55s
246:
        learn: 1.4442390
                                  total: 1.49s
                                                   remaining: 4.55s
247:
        learn: 1.4381343
                                  total: 1.5s
                                                   remaining: 4.53s
        learn: 1.4341691
                                  total: 1.5s
248:
                                                   remaining: 4.53s
        learn: 1.4315612
249:
                                  total: 1.51s
                                                   remaining: 4.52s
250:
        learn: 1.4269373
                                  total: 1.51s
                                                   remaining: 4.51s
251:
        learn: 1.4240241
                                  total: 1.52s
                                                   remaining: 4.5s
252:
        learn: 1.4221121
                                  total: 1.52s
                                                   remaining: 4.49s
253:
        learn: 1.4177943
                                  total: 1.53s
                                                   remaining: 4.49s
254:
        learn: 1.4146473
                                  total: 1.53s
                                                   remaining: 4.48s
255:
        learn: 1.4109214
                                  total: 1.54s
                                                   remaining: 4.47s
256:
        learn: 1.4046618
                                  total: 1.54s
                                                   remaining: 4.47s
257:
        learn: 1.3996945
                                  total: 1.55s
                                                   remaining: 4.46s
258:
        learn: 1.3948243
                                  total: 1.56s
                                                   remaining: 4.46s
259:
        learn: 1.3890754
                                  total: 1.56s
                                                   remaining: 4.45s
260:
        learn: 1.3833131
                                  total: 1.57s
                                                   remaining: 4.45s
        learn: 1.3793737
                                  total: 1.58s
261:
                                                   remaining: 4.44s
262:
        learn: 1.3744146
                                  total: 1.58s
                                                   remaining: 4.44s
                                  total: 1.59s
263:
        learn: 1.3699903
                                                   remaining: 4.44s
264:
        learn: 1.3650861
                                  total: 1.6s
                                                   remaining: 4.44s
265:
        learn: 1.3598368
                                  total: 1.61s
                                                   remaining: 4.43s
266:
        learn: 1.3550939
                                  total: 1.61s
                                                   remaining: 4.43s
267:
        learn: 1.3524013
                                  total: 1.62s
                                                   remaining: 4.43s
268:
        learn: 1.3482247
                                  total: 1.63s
                                                   remaining: 4.42s
269:
        learn: 1.3417291
                                  total: 1.64s
                                                   remaining: 4.42s
        learn: 1.3382441
270:
                                  total: 1.64s
                                                   remaining: 4.42s
271:
        learn: 1.3353829
                                  total: 1.65s
                                                   remaining: 4.42s
272:
        learn: 1.3317588
                                  total: 1.66s
                                                   remaining: 4.42s
273:
        learn: 1.3278873
                                  total: 1.67s
                                                   remaining: 4.42s
```

```
274:
        learn: 1.3238212
                                  total: 1.67s
                                                   remaining: 4.41s
275:
        learn: 1.3207516
                                  total: 1.68s
                                                   remaining: 4.41s
276:
        learn: 1.3174951
                                  total: 1.69s
                                                   remaining: 4.4s
        learn: 1.3134049
277:
                                  total: 1.69s
                                                   remaining: 4.4s
278:
        learn: 1.3098206
                                  total: 1.7s
                                                   remaining: 4.4s
279:
        learn: 1.3056739
                                  total: 1.71s
                                                   remaining: 4.39s
280:
        learn: 1.2998636
                                  total: 1.71s
                                                   remaining: 4.38s
281:
        learn: 1.2957728
                                  total: 1.72s
                                                   remaining: 4.38s
282:
        learn: 1.2914106
                                  total: 1.73s
                                                   remaining: 4.38s
283:
        learn: 1.2895008
                                  total: 1.74s
                                                   remaining: 4.38s
284:
        learn: 1.2850578
                                  total: 1.74s
                                                   remaining: 4.37s
285:
        learn: 1.2801479
                                  total: 1.75s
                                                   remaining: 4.37s
286:
        learn: 1.2773932
                                  total: 1.76s
                                                   remaining: 4.37s
287:
        learn: 1.2745025
                                  total: 1.76s
                                                   remaining: 4.36s
288:
        learn: 1.2710362
                                  total: 1.77s
                                                   remaining: 4.36s
                                  total: 1.77s
        learn: 1.2660788
289:
                                                   remaining: 4.35s
290:
        learn: 1.2630687
                                  total: 1.78s
                                                   remaining: 4.34s
291:
        learn: 1.2607318
                                  total: 1.78s
                                                   remaining: 4.33s
292:
        learn: 1.2585317
                                  total: 1.79s
                                                   remaining: 4.32s
293:
        learn: 1.2546624
                                  total: 1.8s
                                                   remaining: 4.32s
294:
        learn: 1.2533682
                                  total: 1.8s
                                                   remaining: 4.31s
295:
        learn: 1.2511101
                                  total: 1.81s
                                                   remaining: 4.3s
296:
        learn: 1.2470701
                                  total: 1.81s
                                                   remaining: 4.29s
297:
        learn: 1.2433379
                                  total: 1.82s
                                                   remaining: 4.28s
298:
        learn: 1.2401893
                                  total: 1.82s
                                                   remaining: 4.27s
299:
        learn: 1.2362797
                                  total: 1.83s
                                                   remaining: 4.27s
300:
        learn: 1.2327090
                                  total: 1.83s
                                                   remaining: 4.25s
301:
        learn: 1.2287264
                                  total: 1.84s
                                                   remaining: 4.25s
        learn: 1.2239168
302:
                                  total: 1.84s
                                                   remaining: 4.24s
303:
        learn: 1.2220151
                                  total: 1.86s
                                                   remaining: 4.26s
304:
        learn: 1.2180732
                                  total: 1.86s
                                                   remaining: 4.25s
305:
        learn: 1.2133352
                                  total: 1.87s
                                                   remaining: 4.24s
306:
        learn: 1.2103980
                                  total: 1.88s
                                                   remaining: 4.24s
307:
        learn: 1.2067404
                                  total: 1.88s
                                                   remaining: 4.23s
        learn: 1.2031112
                                  total: 1.89s
308:
                                                   remaining: 4.22s
309:
        learn: 1.1993918
                                  total: 1.89s
                                                   remaining: 4.21s
310:
        learn: 1.1966883
                                  total: 1.9s
                                                   remaining: 4.21s
311:
        learn: 1.1933750
                                  total: 1.9s
                                                   remaining: 4.19s
312:
        learn: 1.1915083
                                  total: 1.91s
                                                   remaining: 4.19s
313:
        learn: 1.1896272
                                  total: 1.91s
                                                   remaining: 4.18s
314:
        learn: 1.1860700
                                  total: 1.92s
                                                   remaining: 4.17s
315:
        learn: 1.1818315
                                  total: 1.92s
                                                   remaining: 4.16s
        learn: 1.1787415
316:
                                  total: 1.93s
                                                   remaining: 4.15s
317:
        learn: 1.1751003
                                  total: 1.93s
                                                   remaining: 4.14s
318:
        learn: 1.1722209
                                  total: 1.94s
                                                   remaining: 4.14s
319:
        learn: 1.1691479
                                  total: 1.94s
                                                   remaining: 4.13s
320:
        learn: 1.1662560
                                  total: 1.95s
                                                   remaining: 4.12s
        learn: 1.1630701
                                  total: 1.95s
321:
                                                   remaining: 4.11s
322:
        learn: 1.1598775
                                  total: 1.96s
                                                   remaining: 4.11s
        learn: 1.1583228
323:
                                  total: 1.96s
                                                   remaining: 4.1s
324:
        learn: 1.1556380
                                  total: 1.97s
                                                   remaining: 4.09s
325:
        learn: 1.1509625
                                  total: 1.97s
                                                   remaining: 4.08s
326:
        learn: 1.1466389
                                  total: 1.98s
                                                   remaining: 4.07s
327:
        learn: 1.1445190
                                  total: 1.98s
                                                   remaining: 4.06s
328:
        learn: 1.1419733
                                  total: 1.99s
                                                   remaining: 4.06s
329:
        learn: 1.1389884
                                  total: 1.99s
                                                   remaining: 4.05s
330:
        learn: 1.1370127
                                  total: 2s
                                                   remaining: 4.04s
331:
        learn: 1.1337971
                                  total: 2s
                                                   remaining: 4.04s
332:
        learn: 1.1317504
                                  total: 2.01s
                                                   remaining: 4.03s
333:
        learn: 1.1304021
                                  total: 2.01s
                                                   remaining: 4.02s
```

```
334:
        learn: 1.1282858
                                  total: 2.02s
                                                   remaining: 4.01s
335:
        learn: 1.1264511
                                  total: 2.03s
                                                   remaining: 4.01s
        learn: 1.1237424
                                  total: 2.04s
336:
                                                   remaining: 4s
        learn: 1.1221107
337:
                                  total: 2.04s
                                                   remaining: 4s
338:
        learn: 1.1195374
                                  total: 2.05s
                                                   remaining: 4s
339:
        learn: 1.1162775
                                  total: 2.05s
                                                   remaining: 3.99s
340:
        learn: 1.1134359
                                  total: 2.06s
                                                   remaining: 3.98s
341:
        learn: 1.1106233
                                  total: 2.07s
                                                   remaining: 3.98s
342:
        learn: 1.1075726
                                  total: 2.08s
                                                   remaining: 3.98s
343:
        learn: 1.1055027
                                  total: 2.08s
                                                   remaining: 3.97s
344:
        learn: 1.1035450
                                  total: 2.09s
                                                   remaining: 3.97s
345:
        learn: 1.1016413
                                  total: 2.1s
                                                   remaining: 3.96s
346:
        learn: 1.0991176
                                  total: 2.1s
                                                   remaining: 3.96s
347:
        learn: 1.0973552
                                  total: 2.11s
                                                   remaining: 3.95s
348:
        learn: 1.0950337
                                  total: 2.12s
                                                   remaining: 3.95s
349:
        learn: 1.0928342
                                  total: 2.12s
                                                   remaining: 3.94s
350:
        learn: 1.0893809
                                  total: 2.13s
                                                   remaining: 3.93s
351:
        learn: 1.0877767
                                  total: 2.13s
                                                   remaining: 3.92s
352:
        learn: 1.0847956
                                  total: 2.13s
                                                   remaining: 3.91s
353:
        learn: 1.0807067
                                  total: 2.14s
                                                   remaining: 3.9s
354:
        learn: 1.0783520
                                  total: 2.15s
                                                   remaining: 3.9s
355:
        learn: 1.0756050
                                  total: 2.15s
                                                   remaining: 3.89s
                                  total: 2.15s
356:
        learn: 1.0728807
                                                   remaining: 3.88s
357:
        learn: 1.0702371
                                  total: 2.16s
                                                   remaining: 3.88s
358:
        learn: 1.0675282
                                  total: 2.17s
                                                   remaining: 3.87s
        learn: 1.0643898
                                  total: 2.17s
359:
                                                   remaining: 3.86s
                                  total: 2.18s
360:
        learn: 1.0624404
                                                   remaining: 3.85s
361:
        learn: 1.0601799
                                  total: 2.18s
                                                   remaining: 3.85s
        learn: 1.0576961
362:
                                  total: 2.19s
                                                   remaining: 3.84s
363:
        learn: 1.0543710
                                  total: 2.19s
                                                   remaining: 3.83s
364:
        learn: 1.0519900
                                  total: 2.2s
                                                   remaining: 3.82s
365:
        learn: 1.0490210
                                  total: 2.2s
                                                   remaining: 3.82s
366:
        learn: 1.0471312
                                  total: 2.21s
                                                   remaining: 3.81s
367:
        learn: 1.0448318
                                  total: 2.21s
                                                   remaining: 3.8s
        learn: 1.0429608
                                  total: 2.22s
368:
                                                   remaining: 3.79s
369:
        learn: 1.0399902
                                  total: 2.23s
                                                   remaining: 3.79s
370:
        learn: 1.0363093
                                  total: 2.23s
                                                   remaining: 3.78s
371:
        learn: 1.0338414
                                  total: 2.24s
                                                   remaining: 3.77s
372:
        learn: 1.0327109
                                  total: 2.24s
                                                   remaining: 3.77s
373:
        learn: 1.0301843
                                  total: 2.25s
                                                   remaining: 3.76s
374:
        learn: 1.0284106
                                  total: 2.25s
                                                   remaining: 3.75s
375:
        learn: 1.0262678
                                  total: 2.26s
                                                   remaining: 3.74s
376:
        learn: 1.0224413
                                  total: 2.26s
                                                   remaining: 3.74s
        learn: 1.0208505
377:
                                  total: 2.27s
                                                   remaining: 3.73s
378:
        learn: 1.0189160
                                  total: 2.27s
                                                   remaining: 3.72s
379:
        learn: 1.0170455
                                  total: 2.28s
                                                   remaining: 3.71s
380:
        learn: 1.0151129
                                  total: 2.28s
                                                   remaining: 3.71s
        learn: 1.0129034
                                  total: 2.29s
381:
                                                   remaining: 3.7s
382:
        learn: 1.0106764
                                  total: 2.29s
                                                   remaining: 3.69s
        learn: 1.0091043
                                  total: 2.29s
383:
                                                   remaining: 3.68s
384:
        learn: 1.0069160
                                  total: 2.3s
                                                   remaining: 3.68s
385:
        learn: 1.0046916
                                  total: 2.31s
                                                   remaining: 3.67s
386:
        learn: 1.0023226
                                  total: 2.31s
                                                   remaining: 3.66s
387:
        learn: 1.0013230
                                  total: 2.32s
                                                   remaining: 3.65s
388:
        learn: 0.9990717
                                  total: 2.32s
                                                   remaining: 3.65s
        learn: 0.9970469
389:
                                  total: 2.33s
                                                   remaining: 3.64s
390:
        learn: 0.9955974
                                  total: 2.33s
                                                   remaining: 3.63s
391:
                                  total: 2.34s
        learn: 0.9936382
                                                   remaining: 3.62s
                                  total: 2.34s
392:
        learn: 0.9920501
                                                   remaining: 3.62s
393:
        learn: 0.9909348
                                  total: 2.35s
                                                   remaining: 3.61s
```

```
394:
        learn: 0.9887090
                                  total: 2.35s
                                                   remaining: 3.6s
395:
        learn: 0.9874334
                                  total: 2.35s
                                                   remaining: 3.59s
        learn: 0.9859808
                                  total: 2.36s
396:
                                                   remaining: 3.59s
                                  total: 2.37s
397:
        learn: 0.9838266
                                                   remaining: 3.58s
398:
        learn: 0.9824117
                                  total: 2.38s
                                                   remaining: 3.58s
399:
        learn: 0.9811453
                                  total: 2.38s
                                                   remaining: 3.57s
400:
        learn: 0.9794635
                                  total: 2.39s
                                                   remaining: 3.57s
401:
        learn: 0.9773489
                                  total: 2.4s
                                                   remaining: 3.56s
402:
        learn: 0.9757727
                                  total: 2.4s
                                                   remaining: 3.56s
403:
        learn: 0.9735501
                                  total: 2.41s
                                                   remaining: 3.56s
404:
        learn: 0.9722809
                                  total: 2.42s
                                                   remaining: 3.55s
405:
        learn: 0.9704239
                                  total: 2.42s
                                                   remaining: 3.54s
406:
        learn: 0.9694639
                                  total: 2.43s
                                                   remaining: 3.54s
407:
        learn: 0.9678898
                                  total: 2.44s
                                                   remaining: 3.53s
408:
        learn: 0.9658994
                                  total: 2.44s
                                                   remaining: 3.53s
409:
        learn: 0.9647287
                                  total: 2.45s
                                                   remaining: 3.52s
                                  total: 2.45s
410:
        learn: 0.9634917
                                                   remaining: 3.51s
411:
        learn: 0.9614724
                                  total: 2.46s
                                                   remaining: 3.51s
412:
        learn: 0.9598731
                                  total: 2.46s
                                                   remaining: 3.5s
413:
        learn: 0.9580061
                                  total: 2.47s
                                                   remaining: 3.5s
414:
        learn: 0.9562242
                                  total: 2.48s
                                                   remaining: 3.49s
415:
        learn: 0.9551332
                                  total: 2.48s
                                                   remaining: 3.48s
416:
        learn: 0.9533060
                                  total: 2.49s
                                                   remaining: 3.48s
        learn: 0.9520792
417:
                                  total: 2.49s
                                                   remaining: 3.47s
418:
        learn: 0.9504114
                                  total: 2.5s
                                                   remaining: 3.46s
419:
                                  total: 2.51s
        learn: 0.9484372
                                                   remaining: 3.46s
420:
        learn: 0.9474628
                                  total: 2.51s
                                                   remaining: 3.46s
421:
        learn: 0.9456959
                                  total: 2.52s
                                                   remaining: 3.45s
422:
        learn: 0.9441630
                                  total: 2.53s
                                                   remaining: 3.45s
423:
        learn: 0.9420587
                                  total: 2.53s
                                                   remaining: 3.44s
424:
        learn: 0.9398488
                                  total: 2.54s
                                                   remaining: 3.44s
425:
        learn: 0.9387743
                                  total: 2.55s
                                                   remaining: 3.44s
426:
        learn: 0.9375092
                                  total: 2.56s
                                                   remaining: 3.43s
427:
        learn: 0.9357378
                                  total: 2.56s
                                                   remaining: 3.43s
428:
        learn: 0.9339890
                                  total: 2.57s
                                                   remaining: 3.42s
429:
        learn: 0.9320556
                                  total: 2.58s
                                                   remaining: 3.42s
430:
        learn: 0.9306144
                                  total: 2.58s
                                                   remaining: 3.41s
431:
        learn: 0.9290046
                                  total: 2.59s
                                                   remaining: 3.41s
432:
        learn: 0.9272658
                                  total: 2.6s
                                                   remaining: 3.4s
433:
        learn: 0.9258588
                                  total: 2.6s
                                                   remaining: 3.39s
434:
        learn: 0.9243769
                                  total: 2.61s
                                                   remaining: 3.39s
435:
        learn: 0.9231093
                                  total: 2.61s
                                                   remaining: 3.38s
        learn: 0.9214359
436:
                                  total: 2.62s
                                                   remaining: 3.37s
437:
        learn: 0.9194391
                                  total: 2.62s
                                                   remaining: 3.37s
438:
        learn: 0.9174097
                                  total: 2.63s
                                                   remaining: 3.36s
439:
        learn: 0.9156969
                                  total: 2.63s
                                                   remaining: 3.35s
440:
        learn: 0.9141498
                                  total: 2.64s
                                                   remaining: 3.35s
441:
        learn: 0.9111082
                                  total: 2.65s
                                                   remaining: 3.35s
442:
        learn: 0.9091201
                                  total: 2.66s
                                                   remaining: 3.34s
        learn: 0.9072615
443:
                                  total: 2.66s
                                                   remaining: 3.34s
444:
        learn: 0.9060862
                                  total: 2.67s
                                                   remaining: 3.33s
445:
        learn: 0.9048604
                                  total: 2.68s
                                                   remaining: 3.33s
446:
        learn: 0.9032829
                                  total: 2.69s
                                                   remaining: 3.32s
447:
                                  total: 2.69s
        learn: 0.9016132
                                                   remaining: 3.32s
448:
        learn: 0.9003035
                                  total: 2.7s
                                                   remaining: 3.31s
449:
        learn: 0.8985882
                                  total: 2.71s
                                                   remaining: 3.31s
        learn: 0.8977158
450:
                                  total: 2.71s
                                                   remaining: 3.3s
451:
                                  total: 2.72s
        learn: 0.8957754
                                                   remaining: 3.3s
                                  total: 2.73s
452:
        learn: 0.8943908
                                                   remaining: 3.3s
453:
        learn: 0.8928315
                                  total: 2.74s
                                                   remaining: 3.29s
```

```
454:
        learn: 0.8909978
                                  total: 2.75s
                                                   remaining: 3.29s
455:
        learn: 0.8894524
                                  total: 2.75s
                                                   remaining: 3.28s
456:
        learn: 0.8874145
                                  total: 2.76s
                                                   remaining: 3.28s
        learn: 0.8864710
457:
                                  total: 2.77s
                                                   remaining: 3.27s
458:
        learn: 0.8853376
                                  total: 2.77s
                                                   remaining: 3.27s
459:
        learn: 0.8839517
                                  total: 2.78s
                                                   remaining: 3.27s
460:
        learn: 0.8823449
                                  total: 2.79s
                                                   remaining: 3.26s
461:
        learn: 0.8807556
                                  total: 2.8s
                                                   remaining: 3.26s
462:
        learn: 0.8797259
                                  total: 2.8s
                                                   remaining: 3.25s
463:
        learn: 0.8790277
                                  total: 2.81s
                                                   remaining: 3.25s
                                  total: 2.82s
464:
        learn: 0.8774410
                                                   remaining: 3.24s
465:
        learn: 0.8760297
                                  total: 2.83s
                                                   remaining: 3.24s
466:
        learn: 0.8739186
                                  total: 2.83s
                                                   remaining: 3.23s
467:
        learn: 0.8727089
                                  total: 2.84s
                                                   remaining: 3.23s
468:
        learn: 0.8708090
                                  total: 2.84s
                                                   remaining: 3.22s
469:
        learn: 0.8695054
                                  total: 2.85s
                                                   remaining: 3.22s
                                  total: 2.86s
470:
        learn: 0.8677853
                                                   remaining: 3.21s
471:
        learn: 0.8652248
                                  total: 2.87s
                                                   remaining: 3.21s
472:
        learn: 0.8641695
                                  total: 2.87s
                                                   remaining: 3.2s
473:
        learn: 0.8629471
                                  total: 2.88s
                                                   remaining: 3.2s
474:
        learn: 0.8617428
                                  total: 2.89s
                                                   remaining: 3.19s
475:
        learn: 0.8605241
                                  total: 2.9s
                                                   remaining: 3.19s
476:
        learn: 0.8590010
                                  total: 2.9s
                                                   remaining: 3.18s
        learn: 0.8570546
477:
                                  total: 2.91s
                                                   remaining: 3.17s
478:
        learn: 0.8555113
                                  total: 2.91s
                                                   remaining: 3.17s
479:
                                  total: 2.92s
        learn: 0.8544042
                                                   remaining: 3.16s
480:
        learn: 0.8536584
                                  total: 2.92s
                                                   remaining: 3.15s
481:
        learn: 0.8524197
                                  total: 2.93s
                                                   remaining: 3.15s
482:
        learn: 0.8509306
                                  total: 2.94s
                                                   remaining: 3.14s
483:
        learn: 0.8491724
                                  total: 2.94s
                                                   remaining: 3.14s
484:
        learn: 0.8480406
                                  total: 2.95s
                                                   remaining: 3.13s
485:
        learn: 0.8465708
                                  total: 2.96s
                                                   remaining: 3.13s
486:
        learn: 0.8447574
                                  total: 2.96s
                                                   remaining: 3.12s
487:
        learn: 0.8435834
                                  total: 2.97s
                                                   remaining: 3.12s
        learn: 0.8418140
488:
                                  total: 2.98s
                                                   remaining: 3.11s
489:
        learn: 0.8405377
                                  total: 2.98s
                                                   remaining: 3.1s
490:
        learn: 0.8393019
                                  total: 2.99s
                                                   remaining: 3.1s
491:
        learn: 0.8384780
                                  total: 3s
                                                   remaining: 3.09s
492:
        learn: 0.8373984
                                  total: 3s
                                                   remaining: 3.09s
493:
        learn: 0.8365323
                                  total: 3.01s
                                                   remaining: 3.08s
494:
        learn: 0.8354854
                                  total: 3.02s
                                                   remaining: 3.08s
495:
        learn: 0.8342422
                                  total: 3.02s
                                                   remaining: 3.07s
        learn: 0.8328433
496:
                                  total: 3.03s
                                                   remaining: 3.07s
497:
        learn: 0.8319524
                                  total: 3.04s
                                                   remaining: 3.06s
498:
        learn: 0.8309052
                                  total: 3.04s
                                                   remaining: 3.06s
499:
        learn: 0.8291812
                                  total: 3.05s
                                                   remaining: 3.05s
500:
        learn: 0.8282350
                                  total: 3.06s
                                                   remaining: 3.05s
        learn: 0.8270402
501:
                                  total: 3.06s
                                                   remaining: 3.04s
502:
        learn: 0.8259735
                                  total: 3.07s
                                                   remaining: 3.04s
503:
        learn: 0.8251887
                                  total: 3.08s
                                                   remaining: 3.03s
504:
        learn: 0.8237418
                                  total: 3.09s
                                                   remaining: 3.02s
505:
        learn: 0.8226873
                                  total: 3.09s
                                                   remaining: 3.02s
506:
        learn: 0.8222757
                                  total: 3.1s
                                                   remaining: 3.01s
507:
        learn: 0.8212314
                                  total: 3.11s
                                                   remaining: 3.01s
508:
        learn: 0.8203480
                                  total: 3.11s
                                                   remaining: 3s
        learn: 0.8192654
509:
                                  total: 3.12s
                                                   remaining: 3s
510:
        learn: 0.8185191
                                  total: 3.13s
                                                   remaining: 2.99s
511:
        learn: 0.8175108
                                  total: 3.14s
                                                   remaining: 2.99s
                                  total: 3.14s
512:
        learn: 0.8168720
                                                   remaining: 2.98s
513:
        learn: 0.8158939
                                  total: 3.15s
                                                   remaining: 2.98s
```

```
514:
        learn: 0.8150961
                                  total: 3.16s
                                                   remaining: 2.97s
515:
        learn: 0.8141645
                                  total: 3.16s
                                                   remaining: 2.97s
        learn: 0.8129768
                                  total: 3.17s
516:
                                                   remaining: 2.96s
        learn: 0.8117655
517:
                                  total: 3.18s
                                                   remaining: 2.96s
518:
        learn: 0.8104510
                                  total: 3.18s
                                                   remaining: 2.95s
519:
        learn: 0.8096839
                                  total: 3.19s
                                                   remaining: 2.95s
520:
        learn: 0.8090269
                                  total: 3.2s
                                                   remaining: 2.94s
521:
        learn: 0.8086312
                                  total: 3.21s
                                                   remaining: 2.94s
522:
        learn: 0.8078255
                                  total: 3.21s
                                                   remaining: 2.93s
523:
        learn: 0.8065911
                                  total: 3.22s
                                                   remaining: 2.92s
524:
        learn: 0.8064094
                                  total: 3.23s
                                                   remaining: 2.92s
525:
        learn: 0.8053763
                                  total: 3.23s
                                                   remaining: 2.91s
526:
        learn: 0.8037891
                                  total: 3.24s
                                                   remaining: 2.91s
527:
        learn: 0.8027731
                                  total: 3.25s
                                                   remaining: 2.9s
528:
        learn: 0.8016900
                                  total: 3.25s
                                                   remaining: 2.9s
529:
        learn: 0.8003982
                                  total: 3.26s
                                                   remaining: 2.89s
530:
        learn: 0.7998793
                                  total: 3.26s
                                                   remaining: 2.88s
531:
        learn: 0.7987272
                                  total: 3.27s
                                                   remaining: 2.87s
532:
        learn: 0.7979023
                                  total: 3.27s
                                                   remaining: 2.87s
533:
        learn: 0.7972697
                                  total: 3.27s
                                                   remaining: 2.86s
534:
        learn: 0.7967493
                                  total: 3.28s
                                                   remaining: 2.85s
535:
        learn: 0.7956169
                                  total: 3.28s
                                                   remaining: 2.84s
536:
        learn: 0.7945046
                                  total: 3.29s
                                                   remaining: 2.83s
537:
        learn: 0.7925829
                                  total: 3.29s
                                                   remaining: 2.82s
538:
        learn: 0.7909683
                                  total: 3.29s
                                                   remaining: 2.82s
        learn: 0.7898236
                                  total: 3.3s
539:
                                                   remaining: 2.81s
540:
        learn: 0.7886266
                                  total: 3.3s
                                                   remaining: 2.8s
541:
        learn: 0.7870754
                                  total: 3.31s
                                                   remaining: 2.8s
542:
        learn: 0.7854108
                                  total: 3.32s
                                                   remaining: 2.79s
543:
        learn: 0.7849344
                                  total: 3.33s
                                                   remaining: 2.79s
544:
        learn: 0.7830154
                                  total: 3.33s
                                                   remaining: 2.78s
545:
        learn: 0.7824510
                                  total: 3.34s
                                                   remaining: 2.78s
546:
        learn: 0.7817498
                                  total: 3.34s
                                                   remaining: 2.77s
547:
        learn: 0.7807137
                                  total: 3.35s
                                                   remaining: 2.76s
        learn: 0.7793800
                                  total: 3.36s
548:
                                                   remaining: 2.76s
                                  total: 3.37s
549:
        learn: 0.7783477
                                                   remaining: 2.75s
550:
        learn: 0.7773003
                                  total: 3.37s
                                                   remaining: 2.75s
551:
        learn: 0.7769663
                                  total: 3.38s
                                                   remaining: 2.74s
552:
        learn: 0.7760160
                                  total: 3.38s
                                                   remaining: 2.73s
553:
        learn: 0.7747317
                                  total: 3.39s
                                                   remaining: 2.73s
554:
        learn: 0.7734588
                                  total: 3.4s
                                                   remaining: 2.72s
555:
        learn: 0.7723459
                                  total: 3.4s
                                                   remaining: 2.72s
        learn: 0.7701682
556:
                                  total: 3.41s
                                                   remaining: 2.71s
557:
        learn: 0.7692006
                                  total: 3.41s
                                                   remaining: 2.7s
558:
        learn: 0.7683420
                                  total: 3.42s
                                                   remaining: 2.7s
559:
        learn: 0.7673387
                                  total: 3.42s
                                                   remaining: 2.69s
560:
        learn: 0.7666286
                                  total: 3.43s
                                                   remaining: 2.69s
        learn: 0.7654716
561:
                                  total: 3.44s
                                                   remaining: 2.68s
562:
        learn: 0.7644713
                                  total: 3.44s
                                                   remaining: 2.67s
                                  total: 3.45s
563:
        learn: 0.7626429
                                                   remaining: 2.67s
564:
        learn: 0.7614001
                                  total: 3.46s
                                                   remaining: 2.66s
565:
        learn: 0.7606264
                                  total: 3.46s
                                                   remaining: 2.65s
566:
        learn: 0.7598368
                                  total: 3.47s
                                                   remaining: 2.65s
567:
        learn: 0.7591664
                                  total: 3.48s
                                                   remaining: 2.64s
568:
        learn: 0.7577331
                                  total: 3.48s
                                                   remaining: 2.64s
        learn: 0.7568658
569:
                                  total: 3.49s
                                                   remaining: 2.63s
570:
        learn: 0.7555871
                                  total: 3.5s
                                                   remaining: 2.63s
571:
        learn: 0.7544217
                                  total: 3.51s
                                                   remaining: 2.62s
572:
        learn: 0.7540364
                                  total: 3.51s
                                                   remaining: 2.62s
573:
        learn: 0.7534452
                                  total: 3.52s
                                                   remaining: 2.61s
```

```
574:
        learn: 0.7523064
                                  total: 3.53s
                                                   remaining: 2.61s
575:
        learn: 0.7515227
                                  total: 3.54s
                                                   remaining: 2.6s
576:
        learn: 0.7509570
                                  total: 3.54s
                                                   remaining: 2.6s
                                  total: 3.55s
        learn: 0.7497943
577:
                                                   remaining: 2.59s
578:
        learn: 0.7493509
                                  total: 3.56s
                                                   remaining: 2.59s
579:
        learn: 0.7488139
                                  total: 3.56s
                                                   remaining: 2.58s
580:
        learn: 0.7478642
                                  total: 3.57s
                                                   remaining: 2.58s
581:
        learn: 0.7468528
                                  total: 3.58s
                                                   remaining: 2.57s
582:
        learn: 0.7460009
                                  total: 3.58s
                                                   remaining: 2.56s
583:
        learn: 0.7450919
                                  total: 3.59s
                                                   remaining: 2.56s
584:
        learn: 0.7444893
                                  total: 3.6s
                                                   remaining: 2.55s
585:
        learn: 0.7430725
                                  total: 3.6s
                                                   remaining: 2.55s
586:
        learn: 0.7422272
                                  total: 3.61s
                                                   remaining: 2.54s
587:
        learn: 0.7408369
                                  total: 3.62s
                                                   remaining: 2.54s
588:
        learn: 0.7399627
                                  total: 3.63s
                                                   remaining: 2.53s
589:
        learn: 0.7389306
                                  total: 3.63s
                                                   remaining: 2.52s
                                  total: 3.64s
590:
        learn: 0.7387487
                                                   remaining: 2.52s
591:
        learn: 0.7378206
                                  total: 3.65s
                                                   remaining: 2.51s
592:
        learn: 0.7367618
                                  total: 3.65s
                                                   remaining: 2.51s
593:
        learn: 0.7349990
                                  total: 3.66s
                                                   remaining: 2.5s
594:
        learn: 0.7338040
                                  total: 3.67s
                                                   remaining: 2.5s
595:
        learn: 0.7325606
                                  total: 3.67s
                                                   remaining: 2.49s
596:
        learn: 0.7318337
                                  total: 3.68s
                                                   remaining: 2.48s
597:
        learn: 0.7312383
                                  total: 3.69s
                                                   remaining: 2.48s
598:
        learn: 0.7302659
                                  total: 3.7s
                                                   remaining: 2.47s
599:
        learn: 0.7292259
                                  total: 3.7s
                                                   remaining: 2.47s
600:
        learn: 0.7287945
                                  total: 3.71s
                                                   remaining: 2.46s
601:
        learn: 0.7282649
                                  total: 3.72s
                                                   remaining: 2.46s
                                  total: 3.72s
602:
        learn: 0.7274044
                                                   remaining: 2.45s
603:
        learn: 0.7266161
                                  total: 3.73s
                                                   remaining: 2.45s
604:
        learn: 0.7246091
                                  total: 3.74s
                                                   remaining: 2.44s
605:
        learn: 0.7238916
                                  total: 3.75s
                                                   remaining: 2.44s
606:
        learn: 0.7223539
                                  total: 3.75s
                                                   remaining: 2.43s
607:
        learn: 0.7211944
                                  total: 3.76s
                                                   remaining: 2.42s
        learn: 0.7203360
                                  total: 3.77s
608:
                                                   remaining: 2.42s
609:
        learn: 0.7189844
                                  total: 3.77s
                                                   remaining: 2.41s
610:
        learn: 0.7182777
                                  total: 3.78s
                                                   remaining: 2.41s
611:
        learn: 0.7177750
                                  total: 3.79s
                                                   remaining: 2.4s
612:
        learn: 0.7168566
                                  total: 3.79s
                                                   remaining: 2.4s
613:
        learn: 0.7157758
                                  total: 3.8s
                                                   remaining: 2.39s
614:
        learn: 0.7150182
                                  total: 3.8s
                                                   remaining: 2.38s
615:
        learn: 0.7145708
                                  total: 3.81s
                                                   remaining: 2.37s
        learn: 0.7137909
616:
                                  total: 3.81s
                                                   remaining: 2.37s
        learn: 0.7131062
617:
                                  total: 3.82s
                                                   remaining: 2.36s
618:
        learn: 0.7125252
                                  total: 3.82s
                                                   remaining: 2.35s
619:
        learn: 0.7112390
                                  total: 3.83s
                                                   remaining: 2.35s
620:
        learn: 0.7099745
                                  total: 3.83s
                                                   remaining: 2.34s
        learn: 0.7090065
621:
                                  total: 3.83s
                                                   remaining: 2.33s
622:
        learn: 0.7084658
                                  total: 3.84s
                                                   remaining: 2.33s
623:
        learn: 0.7075461
                                  total: 3.85s
                                                   remaining: 2.32s
624:
        learn: 0.7063373
                                  total: 3.85s
                                                   remaining: 2.31s
625:
        learn: 0.7056953
                                  total: 3.85s
                                                   remaining: 2.3s
626:
        learn: 0.7050724
                                  total: 3.86s
                                                   remaining: 2.29s
627:
        learn: 0.7039474
                                  total: 3.86s
                                                   remaining: 2.29s
628:
        learn: 0.7034130
                                  total: 3.87s
                                                   remaining: 2.28s
629:
        learn: 0.7028336
                                  total: 3.87s
                                                   remaining: 2.27s
630:
        learn: 0.7019646
                                  total: 3.88s
                                                   remaining: 2.27s
631:
        learn: 0.7011066
                                  total: 3.88s
                                                   remaining: 2.26s
                                  total: 3.89s
632:
        learn: 0.7004426
                                                   remaining: 2.25s
633:
        learn: 0.6991608
                                  total: 3.89s
                                                   remaining: 2.25s
```

```
634:
        learn: 0.6986333
                                  total: 3.9s
                                                   remaining: 2.24s
635:
        learn: 0.6979663
                                  total: 3.9s
                                                   remaining: 2.23s
        learn: 0.6973817
                                  total: 3.91s
636:
                                                   remaining: 2.23s
637:
        learn: 0.6964398
                                  total: 3.91s
                                                   remaining: 2.22s
638:
        learn: 0.6957499
                                  total: 3.92s
                                                   remaining: 2.21s
639:
        learn: 0.6950672
                                  total: 3.92s
                                                   remaining: 2.21s
640:
        learn: 0.6941491
                                  total: 3.93s
                                                   remaining: 2.2s
641:
        learn: 0.6930542
                                  total: 3.93s
                                                   remaining: 2.19s
642:
        learn: 0.6920568
                                  total: 3.94s
                                                   remaining: 2.19s
643:
        learn: 0.6913736
                                  total: 3.95s
                                                   remaining: 2.18s
644:
        learn: 0.6906830
                                  total: 3.95s
                                                   remaining: 2.17s
                                  total: 3.96s
645:
        learn: 0.6897672
                                                   remaining: 2.17s
646:
        learn: 0.6890291
                                  total: 3.96s
                                                   remaining: 2.16s
647:
        learn: 0.6880969
                                  total: 3.97s
                                                   remaining: 2.15s
648:
        learn: 0.6875082
                                  total: 3.97s
                                                   remaining: 2.15s
649:
        learn: 0.6865473
                                  total: 3.98s
                                                   remaining: 2.14s
                                  total: 3.99s
650:
        learn: 0.6860380
                                                   remaining: 2.14s
651:
        learn: 0.6851706
                                  total: 3.99s
                                                   remaining: 2.13s
652:
        learn: 0.6847365
                                  total: 4s
                                                   remaining: 2.13s
653:
        learn: 0.6840327
                                  total: 4.01s
                                                   remaining: 2.12s
654:
        learn: 0.6834323
                                  total: 4.01s
                                                   remaining: 2.12s
655:
        learn: 0.6828453
                                  total: 4.02s
                                                   remaining: 2.11s
656:
        learn: 0.6821447
                                  total: 4.03s
                                                   remaining: 2.1s
657:
        learn: 0.6813940
                                  total: 4.03s
                                                   remaining: 2.1s
658:
        learn: 0.6808092
                                  total: 4.04s
                                                   remaining: 2.09s
659:
        learn: 0.6802582
                                  total: 4.04s
                                                   remaining: 2.08s
        learn: 0.6791787
                                  total: 4.05s
660:
                                                   remaining: 2.08s
661:
        learn: 0.6783639
                                  total: 4.06s
                                                   remaining: 2.07s
662:
        learn: 0.6776509
                                  total: 4.06s
                                                   remaining: 2.06s
663:
        learn: 0.6773259
                                  total: 4.07s
                                                   remaining: 2.06s
664:
        learn: 0.6763982
                                  total: 4.07s
                                                   remaining: 2.05s
665:
        learn: 0.6757857
                                  total: 4.08s
                                                   remaining: 2.04s
666:
        learn: 0.6753215
                                  total: 4.08s
                                                   remaining: 2.04s
667:
        learn: 0.6747516
                                  total: 4.08s
                                                   remaining: 2.03s
        learn: 0.6739952
668:
                                  total: 4.09s
                                                   remaining: 2.02s
669:
        learn: 0.6730989
                                  total: 4.09s
                                                   remaining: 2.02s
670:
        learn: 0.6725130
                                  total: 4.1s
                                                   remaining: 2.01s
671:
        learn: 0.6721318
                                  total: 4.1s
                                                   remaining: 2s
672:
        learn: 0.6717635
                                  total: 4.11s
                                                   remaining: 2s
673:
        learn: 0.6711331
                                  total: 4.12s
                                                   remaining: 1.99s
674:
        learn: 0.6707285
                                  total: 4.12s
                                                   remaining: 1.98s
675:
        learn: 0.6704689
                                  total: 4.13s
                                                   remaining: 1.98s
        learn: 0.6702799
676:
                                  total: 4.13s
                                                   remaining: 1.97s
677:
        learn: 0.6699119
                                  total: 4.14s
                                                   remaining: 1.97s
678:
        learn: 0.6686091
                                  total: 4.15s
                                                   remaining: 1.96s
679:
        learn: 0.6681290
                                  total: 4.16s
                                                   remaining: 1.96s
680:
        learn: 0.6672511
                                  total: 4.16s
                                                   remaining: 1.95s
        learn: 0.6664614
681:
                                  total: 4.17s
                                                   remaining: 1.94s
682:
        learn: 0.6654842
                                  total: 4.18s
                                                   remaining: 1.94s
                                  total: 4.18s
683:
        learn: 0.6647271
                                                   remaining: 1.93s
684:
        learn: 0.6644661
                                  total: 4.19s
                                                   remaining: 1.93s
685:
        learn: 0.6639785
                                  total: 4.2s
                                                   remaining: 1.92s
686:
        learn: 0.6632755
                                  total: 4.21s
                                                   remaining: 1.92s
687:
        learn: 0.6624818
                                  total: 4.21s
                                                   remaining: 1.91s
688:
        learn: 0.6621210
                                  total: 4.22s
                                                   remaining: 1.9s
        learn: 0.6616097
689:
                                  total: 4.23s
                                                   remaining: 1.9s
690:
        learn: 0.6611972
                                  total: 4.23s
                                                   remaining: 1.89s
691:
        learn: 0.6601681
                                  total: 4.24s
                                                   remaining: 1.89s
692:
        learn: 0.6594513
                                  total: 4.25s
                                                   remaining: 1.88s
693:
        learn: 0.6590249
                                  total: 4.25s
                                                   remaining: 1.88s
```

```
694:
        learn: 0.6582704
                                  total: 4.26s
                                                   remaining: 1.87s
695:
        learn: 0.6578752
                                  total: 4.27s
                                                   remaining: 1.86s
        learn: 0.6572789
                                  total: 4.28s
696:
                                                   remaining: 1.86s
697:
        learn: 0.6565529
                                  total: 4.29s
                                                   remaining: 1.85s
698:
        learn: 0.6555105
                                  total: 4.29s
                                                   remaining: 1.85s
699:
        learn: 0.6552750
                                  total: 4.3s
                                                   remaining: 1.84s
700:
        learn: 0.6545114
                                  total: 4.31s
                                                   remaining: 1.84s
701:
        learn: 0.6541441
                                  total: 4.32s
                                                   remaining: 1.83s
702:
        learn: 0.6534886
                                  total: 4.32s
                                                   remaining: 1.83s
703:
        learn: 0.6528350
                                  total: 4.33s
                                                   remaining: 1.82s
704:
        learn: 0.6519943
                                  total: 4.34s
                                                   remaining: 1.82s
705:
        learn: 0.6513987
                                  total: 4.35s
                                                   remaining: 1.81s
706:
        learn: 0.6510730
                                  total: 4.35s
                                                   remaining: 1.8s
707:
        learn: 0.6502971
                                  total: 4.36s
                                                   remaining: 1.8s
708:
        learn: 0.6499315
                                  total: 4.37s
                                                   remaining: 1.79s
709:
        learn: 0.6492542
                                  total: 4.37s
                                                   remaining: 1.79s
710:
        learn: 0.6477650
                                  total: 4.38s
                                                   remaining: 1.78s
711:
        learn: 0.6475336
                                  total: 4.39s
                                                   remaining: 1.77s
712:
        learn: 0.6466792
                                  total: 4.39s
                                                   remaining: 1.77s
713:
        learn: 0.6462776
                                  total: 4.4s
                                                   remaining: 1.76s
714:
        learn: 0.6454842
                                  total: 4.41s
                                                   remaining: 1.75s
715:
        learn: 0.6451773
                                  total: 4.41s
                                                   remaining: 1.75s
716:
        learn: 0.6445516
                                  total: 4.42s
                                                   remaining: 1.74s
717:
        learn: 0.6440101
                                  total: 4.43s
                                                   remaining: 1.74s
718:
        learn: 0.6436967
                                  total: 4.43s
                                                   remaining: 1.73s
719:
        learn: 0.6431600
                                  total: 4.44s
                                                   remaining: 1.73s
720:
        learn: 0.6427708
                                  total: 4.45s
                                                   remaining: 1.72s
721:
        learn: 0.6422544
                                  total: 4.46s
                                                   remaining: 1.72s
722:
        learn: 0.6415291
                                  total: 4.46s
                                                   remaining: 1.71s
723:
        learn: 0.6407717
                                  total: 4.47s
                                                   remaining: 1.7s
                                  total: 4.48s
724:
        learn: 0.6397692
                                                   remaining: 1.7s
725:
        learn: 0.6388763
                                  total: 4.49s
                                                   remaining: 1.69s
726:
        learn: 0.6376243
                                  total: 4.49s
                                                   remaining: 1.69s
727:
        learn: 0.6370393
                                  total: 4.5s
                                                   remaining: 1.68s
728:
        learn: 0.6357041
                                  total: 4.5s
                                                   remaining: 1.67s
729:
        learn: 0.6348633
                                  total: 4.51s
                                                   remaining: 1.67s
730:
        learn: 0.6339361
                                  total: 4.52s
                                                   remaining: 1.66s
731:
        learn: 0.6334552
                                  total: 4.53s
                                                   remaining: 1.66s
732:
        learn: 0.6327986
                                  total: 4.53s
                                                   remaining: 1.65s
733:
        learn: 0.6321776
                                  total: 4.54s
                                                   remaining: 1.64s
734:
        learn: 0.6317847
                                  total: 4.54s
                                                   remaining: 1.64s
735:
        learn: 0.6315221
                                  total: 4.55s
                                                   remaining: 1.63s
        learn: 0.6306961
                                  total: 4.56s
736:
                                                   remaining: 1.63s
737:
        learn: 0.6299223
                                  total: 4.56s
                                                   remaining: 1.62s
738:
        learn: 0.6292959
                                  total: 4.57s
                                                   remaining: 1.61s
739:
        learn: 0.6281816
                                  total: 4.58s
                                                   remaining: 1.61s
740:
        learn: 0.6278540
                                  total: 4.58s
                                                   remaining: 1.6s
741:
        learn: 0.6272512
                                  total: 4.59s
                                                   remaining: 1.6s
742:
        learn: 0.6267357
                                  total: 4.6s
                                                   remaining: 1.59s
743:
        learn: 0.6263509
                                  total: 4.61s
                                                   remaining: 1.58s
744:
        learn: 0.6257692
                                  total: 4.61s
                                                   remaining: 1.58s
745:
        learn: 0.6253311
                                  total: 4.62s
                                                   remaining: 1.57s
746:
        learn: 0.6245174
                                  total: 4.63s
                                                   remaining: 1.57s
747:
        learn: 0.6240019
                                  total: 4.63s
                                                   remaining: 1.56s
748:
        learn: 0.6232189
                                  total: 4.64s
                                                   remaining: 1.55s
749:
        learn: 0.6226766
                                  total: 4.65s
                                                   remaining: 1.55s
750:
        learn: 0.6222938
                                  total: 4.66s
                                                   remaining: 1.54s
751:
        learn: 0.6217557
                                  total: 4.66s
                                                   remaining: 1.54s
752:
        learn: 0.6211196
                                  total: 4.67s
                                                   remaining: 1.53s
753:
        learn: 0.6203415
                                  total: 4.68s
                                                   remaining: 1.52s
```

```
754:
        learn: 0.6196575
                                  total: 4.68s
                                                   remaining: 1.52s
755:
        learn: 0.6193641
                                  total: 4.69s
                                                   remaining: 1.51s
756:
        learn: 0.6188413
                                  total: 4.7s
                                                   remaining: 1.51s
                                  total: 4.7s
757:
        learn: 0.6185062
                                                   remaining: 1.5s
758:
        learn: 0.6180573
                                  total: 4.71s
                                                   remaining: 1.5s
759:
        learn: 0.6177189
                                  total: 4.72s
                                                   remaining: 1.49s
760:
        learn: 0.6173872
                                  total: 4.72s
                                                   remaining: 1.48s
761:
        learn: 0.6171269
                                  total: 4.73s
                                                   remaining: 1.48s
762:
        learn: 0.6168852
                                  total: 4.74s
                                                   remaining: 1.47s
763:
        learn: 0.6158537
                                  total: 4.74s
                                                   remaining: 1.46s
764:
        learn: 0.6154324
                                  total: 4.75s
                                                   remaining: 1.46s
765:
        learn: 0.6148529
                                  total: 4.76s
                                                   remaining: 1.45s
766:
        learn: 0.6141200
                                  total: 4.76s
                                                   remaining: 1.45s
767:
        learn: 0.6139339
                                  total: 4.77s
                                                   remaining: 1.44s
768:
        learn: 0.6136459
                                  total: 4.78s
                                                   remaining: 1.44s
769:
        learn: 0.6131057
                                  total: 4.78s
                                                   remaining: 1.43s
770:
        learn: 0.6123314
                                  total: 4.79s
                                                   remaining: 1.42s
771:
        learn: 0.6113036
                                  total: 4.8s
                                                   remaining: 1.42s
772:
        learn: 0.6106529
                                  total: 4.81s
                                                   remaining: 1.41s
773:
        learn: 0.6098308
                                  total: 4.81s
                                                   remaining: 1.41s
774:
        learn: 0.6094563
                                  total: 4.82s
                                                   remaining: 1.4s
775:
        learn: 0.6088458
                                  total: 4.83s
                                                   remaining: 1.39s
                                  total: 4.83s
776:
        learn: 0.6085745
                                                   remaining: 1.39s
777:
        learn: 0.6081618
                                  total: 4.84s
                                                   remaining: 1.38s
778:
        learn: 0.6076894
                                  total: 4.85s
                                                   remaining: 1.37s
779:
        learn: 0.6072610
                                  total: 4.85s
                                                   remaining: 1.37s
780:
        learn: 0.6062188
                                  total: 4.86s
                                                   remaining: 1.36s
        learn: 0.6055404
781:
                                  total: 4.87s
                                                   remaining: 1.36s
782:
        learn: 0.6046863
                                  total: 4.88s
                                                   remaining: 1.35s
783:
        learn: 0.6043505
                                  total: 4.88s
                                                   remaining: 1.34s
784:
        learn: 0.6038658
                                  total: 4.89s
                                                   remaining: 1.34s
785:
        learn: 0.6033010
                                  total: 4.89s
                                                   remaining: 1.33s
        learn: 0.6027130
786:
                                  total: 4.9s
                                                   remaining: 1.32s
787:
        learn: 0.6018618
                                  total: 4.9s
                                                   remaining: 1.32s
788:
        learn: 0.6008823
                                  total: 4.91s
                                                   remaining: 1.31s
789:
        learn: 0.6002764
                                  total: 4.92s
                                                   remaining: 1.31s
790:
        learn: 0.5998651
                                  total: 4.92s
                                                   remaining: 1.3s
791:
        learn: 0.5994325
                                  total: 4.93s
                                                   remaining: 1.29s
792:
        learn: 0.5988957
                                  total: 4.94s
                                                   remaining: 1.29s
793:
        learn: 0.5985717
                                  total: 4.94s
                                                   remaining: 1.28s
794:
        learn: 0.5980953
                                  total: 4.95s
                                                   remaining: 1.28s
795:
        learn: 0.5974261
                                  total: 4.96s
                                                   remaining: 1.27s
796:
        learn: 0.5970664
                                  total: 4.96s
                                                   remaining: 1.26s
797:
        learn: 0.5962725
                                  total: 4.97s
                                                   remaining: 1.26s
798:
        learn: 0.5959061
                                  total: 4.98s
                                                   remaining: 1.25s
799:
        learn: 0.5956460
                                  total: 4.98s
                                                   remaining: 1.25s
:008
        learn: 0.5951288
                                  total: 4.99s
                                                   remaining: 1.24s
801:
        learn: 0.5946667
                                  total: 5s
                                                   remaining: 1.23s
802:
        learn: 0.5943234
                                  total: 5s
                                                   remaining: 1.23s
803:
        learn: 0.5937134
                                  total: 5.01s
                                                   remaining: 1.22s
804:
        learn: 0.5931827
                                  total: 5.01s
                                                   remaining: 1.21s
805:
        learn: 0.5926358
                                  total: 5.02s
                                                   remaining: 1.21s
806:
        learn: 0.5920042
                                  total: 5.02s
                                                   remaining: 1.2s
807:
        learn: 0.5917240
                                  total: 5.02s
                                                   remaining: 1.19s
808:
        learn: 0.5912708
                                  total: 5.03s
                                                   remaining: 1.19s
        learn: 0.5905028
809:
                                  total: 5.03s
                                                   remaining: 1.18s
810:
        learn: 0.5902428
                                  total: 5.04s
                                                   remaining: 1.17s
811:
        learn: 0.5899561
                                  total: 5.04s
                                                   remaining: 1.17s
                                  total: 5.05s
812:
        learn: 0.5893642
                                                   remaining: 1.16s
813:
        learn: 0.5887629
                                  total: 5.05s
                                                   remaining: 1.15s
```

```
814:
        learn: 0.5884160
                                  total: 5.06s
                                                   remaining: 1.15s
815:
        learn: 0.5878407
                                  total: 5.07s
                                                   remaining: 1.14s
        learn: 0.5873776
                                  total: 5.08s
816:
                                                   remaining: 1.14s
        learn: 0.5868468
817:
                                  total: 5.08s
                                                   remaining: 1.13s
818:
        learn: 0.5862176
                                  total: 5.09s
                                                   remaining: 1.12s
819:
        learn: 0.5857413
                                  total: 5.09s
                                                   remaining: 1.12s
820:
        learn: 0.5851891
                                  total: 5.1s
                                                   remaining: 1.11s
821:
        learn: 0.5845207
                                  total: 5.11s
                                                   remaining: 1.11s
822:
        learn: 0.5842979
                                  total: 5.12s
                                                   remaining: 1.1s
823:
        learn: 0.5839135
                                  total: 5.12s
                                                   remaining: 1.09s
824:
        learn: 0.5834859
                                  total: 5.13s
                                                   remaining: 1.09s
                                  total: 5.14s
825:
        learn: 0.5831329
                                                   remaining: 1.08s
826:
        learn: 0.5826893
                                  total: 5.14s
                                                   remaining: 1.07s
827:
        learn: 0.5821369
                                  total: 5.14s
                                                   remaining: 1.07s
828:
        learn: 0.5820187
                                  total: 5.15s
                                                   remaining: 1.06s
                                  total: 5.15s
829:
        learn: 0.5816636
                                                   remaining: 1.05s
                                  total: 5.16s
830:
        learn: 0.5814908
                                                   remaining: 1.05s
                                                   remaining: 1.04s
831:
        learn: 0.5812069
                                  total: 5.17s
832:
        learn: 0.5809157
                                  total: 5.17s
                                                   remaining: 1.04s
833:
        learn: 0.5800816
                                  total: 5.18s
                                                   remaining: 1.03s
834:
        learn: 0.5796385
                                  total: 5.19s
                                                   remaining: 1.02s
835:
        learn: 0.5791131
                                  total: 5.19s
                                                   remaining: 1.02s
                                  total: 5.2s
836:
        learn: 0.5789731
                                                   remaining: 1.01s
837:
        learn: 0.5786090
                                  total: 5.21s
                                                   remaining: 1.01s
838:
        learn: 0.5783290
                                  total: 5.21s
                                                   remaining: 1s
839:
        learn: 0.5777353
                                  total: 5.22s
                                                   remaining: 995ms
840:
        learn: 0.5772303
                                  total: 5.23s
                                                   remaining: 989ms
841:
        learn: 0.5769274
                                  total: 5.24s
                                                   remaining: 983ms
842:
        learn: 0.5764829
                                  total: 5.24s
                                                   remaining: 977ms
843:
        learn: 0.5760505
                                  total: 5.25s
                                                   remaining: 971ms
844:
        learn: 0.5755881
                                  total: 5.26s
                                                   remaining: 964ms
845:
        learn: 0.5748140
                                  total: 5.26s
                                                   remaining: 958ms
846:
        learn: 0.5742349
                                  total: 5.27s
                                                   remaining: 952ms
847:
        learn: 0.5738172
                                  total: 5.28s
                                                   remaining: 946ms
        learn: 0.5736379
                                                   remaining: 940ms
848:
                                  total: 5.29s
                                  total: 5.29s
849:
        learn: 0.5729832
                                                   remaining: 934ms
850:
        learn: 0.5726559
                                  total: 5.3s
                                                   remaining: 928ms
851:
        learn: 0.5724828
                                  total: 5.3s
                                                   remaining: 922ms
852:
        learn: 0.5721511
                                  total: 5.31s
                                                   remaining: 916ms
853:
        learn: 0.5716843
                                  total: 5.32s
                                                   remaining: 909ms
854:
        learn: 0.5715269
                                  total: 5.33s
                                                   remaining: 903ms
855:
        learn: 0.5710649
                                  total: 5.33s
                                                   remaining: 897ms
        learn: 0.5705966
856:
                                  total: 5.34s
                                                   remaining: 891ms
857:
        learn: 0.5703617
                                  total: 5.35s
                                                   remaining: 885ms
858:
        learn: 0.5697162
                                  total: 5.36s
                                                   remaining: 879ms
859:
        learn: 0.5693185
                                  total: 5.36s
                                                   remaining: 873ms
860:
        learn: 0.5690138
                                  total: 5.37s
                                                   remaining: 867ms
        learn: 0.5687433
                                                   remaining: 861ms
861:
                                  total: 5.38s
                                  total: 5.39s
862:
        learn: 0.5682393
                                                   remaining: 855ms
                                  total: 5.39s
863:
        learn: 0.5679666
                                                   remaining: 849ms
        learn: 0.5675499
                                  total: 5.4s
864:
                                                   remaining: 842ms
865:
        learn: 0.5673186
                                  total: 5.4s
                                                   remaining: 836ms
866:
        learn: 0.5667487
                                  total: 5.41s
                                                   remaining: 830ms
867:
        learn: 0.5666430
                                  total: 5.42s
                                                   remaining: 824ms
868:
        learn: 0.5661740
                                  total: 5.42s
                                                   remaining: 817ms
        learn: 0.5657413
869:
                                  total: 5.43s
                                                   remaining: 811ms
870:
        learn: 0.5649612
                                  total: 5.43s
                                                   remaining: 805ms
871:
        learn: 0.5645519
                                  total: 5.44s
                                                   remaining: 799ms
                                  total: 5.45s
872:
        learn: 0.5642880
                                                   remaining: 793ms
873:
        learn: 0.5639788
                                  total: 5.45s
                                                   remaining: 786ms
```

```
874:
        learn: 0.5632838
                                  total: 5.46s
                                                   remaining: 780ms
875:
        learn: 0.5631120
                                  total: 5.47s
                                                   remaining: 774ms
876:
        learn: 0.5631023
                                  total: 5.47s
                                                   remaining: 768ms
                                  total: 5.48s
        learn: 0.5626357
877:
                                                   remaining: 762ms
878:
        learn: 0.5622864
                                  total: 5.49s
                                                   remaining: 755ms
879:
        learn: 0.5619015
                                  total: 5.5s
                                                   remaining: 749ms
880:
        learn: 0.5615397
                                  total: 5.5s
                                                   remaining: 743ms
881:
        learn: 0.5614452
                                  total: 5.51s
                                                   remaining: 737ms
882:
        learn: 0.5611244
                                  total: 5.52s
                                                   remaining: 731ms
883:
        learn: 0.5607843
                                  total: 5.52s
                                                   remaining: 725ms
884:
        learn: 0.5604071
                                  total: 5.53s
                                                   remaining: 719ms
885:
        learn: 0.5600124
                                  total: 5.54s
                                                   remaining: 713ms
886:
        learn: 0.5597729
                                  total: 5.55s
                                                   remaining: 707ms
887:
        learn: 0.5594340
                                  total: 5.55s
                                                   remaining: 700ms
888:
        learn: 0.5588966
                                  total: 5.56s
                                                   remaining: 694ms
889:
        learn: 0.5583676
                                  total: 5.57s
                                                   remaining: 688ms
                                  total: 5.58s
890:
        learn: 0.5578987
                                                   remaining: 682ms
891:
        learn: 0.5573057
                                  total: 5.58s
                                                   remaining: 676ms
892:
                                  total: 5.59s
        learn: 0.5568500
                                                   remaining: 670ms
893:
        learn: 0.5564416
                                  total: 5.6s
                                                   remaining: 664ms
894:
        learn: 0.5563470
                                  total: 5.6s
                                                   remaining: 657ms
895:
        learn: 0.5557121
                                  total: 5.61s
                                                   remaining: 651ms
                                  total: 5.62s
896:
        learn: 0.5554705
                                                   remaining: 645ms
897:
        learn: 0.5550664
                                  total: 5.62s
                                                   remaining: 639ms
898:
        learn: 0.5545662
                                  total: 5.63s
                                                   remaining: 633ms
899:
        learn: 0.5544784
                                  total: 5.64s
                                                   remaining: 626ms
900:
                                  total: 5.64s
        learn: 0.5541793
                                                   remaining: 620ms
901:
        learn: 0.5538326
                                  total: 5.65s
                                                   remaining: 614ms
902:
        learn: 0.5533674
                                  total: 5.66s
                                                   remaining: 608ms
903:
        learn: 0.5530762
                                  total: 5.66s
                                                   remaining: 601ms
904:
        learn: 0.5526872
                                  total: 5.67s
                                                   remaining: 595ms
905:
        learn: 0.5524395
                                  total: 5.67s
                                                   remaining: 588ms
906:
        learn: 0.5520514
                                  total: 5.67s
                                                   remaining: 582ms
907:
        learn: 0.5518817
                                  total: 5.68s
                                                   remaining: 576ms
        learn: 0.5514940
                                                   remaining: 569ms
908:
                                  total: 5.69s
                                  total: 5.69s
909:
        learn: 0.5513131
                                                   remaining: 563ms
910:
        learn: 0.5508413
                                  total: 5.7s
                                                   remaining: 557ms
911:
        learn: 0.5505171
                                  total: 5.7s
                                                   remaining: 550ms
912:
        learn: 0.5500936
                                  total: 5.71s
                                                   remaining: 544ms
913:
        learn: 0.5497946
                                  total: 5.71s
                                                   remaining: 538ms
914:
        learn: 0.5488432
                                  total: 5.72s
                                                   remaining: 532ms
915:
        learn: 0.5485677
                                  total: 5.73s
                                                   remaining: 525ms
        learn: 0.5484551
916:
                                  total: 5.73s
                                                   remaining: 519ms
917:
        learn: 0.5482258
                                  total: 5.74s
                                                   remaining: 513ms
918:
        learn: 0.5479685
                                  total: 5.74s
                                                   remaining: 506ms
919:
        learn: 0.5475910
                                  total: 5.75s
                                                   remaining: 500ms
920:
        learn: 0.5473231
                                  total: 5.75s
                                                   remaining: 494ms
        learn: 0.5471058
921:
                                  total: 5.76s
                                                   remaining: 487ms
                                  total: 5.77s
922:
        learn: 0.5469618
                                                   remaining: 481ms
923:
        learn: 0.5464914
                                  total: 5.77s
                                                   remaining: 475ms
924:
        learn: 0.5461437
                                  total: 5.78s
                                                   remaining: 468ms
925:
        learn: 0.5456672
                                  total: 5.78s
                                                   remaining: 462ms
926:
        learn: 0.5453690
                                  total: 5.79s
                                                   remaining: 456ms
927:
                                  total: 5.79s
        learn: 0.5449802
                                                   remaining: 450ms
928:
        learn: 0.5447011
                                  total: 5.8s
                                                   remaining: 443ms
929:
        learn: 0.5445113
                                  total: 5.81s
                                                   remaining: 437ms
930:
        learn: 0.5440542
                                  total: 5.81s
                                                   remaining: 431ms
931:
        learn: 0.5436414
                                  total: 5.82s
                                                   remaining: 425ms
                                  total: 5.82s
932:
        learn: 0.5431280
                                                   remaining: 418ms
933:
        learn: 0.5429654
                                  total: 5.83s
                                                   remaining: 412ms
```

```
934:
        learn: 0.5427554
                                  total: 5.83s
                                                   remaining: 406ms
935:
        learn: 0.5424251
                                  total: 5.84s
                                                   remaining: 399ms
        learn: 0.5420363
                                  total: 5.85s
936:
                                                   remaining: 393ms
937:
        learn: 0.5417181
                                  total: 5.85s
                                                   remaining: 387ms
938:
        learn: 0.5412293
                                  total: 5.86s
                                                   remaining: 381ms
939:
        learn: 0.5402780
                                  total: 5.86s
                                                   remaining: 374ms
940:
        learn: 0.5397660
                                  total: 5.87s
                                                   remaining: 368ms
941:
        learn: 0.5393278
                                  total: 5.88s
                                                   remaining: 362ms
942:
        learn: 0.5388065
                                  total: 5.88s
                                                   remaining: 356ms
943:
        learn: 0.5384521
                                  total: 5.89s
                                                   remaining: 350ms
944:
        learn: 0.5380539
                                  total: 5.9s
                                                   remaining: 343ms
945:
        learn: 0.5374091
                                  total: 5.91s
                                                   remaining: 337ms
946:
        learn: 0.5370051
                                  total: 5.91s
                                                   remaining: 331ms
947:
        learn: 0.5367268
                                  total: 5.92s
                                                   remaining: 325ms
948:
        learn: 0.5362254
                                  total: 5.92s
                                                   remaining: 318ms
949:
        learn: 0.5360736
                                  total: 5.93s
                                                   remaining: 312ms
                                  total: 5.94s
950:
        learn: 0.5356518
                                                   remaining: 306ms
951:
        learn: 0.5353129
                                  total: 5.94s
                                                   remaining: 300ms
952:
        learn: 0.5350330
                                  total: 5.95s
                                                   remaining: 293ms
953:
        learn: 0.5347707
                                  total: 5.95s
                                                   remaining: 287ms
954:
        learn: 0.5342994
                                  total: 5.96s
                                                   remaining: 281ms
955:
        learn: 0.5337295
                                  total: 5.97s
                                                   remaining: 275ms
                                  total: 5.97s
956:
        learn: 0.5335171
                                                   remaining: 268ms
957:
        learn: 0.5328739
                                  total: 5.98s
                                                   remaining: 262ms
958:
        learn: 0.5324560
                                  total: 5.99s
                                                   remaining: 256ms
959:
        learn: 0.5321895
                                  total: 5.99s
                                                   remaining: 250ms
960:
        learn: 0.5316964
                                  total: 6s
                                                   remaining: 244ms
961:
        learn: 0.5315944
                                  total: 6.01s
                                                   remaining: 237ms
962:
        learn: 0.5308203
                                  total: 6.01s
                                                   remaining: 231ms
963:
        learn: 0.5306132
                                  total: 6.02s
                                                   remaining: 225ms
964:
        learn: 0.5304392
                                  total: 6.03s
                                                   remaining: 219ms
965:
        learn: 0.5299078
                                  total: 6.03s
                                                   remaining: 212ms
966:
        learn: 0.5296758
                                  total: 6.04s
                                                   remaining: 206ms
967:
        learn: 0.5292973
                                  total: 6.04s
                                                   remaining: 200ms
        learn: 0.5288734
968:
                                  total: 6.05s
                                                   remaining: 194ms
969:
        learn: 0.5284189
                                  total: 6.05s
                                                   remaining: 187ms
970:
        learn: 0.5281041
                                  total: 6.06s
                                                   remaining: 181ms
971:
        learn: 0.5278227
                                  total: 6.06s
                                                   remaining: 175ms
972:
        learn: 0.5273633
                                  total: 6.07s
                                                   remaining: 168ms
973:
        learn: 0.5271212
                                  total: 6.08s
                                                   remaining: 162ms
974:
        learn: 0.5269016
                                  total: 6.08s
                                                   remaining: 156ms
975:
        learn: 0.5265717
                                  total: 6.09s
                                                   remaining: 150ms
        learn: 0.5263056
976:
                                  total: 6.09s
                                                   remaining: 143ms
977:
        learn: 0.5259286
                                  total: 6.1s
                                                   remaining: 137ms
978:
        learn: 0.5253493
                                  total: 6.1s
                                                   remaining: 131ms
979:
        learn: 0.5250768
                                  total: 6.11s
                                                   remaining: 125ms
980:
        learn: 0.5247043
                                  total: 6.12s
                                                   remaining: 118ms
        learn: 0.5243487
981:
                                  total: 6.12s
                                                   remaining: 112ms
982:
        learn: 0.5243352
                                  total: 6.13s
                                                   remaining: 106ms
983:
        learn: 0.5240536
                                  total: 6.14s
                                                   remaining: 99.8ms
984:
        learn: 0.5237959
                                  total: 6.14s
                                                   remaining: 93.5ms
985:
        learn: 0.5235913
                                  total: 6.15s
                                                   remaining: 87.3ms
986:
        learn: 0.5233571
                                  total: 6.15s
                                                   remaining: 81.1ms
987:
        learn: 0.5230726
                                  total: 6.16s
                                                   remaining: 74.8ms
988:
        learn: 0.5230588
                                  total: 6.17s
                                                   remaining: 68.6ms
        learn: 0.5229140
989:
                                  total: 6.17s
                                                   remaining: 62.3ms
990:
        learn: 0.5226457
                                  total: 6.18s
                                                   remaining: 56.1ms
991:
        learn: 0.5220638
                                  total: 6.18s
                                                   remaining: 49.9ms
992:
        learn: 0.5217263
                                  total: 6.19s
                                                   remaining: 43.6ms
993:
        learn: 0.5214100
                                  total: 6.19s
                                                   remaining: 37.4ms
```

```
994:
                  learn: 0.5210036
                                           total: 6.2s
                                                           remaining: 31.2ms
         995:
                  learn: 0.5207917
                                           total: 6.21s
                                                           remaining: 24.9ms
                  learn: 0.5205613
                                           total: 6.21s
         996:
                                                           remaining: 18.7ms
         997:
                  learn: 0.5202986
                                           total: 6.22s
                                                           remaining: 12.5ms
                                                           remaining: 6.23ms
         998:
                  learn: 0.5201566
                                           total: 6.22s
         999:
                  learn: 0.5197065
                                           total: 6.23s
                                                           remaining: Ous
         model_output
In [78]:
         [['lr', 0.9672937151257295, 8.441513553849704, 0.9671402283675841],
Out[78]:
           ['svr', 0.992505974855721, 2.3634347253710257, 0.991813157386716],
           ['rf', 0.998194249279826, 1.725603333333332, 0.9979482272225508],
           ['gr', 0.9967670534446199, 2.6055469715993436, 0.9963323893861251],
           ['xg', 0.9851689710032489, 5.268527365843455, 0.9842942909007384],
           ['ct', 0.9998854278232082, 0.48566320366073445, 0.9998640093773282],
           ['lgm', 0.9991384144004999, 1.2834486794591151, 0.998986913825316]]
         preprocessor = ColumnTransformer(transformers=[
In [80]:
              ('ordinal', OrdinalEncoder(), ['Gender']),
              ('num', StandardScaler(), ['Age',
                                       'Height',
                                       'Weight',
                                       'Duration',
                                       'Heart_Rate',
                                       'Body_Temp']),
          ],remainder='passthrough')
         pipeline = Pipeline([
In [81]:
              ('preprocessor', preprocessor),
              ('model', CatBoostRegressor())
         ])
In [82]:
         sample = pd.DataFrame({
             'Gender':'male',
              'Age':68,
              'Height':190.0,
              'Weight':94.0,
              'Duration':29.0,
              'Heart_Rate':105.0,
              'Body_Temp':40.8,
          },index=[0])
In [84]:
         pipeline.fit(X,y)
```

```
Learning rate set to 0.062806
0:
        learn: 58.8495315
                                  total: 5.14ms
                                                   remaining: 5.13s
        learn: 55.5634468
                                  total: 8.79ms
1:
                                                   remaining: 4.38s
2:
        learn: 52.3968831
                                  total: 12.3ms
                                                   remaining: 4.1s
3:
        learn: 49.4584620
                                  total: 15.8ms
                                                   remaining: 3.92s
4:
        learn: 46.7348723
                                  total: 19.2ms
                                                   remaining: 3.83s
5:
                                  total: 23ms
        learn: 44.1090155
                                                   remaining: 3.81s
6:
        learn: 41.6368790
                                  total: 26.5ms
                                                   remaining: 3.77s
7:
        learn: 39.4495798
                                  total: 30ms
                                                   remaining: 3.72s
8:
        learn: 37.3458298
                                  total: 33.7ms
                                                   remaining: 3.71s
9:
        learn: 35.3000975
                                  total: 37.3ms
                                                   remaining: 3.7s
10:
        learn: 33.4598079
                                  total: 41ms
                                                   remaining: 3.68s
11:
        learn: 31.6437223
                                  total: 44.7ms
                                                   remaining: 3.68s
12:
        learn: 29.9479402
                                  total: 47.8ms
                                                   remaining: 3.63s
13:
        learn: 28.3739274
                                  total: 50.7ms
                                                   remaining: 3.57s
        learn: 26.8711356
                                  total: 53.9ms
14:
                                                   remaining: 3.54s
15:
        learn: 25.4484745
                                  total: 56.9ms
                                                   remaining: 3.5s
16:
        learn: 24.1080370
                                  total: 59.8ms
                                                   remaining: 3.46s
17:
        learn: 22.9264020
                                  total: 62.7ms
                                                   remaining: 3.42s
        learn: 21.7551179
18:
                                  total: 65.7ms
                                                   remaining: 3.39s
19:
        learn: 20.6218400
                                  total: 68.5ms
                                                   remaining: 3.36s
20:
        learn: 19.6368234
                                  total: 71.4ms
                                                   remaining: 3.33s
21:
        learn: 18.6598488
                                  total: 74.2ms
                                                   remaining: 3.3s
22:
        learn: 17.7684795
                                  total: 77.1ms
                                                   remaining: 3.27s
                                  total: 79.9ms
23:
        learn: 16.8945938
                                                   remaining: 3.25s
24:
        learn: 16.0937336
                                  total: 83ms
                                                   remaining: 3.24s
25:
        learn: 15.3313970
                                                   remaining: 3.22s
                                  total: 86ms
        learn: 14.6445435
26:
                                  total: 88.9ms
                                                   remaining: 3.21s
        learn: 13.9785641
27:
                                  total: 91.9ms
                                                   remaining: 3.19s
28:
        learn: 13.3637200
                                  total: 94.8ms
                                                   remaining: 3.17s
29:
        learn: 12.7629472
                                  total: 98ms
                                                   remaining: 3.17s
        learn: 12.1894013
30:
                                  total: 101ms
                                                   remaining: 3.15s
        learn: 11.6637262
31:
                                  total: 104ms
                                                   remaining: 3.14s
32:
        learn: 11.1507286
                                  total: 107ms
                                                   remaining: 3.13s
33:
        learn: 10.6768330
                                  total: 110ms
                                                   remaining: 3.12s
34:
        learn: 10.2473941
                                  total: 113ms
                                                   remaining: 3.11s
35:
        learn: 9.8418911
                                  total: 116ms
                                                   remaining: 3.1s
36:
        learn: 9.4427865
                                  total: 119ms
                                                   remaining: 3.08s
37:
        learn: 9.0755130
                                  total: 121ms
                                                   remaining: 3.08s
        learn: 8.7456178
                                  total: 124ms
38:
                                                   remaining: 3.06s
39:
        learn: 8.3982559
                                  total: 127ms
                                                   remaining: 3.06s
40:
        learn: 8.1014845
                                  total: 130ms
                                                   remaining: 3.05s
        learn: 7.8219992
                                  total: 133ms
41:
                                                   remaining: 3.04s
42:
        learn: 7.5543977
                                  total: 136ms
                                                   remaining: 3.03s
        learn: 7.2800402
                                  total: 139ms
43:
                                                   remaining: 3.02s
44:
        learn: 7.0263926
                                  total: 142ms
                                                   remaining: 3.01s
45:
        learn: 6.7955683
                                  total: 145ms
                                                   remaining: 3s
        learn: 6.5807520
                                  total: 148ms
46:
                                                   remaining: 3s
47:
        learn: 6.3757596
                                  total: 151ms
                                                   remaining: 2.99s
48:
        learn: 6.1825963
                                  total: 154ms
                                                   remaining: 2.98s
49:
        learn: 6.0055000
                                  total: 157ms
                                                   remaining: 2.97s
50:
        learn: 5.8297582
                                  total: 160ms
                                                   remaining: 2.97s
51:
        learn: 5.6657526
                                  total: 163ms
                                                   remaining: 2.96s
52:
        learn: 5.5190665
                                  total: 166ms
                                                   remaining: 2.96s
53:
        learn: 5.3683692
                                  total: 168ms
                                                   remaining: 2.95s
54:
        learn: 5.2369437
                                  total: 171ms
                                                   remaining: 2.94s
55:
        learn: 5.1235050
                                  total: 174ms
                                                   remaining: 2.93s
56:
        learn: 4.9898309
                                  total: 177ms
                                                   remaining: 2.93s
57:
        learn: 4.8837067
                                  total: 180ms
                                                   remaining: 2.92s
58:
        learn: 4.7658336
                                  total: 182ms
                                                   remaining: 2.91s
```

```
59:
        learn: 4.6601803
                                  total: 185ms
                                                   remaining: 2.9s
60:
        learn: 4.5721376
                                  total: 190ms
                                                   remaining: 2.93s
61:
        learn: 4.4725346
                                  total: 194ms
                                                   remaining: 2.93s
62:
        learn: 4.3865620
                                  total: 197ms
                                                   remaining: 2.94s
63:
        learn: 4.3022050
                                  total: 201ms
                                                   remaining: 2.94s
64:
        learn: 4.2176468
                                  total: 206ms
                                                   remaining: 2.96s
65:
        learn: 4.1344782
                                  total: 210ms
                                                   remaining: 2.97s
66:
        learn: 4.0634089
                                  total: 213ms
                                                   remaining: 2.97s
67:
        learn: 3.9944107
                                  total: 216ms
                                                   remaining: 2.96s
68:
        learn: 3.9375207
                                  total: 219ms
                                                   remaining: 2.95s
                                  total: 222ms
69:
        learn: 3.8813973
                                                   remaining: 2.95s
70:
        learn: 3.8176927
                                  total: 225ms
                                                   remaining: 2.94s
71:
        learn: 3.7510421
                                  total: 228ms
                                                   remaining: 2.94s
72:
        learn: 3.6977003
                                  total: 231ms
                                                   remaining: 2.93s
73:
        learn: 3.6432463
                                  total: 234ms
                                                   remaining: 2.93s
74:
        learn: 3.5919643
                                  total: 237ms
                                                   remaining: 2.92s
75:
        learn: 3.5452340
                                  total: 240ms
                                                   remaining: 2.92s
76:
        learn: 3.4875629
                                  total: 244ms
                                                   remaining: 2.92s
77:
        learn: 3.4393888
                                  total: 248ms
                                                   remaining: 2.93s
        learn: 3.3891124
78:
                                  total: 252ms
                                                   remaining: 2.93s
79:
        learn: 3.3449682
                                  total: 255ms
                                                   remaining: 2.93s
:08
        learn: 3.3112322
                                  total: 259ms
                                                   remaining: 2.94s
81:
        learn: 3.2762681
                                  total: 262ms
                                                   remaining: 2.94s
82:
        learn: 3.2438972
                                  total: 266ms
                                                   remaining: 2.94s
83:
        learn: 3.2074396
                                  total: 269ms
                                                   remaining: 2.94s
84:
        learn: 3.1724368
                                  total: 273ms
                                                   remaining: 2.94s
                                  total: 278ms
85:
        learn: 3.1402333
                                                   remaining: 2.95s
        learn: 3.1104174
86:
                                  total: 282ms
                                                   remaining: 2.96s
87:
        learn: 3.0867141
                                  total: 286ms
                                                   remaining: 2.96s
88:
        learn: 3.0637652
                                  total: 289ms
                                                   remaining: 2.95s
89:
        learn: 3.0318587
                                  total: 291ms
                                                   remaining: 2.95s
90:
        learn: 3.0021298
                                  total: 294ms
                                                   remaining: 2.94s
91:
        learn: 2.9718748
                                  total: 297ms
                                                   remaining: 2.93s
92:
        learn: 2.9453332
                                  total: 301ms
                                                   remaining: 2.94s
93:
        learn: 2.9228903
                                  total: 305ms
                                                   remaining: 2.94s
94:
        learn: 2.9049435
                                  total: 308ms
                                                   remaining: 2.93s
95:
        learn: 2.8823503
                                  total: 311ms
                                                   remaining: 2.93s
96:
        learn: 2.8571359
                                  total: 314ms
                                                   remaining: 2.93s
        learn: 2.8239858
97:
                                  total: 318ms
                                                   remaining: 2.92s
98:
        learn: 2.7988662
                                  total: 320ms
                                                   remaining: 2.92s
99:
        learn: 2.7795700
                                  total: 323ms
                                                   remaining: 2.91s
100:
        learn: 2.7661620
                                  total: 326ms
                                                   remaining: 2.9s
101:
        learn: 2.7437838
                                  total: 329ms
                                                   remaining: 2.9s
102:
        learn: 2.7203676
                                  total: 332ms
                                                   remaining: 2.89s
103:
        learn: 2.7049166
                                  total: 335ms
                                                   remaining: 2.88s
104:
        learn: 2.6853433
                                  total: 338ms
                                                   remaining: 2.88s
105:
        learn: 2.6548068
                                  total: 340ms
                                                   remaining: 2.87s
106:
        learn: 2.6382367
                                  total: 343ms
                                                   remaining: 2.86s
107:
        learn: 2.6221278
                                  total: 346ms
                                                   remaining: 2.86s
108:
        learn: 2.6050727
                                  total: 349ms
                                                   remaining: 2.85s
109:
        learn: 2.5787249
                                  total: 352ms
                                                   remaining: 2.85s
110:
        learn: 2.5552406
                                  total: 355ms
                                                   remaining: 2.84s
111:
        learn: 2.5364044
                                  total: 358ms
                                                   remaining: 2.83s
112:
        learn: 2.5203273
                                  total: 361ms
                                                   remaining: 2.83s
113:
        learn: 2.5034831
                                  total: 364ms
                                                   remaining: 2.83s
114:
                                                   remaining: 2.82s
        learn: 2.4909087
                                  total: 367ms
115:
        learn: 2.4776292
                                  total: 370ms
                                                   remaining: 2.82s
116:
        learn: 2.4579739
                                  total: 372ms
                                                   remaining: 2.81s
117:
        learn: 2.4436615
                                  total: 375ms
                                                   remaining: 2.81s
118:
        learn: 2.4261823
                                  total: 378ms
                                                   remaining: 2.8s
```

```
119:
        learn: 2.4037128
                                  total: 383ms
                                                   remaining: 2.81s
120:
        learn: 2.3890078
                                  total: 386ms
                                                   remaining: 2.81s
        learn: 2.3688000
121:
                                  total: 390ms
                                                   remaining: 2.81s
                                  total: 394ms
122:
        learn: 2.3461053
                                                   remaining: 2.81s
123:
        learn: 2.3249298
                                  total: 398ms
                                                   remaining: 2.81s
124:
        learn: 2.3120443
                                  total: 401ms
                                                   remaining: 2.81s
125:
        learn: 2.2990560
                                  total: 405ms
                                                   remaining: 2.81s
126:
        learn: 2.2817053
                                  total: 422ms
                                                   remaining: 2.9s
127:
        learn: 2.2731192
                                  total: 426ms
                                                   remaining: 2.9s
128:
        learn: 2.2660762
                                  total: 430ms
                                                   remaining: 2.9s
129:
        learn: 2.2548132
                                  total: 435ms
                                                   remaining: 2.91s
130:
        learn: 2.2313658
                                  total: 439ms
                                                   remaining: 2.91s
131:
        learn: 2.2246949
                                  total: 442ms
                                                   remaining: 2.91s
132:
        learn: 2.2062653
                                  total: 446ms
                                                   remaining: 2.9s
        learn: 2.1939508
133:
                                  total: 449ms
                                                   remaining: 2.9s
        learn: 2.1813105
134:
                                  total: 452ms
                                                   remaining: 2.89s
135:
        learn: 2.1655701
                                  total: 455ms
                                                   remaining: 2.89s
136:
        learn: 2.1541962
                                  total: 457ms
                                                   remaining: 2.88s
137:
        learn: 2.1437254
                                  total: 460ms
                                                   remaining: 2.87s
        learn: 2.1299135
138:
                                  total: 463ms
                                                   remaining: 2.87s
139:
        learn: 2.1209984
                                  total: 466ms
                                                   remaining: 2.86s
140:
        learn: 2.1089921
                                  total: 469ms
                                                   remaining: 2.85s
141:
        learn: 2.0928033
                                  total: 472ms
                                                   remaining: 2.85s
142:
        learn: 2.0778211
                                  total: 475ms
                                                   remaining: 2.84s
143:
        learn: 2.0679370
                                  total: 477ms
                                                   remaining: 2.84s
        learn: 2.0576085
                                  total: 480ms
144:
                                                   remaining: 2.83s
145:
                                  total: 483ms
        learn: 2.0508412
                                                   remaining: 2.82s
        learn: 2.0361554
146:
                                  total: 486ms
                                                   remaining: 2.82s
147:
        learn: 2.0244569
                                  total: 489ms
                                                   remaining: 2.81s
148:
        learn: 2.0161657
                                  total: 491ms
                                                   remaining: 2.81s
149:
        learn: 2.0078693
                                  total: 494ms
                                                   remaining: 2.8s
150:
        learn: 1.9887191
                                  total: 497ms
                                                   remaining: 2.79s
        learn: 1.9697801
151:
                                  total: 500ms
                                                   remaining: 2.79s
152:
        learn: 1.9530981
                                  total: 503ms
                                                   remaining: 2.78s
153:
        learn: 1.9457219
                                  total: 505ms
                                                   remaining: 2.78s
154:
        learn: 1.9349841
                                  total: 508ms
                                                   remaining: 2.77s
155:
        learn: 1.9246724
                                  total: 511ms
                                                   remaining: 2.76s
156:
        learn: 1.9134858
                                  total: 514ms
                                                   remaining: 2.76s
157:
        learn: 1.9045653
                                  total: 517ms
                                                   remaining: 2.75s
158:
        learn: 1.8968139
                                  total: 519ms
                                                   remaining: 2.75s
159:
        learn: 1.8880963
                                  total: 522ms
                                                   remaining: 2.74s
160:
        learn: 1.8791101
                                  total: 525ms
                                                   remaining: 2.74s
161:
        learn: 1.8714039
                                  total: 528ms
                                                   remaining: 2.73s
162:
        learn: 1.8597013
                                  total: 531ms
                                                   remaining: 2.73s
163:
        learn: 1.8549224
                                  total: 534ms
                                                   remaining: 2.72s
164:
        learn: 1.8485729
                                  total: 537ms
                                                   remaining: 2.71s
165:
        learn: 1.8402424
                                  total: 539ms
                                                   remaining: 2.71s
        learn: 1.8342744
                                  total: 542ms
166:
                                                   remaining: 2.7s
167:
        learn: 1.8219503
                                  total: 545ms
                                                   remaining: 2.7s
168:
        learn: 1.8122816
                                  total: 548ms
                                                   remaining: 2.69s
169:
        learn: 1.8028968
                                  total: 551ms
                                                   remaining: 2.69s
170:
        learn: 1.7901388
                                  total: 554ms
                                                   remaining: 2.69s
171:
        learn: 1.7850825
                                  total: 557ms
                                                   remaining: 2.68s
172:
        learn: 1.7714768
                                  total: 560ms
                                                   remaining: 2.67s
173:
        learn: 1.7681030
                                  total: 562ms
                                                   remaining: 2.67s
174:
                                                   remaining: 2.66s
        learn: 1.7600765
                                  total: 565ms
175:
        learn: 1.7523849
                                  total: 568ms
                                                   remaining: 2.66s
176:
        learn: 1.7458902
                                  total: 571ms
                                                   remaining: 2.65s
                                  total: 573ms
177:
        learn: 1.7370505
                                                   remaining: 2.65s
178:
        learn: 1.7223764
                                  total: 576ms
                                                   remaining: 2.64s
```

```
total: 579ms
179:
        learn: 1.7114492
                                                   remaining: 2.64s
180:
        learn: 1.7051347
                                  total: 583ms
                                                   remaining: 2.64s
181:
        learn: 1.6975230
                                  total: 587ms
                                                   remaining: 2.64s
                                  total: 590ms
182:
        learn: 1.6944195
                                                   remaining: 2.63s
183:
        learn: 1.6810150
                                  total: 594ms
                                                   remaining: 2.63s
184:
        learn: 1.6748715
                                  total: 597ms
                                                   remaining: 2.63s
185:
        learn: 1.6662580
                                  total: 602ms
                                                   remaining: 2.64s
186:
        learn: 1.6585370
                                  total: 606ms
                                                   remaining: 2.64s
187:
        learn: 1.6504778
                                  total: 611ms
                                                   remaining: 2.64s
188:
        learn: 1.6445295
                                  total: 613ms
                                                   remaining: 2.63s
189:
        learn: 1.6375821
                                  total: 617ms
                                                   remaining: 2.63s
190:
        learn: 1.6325751
                                  total: 619ms
                                                   remaining: 2.62s
191:
        learn: 1.6262722
                                  total: 622ms
                                                   remaining: 2.62s
192:
        learn: 1.6137156
                                  total: 625ms
                                                   remaining: 2.61s
193:
        learn: 1.6089985
                                  total: 628ms
                                                   remaining: 2.61s
        learn: 1.6048490
194:
                                  total: 631ms
                                                   remaining: 2.6s
195:
        learn: 1.6000348
                                  total: 634ms
                                                   remaining: 2.6s
196:
        learn: 1.5964588
                                  total: 636ms
                                                   remaining: 2.59s
197:
                                  total: 639ms
        learn: 1.5839838
                                                   remaining: 2.59s
198:
        learn: 1.5770024
                                  total: 642ms
                                                   remaining: 2.58s
199:
        learn: 1.5721635
                                  total: 645ms
                                                   remaining: 2.58s
200:
        learn: 1.5625259
                                  total: 648ms
                                                   remaining: 2.58s
201:
        learn: 1.5593069
                                  total: 651ms
                                                   remaining: 2.57s
202:
        learn: 1.5542659
                                  total: 654ms
                                                   remaining: 2.57s
203:
        learn: 1.5487686
                                  total: 657ms
                                                   remaining: 2.56s
        learn: 1.5423450
                                  total: 660ms
204:
                                                   remaining: 2.56s
205:
        learn: 1.5350967
                                  total: 662ms
                                                   remaining: 2.55s
206:
        learn: 1.5311094
                                  total: 665ms
                                                   remaining: 2.55s
        learn: 1.5231725
207:
                                  total: 668ms
                                                   remaining: 2.54s
208:
        learn: 1.5177539
                                  total: 671ms
                                                   remaining: 2.54s
209:
        learn: 1.5113523
                                  total: 674ms
                                                   remaining: 2.54s
210:
        learn: 1.5057808
                                  total: 677ms
                                                   remaining: 2.53s
211:
        learn: 1.4975463
                                  total: 679ms
                                                   remaining: 2.52s
212:
        learn: 1.4893964
                                  total: 682ms
                                                   remaining: 2.52s
        learn: 1.4814371
                                  total: 685ms
213:
                                                   remaining: 2.52s
214:
        learn: 1.4774757
                                  total: 688ms
                                                   remaining: 2.51s
215:
        learn: 1.4734344
                                  total: 691ms
                                                   remaining: 2.51s
216:
        learn: 1.4682871
                                  total: 694ms
                                                   remaining: 2.5s
217:
        learn: 1.4623388
                                  total: 697ms
                                                   remaining: 2.5s
218:
        learn: 1.4580390
                                  total: 699ms
                                                   remaining: 2.49s
219:
        learn: 1.4498249
                                  total: 702ms
                                                   remaining: 2.49s
220:
        learn: 1.4456747
                                  total: 705ms
                                                   remaining: 2.48s
221:
        learn: 1.4381545
                                  total: 708ms
                                                   remaining: 2.48s
222:
        learn: 1.4344406
                                  total: 711ms
                                                   remaining: 2.48s
                                  total: 714ms
223:
        learn: 1.4277815
                                                   remaining: 2.47s
224:
        learn: 1.4234268
                                  total: 717ms
                                                   remaining: 2.47s
225:
        learn: 1.4173960
                                  total: 720ms
                                                   remaining: 2.47s
        learn: 1.4125541
                                  total: 723ms
226:
                                                   remaining: 2.46s
227:
        learn: 1.4060601
                                  total: 726ms
                                                   remaining: 2.46s
                                  total: 729ms
228:
        learn: 1.3997606
                                                   remaining: 2.45s
229:
        learn: 1.3953754
                                  total: 731ms
                                                   remaining: 2.45s
230:
        learn: 1.3923829
                                  total: 734ms
                                                   remaining: 2.44s
231:
        learn: 1.3866935
                                  total: 737ms
                                                   remaining: 2.44s
232:
        learn: 1.3832735
                                  total: 739ms
                                                   remaining: 2.43s
233:
        learn: 1.3776787
                                  total: 742ms
                                                   remaining: 2.43s
234:
        learn: 1.3738502
                                  total: 745ms
                                                   remaining: 2.42s
235:
        learn: 1.3670419
                                  total: 748ms
                                                   remaining: 2.42s
236:
        learn: 1.3628291
                                  total: 750ms
                                                   remaining: 2.42s
237:
        learn: 1.3566624
                                  total: 753ms
                                                   remaining: 2.41s
238:
        learn: 1.3525008
                                  total: 756ms
                                                   remaining: 2.41s
```

```
239:
        learn: 1.3459001
                                  total: 760ms
                                                   remaining: 2.41s
240:
        learn: 1.3397453
                                  total: 764ms
                                                   remaining: 2.4s
                                  total: 767ms
241:
        learn: 1.3353580
                                                   remaining: 2.4s
242:
        learn: 1.3300845
                                  total: 770ms
                                                   remaining: 2.4s
243:
        learn: 1.3233534
                                  total: 774ms
                                                   remaining: 2.4s
244:
        learn: 1.3207100
                                  total: 778ms
                                                   remaining: 2.4s
245:
        learn: 1.3158194
                                  total: 781ms
                                                   remaining: 2.39s
246:
        learn: 1.3134906
                                  total: 784ms
                                                   remaining: 2.39s
247:
        learn: 1.3097856
                                  total: 787ms
                                                   remaining: 2.38s
248:
        learn: 1.3028968
                                  total: 791ms
                                                   remaining: 2.39s
249:
        learn: 1.2997386
                                  total: 796ms
                                                   remaining: 2.39s
250:
        learn: 1.2968402
                                  total: 799ms
                                                   remaining: 2.38s
251:
        learn: 1.2937174
                                  total: 804ms
                                                   remaining: 2.39s
252:
        learn: 1.2886389
                                  total: 808ms
                                                   remaining: 2.39s
253:
        learn: 1.2854463
                                  total: 812ms
                                                   remaining: 2.38s
        learn: 1.2801031
254:
                                  total: 814ms
                                                   remaining: 2.38s
255:
        learn: 1.2766389
                                  total: 818ms
                                                   remaining: 2.38s
256:
        learn: 1.2725126
                                  total: 822ms
                                                   remaining: 2.38s
257:
        learn: 1.2692392
                                  total: 826ms
                                                   remaining: 2.37s
258:
        learn: 1.2632383
                                  total: 829ms
                                                   remaining: 2.37s
259:
        learn: 1.2583172
                                  total: 832ms
                                                   remaining: 2.37s
260:
        learn: 1.2533391
                                  total: 835ms
                                                   remaining: 2.36s
261:
        learn: 1.2517167
                                  total: 839ms
                                                   remaining: 2.36s
262:
        learn: 1.2483625
                                  total: 842ms
                                                   remaining: 2.36s
263:
        learn: 1.2447169
                                  total: 845ms
                                                   remaining: 2.35s
        learn: 1.2428859
                                  total: 848ms
264:
                                                   remaining: 2.35s
265:
                                                   remaining: 2.35s
        learn: 1.2382012
                                  total: 851ms
266:
        learn: 1.2356189
                                  total: 855ms
                                                   remaining: 2.35s
        learn: 1.2320549
267:
                                  total: 858ms
                                                   remaining: 2.34s
268:
        learn: 1.2282388
                                  total: 861ms
                                                   remaining: 2.34s
269:
        learn: 1.2235636
                                  total: 864ms
                                                   remaining: 2.33s
270:
        learn: 1.2190922
                                  total: 867ms
                                                   remaining: 2.33s
        learn: 1.2154316
271:
                                  total: 870ms
                                                   remaining: 2.33s
272:
        learn: 1.2132321
                                  total: 873ms
                                                   remaining: 2.33s
273:
        learn: 1.2105495
                                  total: 876ms
                                                   remaining: 2.32s
274:
        learn: 1.2074767
                                  total: 879ms
                                                   remaining: 2.32s
275:
        learn: 1.2036820
                                  total: 883ms
                                                   remaining: 2.32s
276:
        learn: 1.1983489
                                  total: 887ms
                                                   remaining: 2.32s
277:
        learn: 1.1963944
                                  total: 891ms
                                                   remaining: 2.31s
278:
        learn: 1.1911812
                                  total: 896ms
                                                   remaining: 2.32s
279:
        learn: 1.1877661
                                  total: 904ms
                                                   remaining: 2.33s
280:
        learn: 1.1824223
                                  total: 908ms
                                                   remaining: 2.32s
        learn: 1.1791916
281:
                                  total: 912ms
                                                   remaining: 2.32s
282:
        learn: 1.1757547
                                  total: 916ms
                                                   remaining: 2.32s
283:
        learn: 1.1735567
                                  total: 920ms
                                                   remaining: 2.32s
284:
        learn: 1.1709586
                                  total: 924ms
                                                   remaining: 2.32s
285:
        learn: 1.1687234
                                  total: 928ms
                                                   remaining: 2.32s
        learn: 1.1659727
                                  total: 933ms
286:
                                                   remaining: 2.32s
287:
        learn: 1.1614052
                                  total: 937ms
                                                   remaining: 2.31s
288:
        learn: 1.1582931
                                  total: 941ms
                                                   remaining: 2.31s
289:
        learn: 1.1556616
                                  total: 944ms
                                                   remaining: 2.31s
290:
        learn: 1.1514066
                                  total: 949ms
                                                   remaining: 2.31s
291:
        learn: 1.1491178
                                  total: 953ms
                                                   remaining: 2.31s
292:
        learn: 1.1449938
                                  total: 957ms
                                                   remaining: 2.31s
293:
        learn: 1.1431372
                                  total: 960ms
                                                   remaining: 2.31s
294:
        learn: 1.1386568
                                  total: 965ms
                                                   remaining: 2.31s
295:
        learn: 1.1340958
                                  total: 970ms
                                                   remaining: 2.31s
296:
        learn: 1.1306531
                                  total: 974ms
                                                   remaining: 2.31s
                                  total: 978ms
297:
        learn: 1.1286482
                                                   remaining: 2.3s
298:
        learn: 1.1262167
                                  total: 982ms
                                                   remaining: 2.3s
```

```
299:
        learn: 1.1233199
                                  total: 986ms
                                                   remaining: 2.3s
300:
        learn: 1.1196615
                                  total: 990ms
                                                   remaining: 2.3s
301:
        learn: 1.1168438
                                  total: 996ms
                                                   remaining: 2.3s
302:
        learn: 1.1117854
                                  total: 1000ms
                                                   remaining: 2.3s
303:
        learn: 1.1106727
                                  total: 1s
                                                   remaining: 2.29s
304:
        learn: 1.1070849
                                  total: 1s
                                                   remaining: 2.29s
305:
        learn: 1.1035881
                                  total: 1.01s
                                                   remaining: 2.29s
306:
        learn: 1.1001368
                                  total: 1.01s
                                                   remaining: 2.29s
307:
        learn: 1.0973117
                                  total: 1.02s
                                                   remaining: 2.28s
308:
        learn: 1.0944546
                                  total: 1.02s
                                                   remaining: 2.28s
        learn: 1.0916029
309:
                                  total: 1.02s
                                                   remaining: 2.28s
310:
        learn: 1.0879371
                                  total: 1.03s
                                                   remaining: 2.27s
311:
        learn: 1.0853470
                                  total: 1.03s
                                                   remaining: 2.27s
312:
        learn: 1.0828155
                                  total: 1.03s
                                                   remaining: 2.27s
313:
        learn: 1.0797224
                                  total: 1.04s
                                                   remaining: 2.26s
        learn: 1.0778645
                                  total: 1.04s
314:
                                                   remaining: 2.26s
315:
        learn: 1.0762242
                                  total: 1.04s
                                                   remaining: 2.26s
316:
        learn: 1.0735624
                                  total: 1.05s
                                                   remaining: 2.25s
        learn: 1.0702377
317:
                                  total: 1.05s
                                                   remaining: 2.25s
318:
        learn: 1.0687107
                                  total: 1.05s
                                                   remaining: 2.25s
319:
        learn: 1.0645335
                                  total: 1.06s
                                                   remaining: 2.25s
320:
        learn: 1.0625600
                                  total: 1.06s
                                                   remaining: 2.24s
321:
        learn: 1.0603239
                                  total: 1.06s
                                                   remaining: 2.24s
322:
        learn: 1.0581049
                                  total: 1.06s
                                                   remaining: 2.23s
323:
        learn: 1.0560522
                                  total: 1.07s
                                                   remaining: 2.23s
                                  total: 1.07s
324:
        learn: 1.0542509
                                                   remaining: 2.23s
325:
        learn: 1.0510965
                                  total: 1.08s
                                                   remaining: 2.23s
326:
        learn: 1.0488739
                                  total: 1.08s
                                                   remaining: 2.22s
327:
        learn: 1.0464891
                                  total: 1.08s
                                                   remaining: 2.22s
328:
        learn: 1.0441560
                                  total: 1.08s
                                                   remaining: 2.21s
        learn: 1.0408535
329:
                                  total: 1.09s
                                                   remaining: 2.21s
330:
        learn: 1.0386005
                                  total: 1.09s
                                                   remaining: 2.21s
331:
        learn: 1.0362555
                                  total: 1.09s
                                                   remaining: 2.2s
332:
        learn: 1.0339042
                                  total: 1.1s
                                                   remaining: 2.2s
        learn: 1.0324287
333:
                                  total: 1.1s
                                                   remaining: 2.2s
334:
        learn: 1.0304712
                                  total: 1.11s
                                                   remaining: 2.2s
335:
        learn: 1.0282569
                                  total: 1.11s
                                                   remaining: 2.19s
336:
        learn: 1.0262475
                                  total: 1.11s
                                                   remaining: 2.19s
337:
        learn: 1.0220959
                                  total: 1.11s
                                                   remaining: 2.18s
338:
        learn: 1.0197711
                                  total: 1.12s
                                                   remaining: 2.18s
339:
        learn: 1.0171275
                                  total: 1.12s
                                                   remaining: 2.18s
340:
        learn: 1.0144526
                                  total: 1.13s
                                                   remaining: 2.18s
341:
        learn: 1.0123255
                                  total: 1.13s
                                                   remaining: 2.18s
342:
        learn: 1.0097165
                                  total: 1.14s
                                                   remaining: 2.17s
343:
        learn: 1.0064628
                                  total: 1.14s
                                                   remaining: 2.17s
344:
        learn: 1.0042817
                                  total: 1.14s
                                                   remaining: 2.17s
345:
        learn: 1.0023423
                                  total: 1.14s
                                                   remaining: 2.16s
        learn: 1.0017915
                                  total: 1.15s
346:
                                                   remaining: 2.16s
347:
        learn: 0.9992011
                                  total: 1.15s
                                                   remaining: 2.16s
        learn: 0.9973174
348:
                                  total: 1.15s
                                                   remaining: 2.15s
349:
        learn: 0.9952629
                                  total: 1.16s
                                                   remaining: 2.15s
350:
        learn: 0.9917436
                                  total: 1.16s
                                                   remaining: 2.15s
351:
        learn: 0.9891242
                                  total: 1.16s
                                                   remaining: 2.14s
352:
        learn: 0.9878238
                                  total: 1.17s
                                                   remaining: 2.14s
353:
        learn: 0.9856824
                                  total: 1.17s
                                                   remaining: 2.14s
        learn: 0.9845781
354:
                                  total: 1.18s
                                                   remaining: 2.13s
355:
        learn: 0.9827016
                                  total: 1.18s
                                                   remaining: 2.13s
356:
                                  total: 1.18s
        learn: 0.9802512
                                                   remaining: 2.13s
357:
        learn: 0.9781899
                                  total: 1.19s
                                                   remaining: 2.13s
358:
        learn: 0.9749388
                                  total: 1.19s
                                                   remaining: 2.12s
```

```
359:
        learn: 0.9729896
                                  total: 1.19s
                                                   remaining: 2.12s
360:
        learn: 0.9717611
                                  total: 1.2s
                                                   remaining: 2.12s
361:
        learn: 0.9702092
                                  total: 1.2s
                                                   remaining: 2.12s
        learn: 0.9683330
362:
                                  total: 1.2s
                                                   remaining: 2.11s
363:
        learn: 0.9665412
                                  total: 1.21s
                                                   remaining: 2.11s
364:
        learn: 0.9635244
                                  total: 1.21s
                                                   remaining: 2.1s
365:
        learn: 0.9618595
                                  total: 1.21s
                                                   remaining: 2.1s
366:
        learn: 0.9592969
                                  total: 1.22s
                                                   remaining: 2.1s
367:
        learn: 0.9573132
                                  total: 1.22s
                                                   remaining: 2.1s
368:
        learn: 0.9556907
                                  total: 1.22s
                                                   remaining: 2.09s
369:
        learn: 0.9540323
                                  total: 1.23s
                                                   remaining: 2.09s
370:
        learn: 0.9526465
                                  total: 1.23s
                                                   remaining: 2.08s
371:
        learn: 0.9512801
                                  total: 1.23s
                                                   remaining: 2.08s
372:
        learn: 0.9492971
                                  total: 1.24s
                                                   remaining: 2.08s
373:
        learn: 0.9473886
                                  total: 1.24s
                                                   remaining: 2.07s
                                  total: 1.24s
374:
        learn: 0.9452669
                                                   remaining: 2.07s
375:
        learn: 0.9427195
                                  total: 1.25s
                                                   remaining: 2.07s
376:
        learn: 0.9410358
                                  total: 1.25s
                                                   remaining: 2.06s
377:
        learn: 0.9397346
                                  total: 1.25s
                                                   remaining: 2.06s
378:
        learn: 0.9369982
                                  total: 1.26s
                                                   remaining: 2.06s
379:
        learn: 0.9353395
                                  total: 1.26s
                                                   remaining: 2.06s
380:
        learn: 0.9332925
                                  total: 1.26s
                                                   remaining: 2.05s
381:
        learn: 0.9312678
                                  total: 1.27s
                                                   remaining: 2.05s
        learn: 0.9300822
382:
                                  total: 1.27s
                                                   remaining: 2.05s
383:
        learn: 0.9270317
                                  total: 1.27s
                                                   remaining: 2.04s
        learn: 0.9251186
                                  total: 1.28s
384:
                                                   remaining: 2.04s
385:
                                  total: 1.28s
        learn: 0.9243385
                                                   remaining: 2.04s
386:
        learn: 0.9226841
                                  total: 1.28s
                                                   remaining: 2.03s
                                  total: 1.29s
387:
        learn: 0.9204073
                                                   remaining: 2.03s
388:
        learn: 0.9187708
                                  total: 1.29s
                                                   remaining: 2.03s
389:
        learn: 0.9179841
                                  total: 1.29s
                                                   remaining: 2.02s
390:
        learn: 0.9167366
                                  total: 1.3s
                                                   remaining: 2.02s
391:
        learn: 0.9154860
                                  total: 1.3s
                                                   remaining: 2.02s
392:
        learn: 0.9135239
                                  total: 1.3s
                                                   remaining: 2.01s
        learn: 0.9116611
                                  total: 1.31s
393:
                                                   remaining: 2.01s
394:
        learn: 0.9109430
                                  total: 1.31s
                                                   remaining: 2.01s
395:
        learn: 0.9089861
                                  total: 1.31s
                                                   remaining: 2s
396:
        learn: 0.9070520
                                  total: 1.32s
                                                   remaining: 2s
397:
        learn: 0.9042082
                                  total: 1.32s
                                                   remaining: 2s
398:
        learn: 0.9019042
                                  total: 1.32s
                                                   remaining: 1.99s
399:
        learn: 0.9011558
                                  total: 1.33s
                                                   remaining: 1.99s
400:
        learn: 0.9006795
                                  total: 1.33s
                                                   remaining: 1.99s
        learn: 0.8986881
401:
                                  total: 1.33s
                                                   remaining: 1.98s
402:
        learn: 0.8968356
                                  total: 1.34s
                                                   remaining: 1.98s
403:
        learn: 0.8949240
                                  total: 1.34s
                                                   remaining: 1.98s
404:
        learn: 0.8928428
                                  total: 1.34s
                                                   remaining: 1.97s
405:
        learn: 0.8910910
                                  total: 1.34s
                                                   remaining: 1.97s
        learn: 0.8904832
                                  total: 1.35s
406:
                                                   remaining: 1.97s
407:
        learn: 0.8888328
                                  total: 1.35s
                                                   remaining: 1.96s
                                  total: 1.35s
408:
        learn: 0.8870393
                                                   remaining: 1.96s
409:
        learn: 0.8850788
                                  total: 1.36s
                                                   remaining: 1.96s
410:
        learn: 0.8833545
                                  total: 1.36s
                                                   remaining: 1.95s
411:
        learn: 0.8821245
                                  total: 1.36s
                                                   remaining: 1.95s
412:
                                  total: 1.37s
        learn: 0.8806746
                                                   remaining: 1.95s
413:
        learn: 0.8791065
                                  total: 1.38s
                                                   remaining: 1.95s
        learn: 0.8778471
414:
                                  total: 1.38s
                                                   remaining: 1.95s
415:
        learn: 0.8763879
                                  total: 1.38s
                                                   remaining: 1.94s
416:
                                  total: 1.39s
        learn: 0.8756087
                                                   remaining: 1.94s
417:
        learn: 0.8746302
                                  total: 1.39s
                                                   remaining: 1.94s
418:
        learn: 0.8728865
                                  total: 1.39s
                                                   remaining: 1.93s
```

```
419:
        learn: 0.8715694
                                  total: 1.4s
                                                   remaining: 1.93s
420:
        learn: 0.8698058
                                  total: 1.4s
                                                   remaining: 1.92s
421:
        learn: 0.8677819
                                  total: 1.4s
                                                   remaining: 1.92s
422:
        learn: 0.8656207
                                  total: 1.41s
                                                   remaining: 1.92s
423:
        learn: 0.8644396
                                  total: 1.41s
                                                   remaining: 1.91s
424:
        learn: 0.8626357
                                  total: 1.41s
                                                   remaining: 1.91s
425:
        learn: 0.8615177
                                  total: 1.41s
                                                   remaining: 1.9s
426:
        learn: 0.8599360
                                  total: 1.42s
                                                   remaining: 1.9s
427:
        learn: 0.8576605
                                  total: 1.42s
                                                   remaining: 1.9s
428:
        learn: 0.8565340
                                  total: 1.42s
                                                   remaining: 1.89s
429:
        learn: 0.8553063
                                  total: 1.43s
                                                   remaining: 1.89s
430:
        learn: 0.8539594
                                  total: 1.43s
                                                   remaining: 1.89s
431:
        learn: 0.8519198
                                  total: 1.43s
                                                   remaining: 1.88s
432:
        learn: 0.8496006
                                  total: 1.43s
                                                   remaining: 1.88s
433:
        learn: 0.8474206
                                  total: 1.44s
                                                   remaining: 1.87s
434:
        learn: 0.8467779
                                  total: 1.44s
                                                   remaining: 1.87s
435:
        learn: 0.8452896
                                  total: 1.44s
                                                   remaining: 1.86s
436:
        learn: 0.8435536
                                  total: 1.44s
                                                   remaining: 1.86s
437:
        learn: 0.8424267
                                  total: 1.45s
                                                   remaining: 1.86s
438:
        learn: 0.8413332
                                  total: 1.45s
                                                   remaining: 1.85s
439:
        learn: 0.8397592
                                  total: 1.45s
                                                   remaining: 1.85s
440:
        learn: 0.8395479
                                  total: 1.46s
                                                   remaining: 1.84s
441:
        learn: 0.8382934
                                  total: 1.46s
                                                   remaining: 1.84s
442:
        learn: 0.8370505
                                  total: 1.46s
                                                   remaining: 1.84s
443:
        learn: 0.8357069
                                  total: 1.46s
                                                   remaining: 1.83s
                                  total: 1.47s
444:
        learn: 0.8343431
                                                   remaining: 1.83s
445:
        learn: 0.8335547
                                                   remaining: 1.82s
                                  total: 1.47s
446:
        learn: 0.8307692
                                  total: 1.47s
                                                   remaining: 1.82s
447:
        learn: 0.8297112
                                  total: 1.48s
                                                   remaining: 1.82s
448:
        learn: 0.8283940
                                  total: 1.48s
                                                   remaining: 1.81s
449:
        learn: 0.8267162
                                  total: 1.48s
                                                   remaining: 1.81s
450:
        learn: 0.8247890
                                  total: 1.48s
                                                   remaining: 1.81s
451:
        learn: 0.8235603
                                  total: 1.49s
                                                   remaining: 1.8s
452:
        learn: 0.8214347
                                  total: 1.49s
                                                   remaining: 1.8s
        learn: 0.8201205
                                  total: 1.49s
453:
                                                   remaining: 1.79s
454:
        learn: 0.8196260
                                  total: 1.5s
                                                   remaining: 1.79s
455:
        learn: 0.8185525
                                  total: 1.5s
                                                   remaining: 1.79s
456:
        learn: 0.8166600
                                  total: 1.5s
                                                   remaining: 1.78s
457:
        learn: 0.8158141
                                  total: 1.5s
                                                   remaining: 1.78s
458:
        learn: 0.8149547
                                  total: 1.51s
                                                   remaining: 1.78s
459:
        learn: 0.8130255
                                  total: 1.51s
                                                   remaining: 1.77s
460:
        learn: 0.8124392
                                  total: 1.51s
                                                   remaining: 1.77s
        learn: 0.8106474
461:
                                  total: 1.51s
                                                   remaining: 1.76s
462:
        learn: 0.8086250
                                  total: 1.52s
                                                   remaining: 1.76s
463:
        learn: 0.8071948
                                  total: 1.52s
                                                   remaining: 1.76s
464:
        learn: 0.8060502
                                  total: 1.52s
                                                   remaining: 1.75s
465:
        learn: 0.8047999
                                  total: 1.53s
                                                   remaining: 1.75s
        learn: 0.8041914
                                  total: 1.53s
466:
                                                   remaining: 1.75s
467:
        learn: 0.8038129
                                  total: 1.53s
                                                   remaining: 1.74s
468:
        learn: 0.8024286
                                  total: 1.54s
                                                   remaining: 1.74s
469:
        learn: 0.8013587
                                  total: 1.54s
                                                   remaining: 1.74s
470:
        learn: 0.8004115
                                  total: 1.54s
                                                   remaining: 1.73s
471:
        learn: 0.7998876
                                  total: 1.54s
                                                   remaining: 1.73s
472:
        learn: 0.7976776
                                  total: 1.55s
                                                   remaining: 1.72s
473:
        learn: 0.7956810
                                  total: 1.55s
                                                   remaining: 1.72s
        learn: 0.7940927
474:
                                  total: 1.55s
                                                   remaining: 1.72s
475:
        learn: 0.7925015
                                  total: 1.56s
                                                   remaining: 1.71s
476:
        learn: 0.7912724
                                  total: 1.56s
                                                   remaining: 1.71s
477:
        learn: 0.7902779
                                  total: 1.56s
                                                   remaining: 1.71s
478:
        learn: 0.7895882
                                  total: 1.56s
                                                   remaining: 1.7s
```

```
479:
        learn: 0.7884294
                                  total: 1.57s
                                                   remaining: 1.7s
480:
        learn: 0.7873146
                                  total: 1.57s
                                                   remaining: 1.69s
481:
        learn: 0.7860611
                                  total: 1.57s
                                                   remaining: 1.69s
                                  total: 1.58s
482:
        learn: 0.7847311
                                                   remaining: 1.69s
483:
        learn: 0.7831570
                                  total: 1.58s
                                                   remaining: 1.69s
484:
        learn: 0.7825710
                                  total: 1.58s
                                                   remaining: 1.68s
485:
        learn: 0.7814075
                                  total: 1.59s
                                                   remaining: 1.68s
486:
        learn: 0.7801930
                                  total: 1.59s
                                                   remaining: 1.68s
487:
        learn: 0.7790320
                                  total: 1.6s
                                                   remaining: 1.68s
488:
        learn: 0.7777767
                                  total: 1.6s
                                                   remaining: 1.67s
489:
        learn: 0.7772108
                                  total: 1.6s
                                                   remaining: 1.67s
490:
        learn: 0.7763031
                                  total: 1.61s
                                                   remaining: 1.67s
491:
        learn: 0.7757347
                                  total: 1.61s
                                                   remaining: 1.66s
492:
        learn: 0.7748277
                                  total: 1.61s
                                                   remaining: 1.66s
493:
        learn: 0.7741430
                                  total: 1.62s
                                                   remaining: 1.66s
494:
        learn: 0.7733922
                                  total: 1.62s
                                                   remaining: 1.65s
495:
        learn: 0.7723286
                                  total: 1.62s
                                                   remaining: 1.65s
496:
        learn: 0.7712466
                                  total: 1.63s
                                                   remaining: 1.65s
497:
        learn: 0.7696691
                                  total: 1.63s
                                                   remaining: 1.64s
498:
        learn: 0.7688139
                                  total: 1.63s
                                                   remaining: 1.64s
499:
        learn: 0.7682623
                                  total: 1.64s
                                                   remaining: 1.64s
500:
        learn: 0.7671298
                                  total: 1.64s
                                                   remaining: 1.63s
                                  total: 1.64s
501:
        learn: 0.7662740
                                                   remaining: 1.63s
502:
        learn: 0.7642832
                                  total: 1.65s
                                                   remaining: 1.63s
503:
        learn: 0.7627420
                                  total: 1.65s
                                                   remaining: 1.63s
        learn: 0.7616690
                                  total: 1.65s
504:
                                                   remaining: 1.62s
505:
        learn: 0.7609826
                                  total: 1.66s
                                                   remaining: 1.62s
        learn: 0.7601763
506:
                                  total: 1.66s
                                                   remaining: 1.61s
        learn: 0.7591066
507:
                                  total: 1.67s
                                                   remaining: 1.61s
508:
        learn: 0.7580849
                                  total: 1.67s
                                                   remaining: 1.61s
509:
        learn: 0.7571549
                                  total: 1.67s
                                                   remaining: 1.6s
510:
        learn: 0.7562713
                                  total: 1.67s
                                                   remaining: 1.6s
511:
        learn: 0.7552275
                                  total: 1.68s
                                                   remaining: 1.6s
512:
        learn: 0.7548864
                                  total: 1.68s
                                                   remaining: 1.6s
        learn: 0.7530509
513:
                                  total: 1.68s
                                                   remaining: 1.59s
514:
        learn: 0.7511549
                                  total: 1.69s
                                                   remaining: 1.59s
515:
        learn: 0.7505796
                                  total: 1.69s
                                                   remaining: 1.59s
516:
        learn: 0.7496415
                                  total: 1.7s
                                                   remaining: 1.58s
517:
        learn: 0.7491774
                                  total: 1.7s
                                                   remaining: 1.58s
518:
        learn: 0.7487846
                                  total: 1.7s
                                                   remaining: 1.58s
519:
        learn: 0.7471149
                                  total: 1.7s
                                                   remaining: 1.57s
520:
        learn: 0.7464867
                                  total: 1.71s
                                                   remaining: 1.57s
521:
        learn: 0.7458095
                                  total: 1.71s
                                                   remaining: 1.57s
522:
        learn: 0.7451815
                                  total: 1.71s
                                                   remaining: 1.56s
523:
        learn: 0.7444928
                                  total: 1.72s
                                                   remaining: 1.56s
524:
        learn: 0.7429687
                                  total: 1.72s
                                                   remaining: 1.56s
525:
        learn: 0.7423217
                                  total: 1.73s
                                                   remaining: 1.55s
526:
        learn: 0.7407577
                                  total: 1.73s
                                                   remaining: 1.55s
                                  total: 1.73s
527:
        learn: 0.7395990
                                                   remaining: 1.55s
528:
        learn: 0.7381247
                                  total: 1.74s
                                                   remaining: 1.54s
529:
        learn: 0.7376559
                                  total: 1.74s
                                                   remaining: 1.54s
530:
        learn: 0.7374133
                                  total: 1.74s
                                                   remaining: 1.54s
531:
        learn: 0.7353955
                                  total: 1.75s
                                                   remaining: 1.54s
532:
        learn: 0.7341116
                                  total: 1.75s
                                                   remaining: 1.53s
533:
        learn: 0.7328864
                                  total: 1.75s
                                                   remaining: 1.53s
534:
        learn: 0.7324436
                                  total: 1.76s
                                                   remaining: 1.53s
535:
        learn: 0.7318137
                                  total: 1.76s
                                                   remaining: 1.52s
536:
        learn: 0.7310693
                                  total: 1.76s
                                                   remaining: 1.52s
537:
        learn: 0.7300463
                                  total: 1.76s
                                                   remaining: 1.52s
538:
        learn: 0.7294677
                                  total: 1.77s
                                                   remaining: 1.51s
```

```
539:
        learn: 0.7281237
                                  total: 1.77s
                                                   remaining: 1.51s
540:
        learn: 0.7273371
                                  total: 1.78s
                                                   remaining: 1.51s
541:
        learn: 0.7263852
                                  total: 1.78s
                                                   remaining: 1.5s
542:
        learn: 0.7252912
                                  total: 1.78s
                                                   remaining: 1.5s
543:
        learn: 0.7241615
                                  total: 1.79s
                                                   remaining: 1.5s
544:
        learn: 0.7236256
                                  total: 1.79s
                                                   remaining: 1.49s
545:
        learn: 0.7229175
                                  total: 1.79s
                                                   remaining: 1.49s
546:
        learn: 0.7218648
                                  total: 1.8s
                                                   remaining: 1.49s
547:
        learn: 0.7215500
                                  total: 1.8s
                                                   remaining: 1.49s
548:
        learn: 0.7211381
                                  total: 1.81s
                                                   remaining: 1.48s
549:
        learn: 0.7201340
                                  total: 1.81s
                                                   remaining: 1.48s
550:
        learn: 0.7183211
                                  total: 1.81s
                                                   remaining: 1.48s
551:
        learn: 0.7179626
                                  total: 1.81s
                                                   remaining: 1.47s
552:
        learn: 0.7170030
                                  total: 1.82s
                                                   remaining: 1.47s
553:
        learn: 0.7160448
                                  total: 1.82s
                                                   remaining: 1.47s
                                  total: 1.82s
554:
        learn: 0.7158013
                                                   remaining: 1.46s
555:
        learn: 0.7148409
                                  total: 1.83s
                                                   remaining: 1.46s
556:
        learn: 0.7134438
                                  total: 1.83s
                                                   remaining: 1.46s
557:
        learn: 0.7121882
                                  total: 1.83s
                                                   remaining: 1.45s
        learn: 0.7109324
558:
                                  total: 1.84s
                                                   remaining: 1.45s
559:
        learn: 0.7090452
                                  total: 1.84s
                                                   remaining: 1.45s
560:
        learn: 0.7084520
                                  total: 1.84s
                                                   remaining: 1.44s
                                  total: 1.85s
561:
        learn: 0.7075764
                                                   remaining: 1.44s
562:
        learn: 0.7065982
                                  total: 1.85s
                                                   remaining: 1.44s
563:
        learn: 0.7058233
                                  total: 1.85s
                                                   remaining: 1.43s
564:
        learn: 0.7049197
                                  total: 1.86s
                                                   remaining: 1.43s
565:
        learn: 0.7040521
                                  total: 1.86s
                                                   remaining: 1.43s
        learn: 0.7033703
566:
                                  total: 1.86s
                                                   remaining: 1.42s
        learn: 0.7021488
                                  total: 1.87s
567:
                                                   remaining: 1.42s
568:
        learn: 0.7016898
                                  total: 1.87s
                                                   remaining: 1.42s
569:
        learn: 0.7006810
                                  total: 1.88s
                                                   remaining: 1.41s
570:
        learn: 0.7003102
                                  total: 1.88s
                                                   remaining: 1.41s
571:
        learn: 0.6998697
                                  total: 1.88s
                                                   remaining: 1.41s
572:
        learn: 0.6985601
                                  total: 1.89s
                                                   remaining: 1.41s
573:
        learn: 0.6978579
                                  total: 1.89s
                                                   remaining: 1.4s
574:
        learn: 0.6970404
                                  total: 1.89s
                                                   remaining: 1.4s
575:
        learn: 0.6963961
                                  total: 1.9s
                                                   remaining: 1.4s
576:
        learn: 0.6962748
                                  total: 1.9s
                                                   remaining: 1.39s
577:
        learn: 0.6956705
                                  total: 1.9s
                                                   remaining: 1.39s
578:
        learn: 0.6952455
                                  total: 1.91s
                                                   remaining: 1.39s
        learn: 0.6942985
579:
                                  total: 1.91s
                                                   remaining: 1.38s
580:
        learn: 0.6934412
                                  total: 1.91s
                                                   remaining: 1.38s
581:
        learn: 0.6929906
                                  total: 1.92s
                                                   remaining: 1.38s
582:
        learn: 0.6919102
                                  total: 1.92s
                                                   remaining: 1.37s
583:
        learn: 0.6910315
                                  total: 1.92s
                                                   remaining: 1.37s
584:
        learn: 0.6891366
                                  total: 1.93s
                                                   remaining: 1.37s
585:
        learn: 0.6886540
                                  total: 1.93s
                                                   remaining: 1.36s
586:
        learn: 0.6872815
                                  total: 1.93s
                                                   remaining: 1.36s
587:
        learn: 0.6868224
                                  total: 1.94s
                                                   remaining: 1.36s
                                  total: 1.94s
588:
        learn: 0.6863662
                                                   remaining: 1.35s
589:
        learn: 0.6853039
                                  total: 1.94s
                                                   remaining: 1.35s
590:
        learn: 0.6843837
                                  total: 1.94s
                                                   remaining: 1.34s
591:
        learn: 0.6831613
                                  total: 1.95s
                                                   remaining: 1.34s
592:
        learn: 0.6823276
                                  total: 1.95s
                                                   remaining: 1.34s
593:
        learn: 0.6809075
                                  total: 1.95s
                                                   remaining: 1.33s
594:
        learn: 0.6800979
                                  total: 1.96s
                                                   remaining: 1.33s
595:
        learn: 0.6795496
                                  total: 1.96s
                                                   remaining: 1.33s
596:
                                  total: 1.96s
        learn: 0.6792884
                                                   remaining: 1.33s
597:
        learn: 0.6787458
                                  total: 1.97s
                                                   remaining: 1.32s
598:
        learn: 0.6775892
                                  total: 1.97s
                                                   remaining: 1.32s
```

```
599:
        learn: 0.6771450
                                  total: 1.98s
                                                   remaining: 1.32s
600:
        learn: 0.6761875
                                  total: 1.98s
                                                   remaining: 1.31s
601:
        learn: 0.6757404
                                  total: 1.98s
                                                   remaining: 1.31s
602:
        learn: 0.6750146
                                  total: 1.99s
                                                   remaining: 1.31s
603:
        learn: 0.6741520
                                  total: 1.99s
                                                   remaining: 1.31s
604:
        learn: 0.6729428
                                  total: 2s
                                                   remaining: 1.3s
605:
        learn: 0.6719259
                                  total: 2s
                                                   remaining: 1.3s
606:
        learn: 0.6708901
                                  total: 2s
                                                   remaining: 1.3s
607:
        learn: 0.6700355
                                  total: 2.01s
                                                   remaining: 1.29s
608:
        learn: 0.6686682
                                  total: 2.01s
                                                   remaining: 1.29s
609:
        learn: 0.6678933
                                  total: 2.01s
                                                   remaining: 1.29s
610:
        learn: 0.6668918
                                  total: 2.02s
                                                   remaining: 1.28s
611:
        learn: 0.6661088
                                  total: 2.02s
                                                   remaining: 1.28s
612:
        learn: 0.6648904
                                  total: 2.02s
                                                   remaining: 1.28s
613:
        learn: 0.6640959
                                  total: 2.02s
                                                   remaining: 1.27s
        learn: 0.6633112
614:
                                  total: 2.03s
                                                   remaining: 1.27s
                                  total: 2.03s
615:
        learn: 0.6625083
                                                   remaining: 1.27s
616:
        learn: 0.6620452
                                  total: 2.03s
                                                   remaining: 1.26s
        learn: 0.6619541
                                  total: 2.04s
617:
                                                   remaining: 1.26s
618:
        learn: 0.6610298
                                  total: 2.04s
                                                   remaining: 1.25s
619:
        learn: 0.6603393
                                  total: 2.04s
                                                   remaining: 1.25s
620:
        learn: 0.6595564
                                  total: 2.05s
                                                   remaining: 1.25s
621:
        learn: 0.6585493
                                  total: 2.05s
                                                   remaining: 1.25s
622:
        learn: 0.6578708
                                  total: 2.05s
                                                   remaining: 1.24s
623:
        learn: 0.6576243
                                  total: 2.06s
                                                   remaining: 1.24s
                                  total: 2.06s
624:
        learn: 0.6565974
                                                   remaining: 1.24s
625:
                                  total: 2.06s
        learn: 0.6557439
                                                   remaining: 1.23s
626:
        learn: 0.6551855
                                  total: 2.07s
                                                   remaining: 1.23s
627:
        learn: 0.6542620
                                  total: 2.07s
                                                   remaining: 1.23s
628:
        learn: 0.6529595
                                  total: 2.07s
                                                   remaining: 1.22s
629:
        learn: 0.6518294
                                  total: 2.08s
                                                   remaining: 1.22s
630:
        learn: 0.6509556
                                  total: 2.08s
                                                   remaining: 1.22s
631:
        learn: 0.6500063
                                  total: 2.08s
                                                   remaining: 1.21s
632:
        learn: 0.6492333
                                  total: 2.09s
                                                   remaining: 1.21s
633:
        learn: 0.6485628
                                  total: 2.09s
                                                   remaining: 1.21s
634:
        learn: 0.6481467
                                  total: 2.09s
                                                   remaining: 1.2s
635:
        learn: 0.6477776
                                  total: 2.1s
                                                   remaining: 1.2s
636:
        learn: 0.6471180
                                  total: 2.1s
                                                   remaining: 1.2s
637:
        learn: 0.6468454
                                  total: 2.1s
                                                   remaining: 1.19s
        learn: 0.6462922
638:
                                  total: 2.11s
                                                   remaining: 1.19s
639:
        learn: 0.6453098
                                  total: 2.11s
                                                   remaining: 1.19s
640:
        learn: 0.6450326
                                  total: 2.11s
                                                   remaining: 1.18s
641:
        learn: 0.6443367
                                  total: 2.12s
                                                   remaining: 1.18s
642:
        learn: 0.6431921
                                  total: 2.12s
                                                   remaining: 1.18s
643:
        learn: 0.6425968
                                  total: 2.12s
                                                   remaining: 1.17s
644:
        learn: 0.6418981
                                  total: 2.12s
                                                   remaining: 1.17s
645:
        learn: 0.6416578
                                  total: 2.13s
                                                   remaining: 1.17s
        learn: 0.6410828
                                  total: 2.13s
646:
                                                   remaining: 1.16s
647:
        learn: 0.6406099
                                  total: 2.13s
                                                   remaining: 1.16s
648:
        learn: 0.6396398
                                  total: 2.14s
                                                   remaining: 1.16s
649:
        learn: 0.6392447
                                  total: 2.14s
                                                   remaining: 1.15s
650:
        learn: 0.6386662
                                  total: 2.14s
                                                   remaining: 1.15s
651:
        learn: 0.6377677
                                  total: 2.15s
                                                   remaining: 1.15s
652:
        learn: 0.6372672
                                  total: 2.15s
                                                   remaining: 1.14s
653:
        learn: 0.6368502
                                  total: 2.15s
                                                   remaining: 1.14s
        learn: 0.6359783
654:
                                  total: 2.15s
                                                   remaining: 1.13s
655:
        learn: 0.6352402
                                  total: 2.16s
                                                   remaining: 1.13s
656:
        learn: 0.6341159
                                  total: 2.16s
                                                   remaining: 1.13s
657:
        learn: 0.6337298
                                  total: 2.16s
                                                   remaining: 1.12s
658:
        learn: 0.6328802
                                  total: 2.17s
                                                   remaining: 1.12s
```

```
659:
        learn: 0.6322632
                                  total: 2.17s
                                                   remaining: 1.12s
660:
        learn: 0.6318209
                                  total: 2.17s
                                                   remaining: 1.11s
661:
        learn: 0.6312234
                                  total: 2.18s
                                                   remaining: 1.11s
        learn: 0.6308945
662:
                                  total: 2.18s
                                                   remaining: 1.11s
663:
        learn: 0.6300197
                                  total: 2.19s
                                                   remaining: 1.11s
664:
        learn: 0.6295178
                                  total: 2.19s
                                                   remaining: 1.1s
665:
        learn: 0.6289206
                                  total: 2.2s
                                                   remaining: 1.1s
666:
        learn: 0.6283761
                                  total: 2.2s
                                                   remaining: 1.1s
667:
        learn: 0.6281108
                                  total: 2.2s
                                                   remaining: 1.09s
668:
        learn: 0.6277084
                                  total: 2.2s
                                                   remaining: 1.09s
                                  total: 2.21s
669:
        learn: 0.6271111
                                                   remaining: 1.09s
670:
        learn: 0.6265879
                                  total: 2.21s
                                                   remaining: 1.08s
671:
        learn: 0.6262400
                                  total: 2.21s
                                                   remaining: 1.08s
672:
        learn: 0.6257322
                                  total: 2.22s
                                                   remaining: 1.08s
673:
        learn: 0.6253656
                                  total: 2.22s
                                                   remaining: 1.07s
                                  total: 2.22s
674:
        learn: 0.6251064
                                                   remaining: 1.07s
675:
        learn: 0.6247502
                                  total: 2.23s
                                                   remaining: 1.07s
676:
        learn: 0.6243550
                                  total: 2.23s
                                                   remaining: 1.06s
        learn: 0.6239325
                                  total: 2.23s
677:
                                                   remaining: 1.06s
678:
        learn: 0.6235984
                                  total: 2.23s
                                                   remaining: 1.05s
679:
        learn: 0.6228764
                                  total: 2.24s
                                                   remaining: 1.05s
680:
        learn: 0.6221106
                                  total: 2.24s
                                                   remaining: 1.05s
681:
        learn: 0.6212529
                                  total: 2.24s
                                                   remaining: 1.04s
682:
        learn: 0.6207015
                                  total: 2.25s
                                                   remaining: 1.04s
683:
        learn: 0.6203377
                                  total: 2.25s
                                                   remaining: 1.04s
                                  total: 2.25s
684:
        learn: 0.6201437
                                                   remaining: 1.03s
                                  total: 2.25s
685:
        learn: 0.6196884
                                                   remaining: 1.03s
686:
        learn: 0.6186270
                                  total: 2.26s
                                                   remaining: 1.03s
                                  total: 2.26s
687:
        learn: 0.6184813
                                                   remaining: 1.02s
688:
        learn: 0.6178313
                                  total: 2.26s
                                                   remaining: 1.02s
689:
        learn: 0.6175567
                                  total: 2.27s
                                                   remaining: 1.02s
690:
        learn: 0.6170429
                                  total: 2.27s
                                                   remaining: 1.01s
691:
        learn: 0.6166040
                                  total: 2.27s
                                                   remaining: 1.01s
692:
        learn: 0.6159956
                                  total: 2.27s
                                                   remaining: 1.01s
        learn: 0.6152214
                                  total: 2.28s
693:
                                                   remaining: 1s
                                                   remaining: 1s
694:
        learn: 0.6147562
                                  total: 2.28s
695:
        learn: 0.6141648
                                  total: 2.28s
                                                   remaining: 998ms
696:
        learn: 0.6136544
                                  total: 2.29s
                                                   remaining: 994ms
                                  total: 2.29s
697:
        learn: 0.6128776
                                                   remaining: 991ms
698:
        learn: 0.6121796
                                  total: 2.29s
                                                   remaining: 988ms
        learn: 0.6117390
699:
                                  total: 2.3s
                                                   remaining: 984ms
700:
        learn: 0.6111607
                                  total: 2.3s
                                                   remaining: 981ms
701:
        learn: 0.6107199
                                  total: 2.3s
                                                   remaining: 978ms
702:
        learn: 0.6102866
                                  total: 2.31s
                                                   remaining: 974ms
703:
        learn: 0.6094960
                                  total: 2.31s
                                                   remaining: 971ms
704:
        learn: 0.6088606
                                  total: 2.32s
                                                   remaining: 969ms
705:
        learn: 0.6082647
                                  total: 2.32s
                                                   remaining: 967ms
        learn: 0.6074347
                                  total: 2.32s
                                                   remaining: 964ms
706:
                                  total: 2.33s
707:
        learn: 0.6069828
                                                   remaining: 960ms
                                  total: 2.33s
708:
        learn: 0.6064190
                                                   remaining: 957ms
709:
        learn: 0.6056203
                                  total: 2.33s
                                                   remaining: 954ms
710:
        learn: 0.6051599
                                  total: 2.34s
                                                   remaining: 951ms
711:
        learn: 0.6047526
                                  total: 2.34s
                                                   remaining: 947ms
712:
                                  total: 2.35s
        learn: 0.6045507
                                                   remaining: 944ms
713:
        learn: 0.6041003
                                  total: 2.35s
                                                   remaining: 941ms
        learn: 0.6036343
714:
                                  total: 2.35s
                                                   remaining: 937ms
715:
        learn: 0.6031471
                                  total: 2.35s
                                                   remaining: 934ms
716:
        learn: 0.6028178
                                  total: 2.36s
                                                   remaining: 930ms
717:
        learn: 0.6021780
                                  total: 2.36s
                                                   remaining: 927ms
718:
        learn: 0.6014934
                                  total: 2.36s
                                                   remaining: 924ms
```

```
719:
        learn: 0.6003032
                                  total: 2.37s
                                                   remaining: 920ms
720:
        learn: 0.5994963
                                  total: 2.37s
                                                   remaining: 917ms
721:
        learn: 0.5986888
                                  total: 2.38s
                                                   remaining: 915ms
                                  total: 2.38s
722:
        learn: 0.5979038
                                                   remaining: 911ms
723:
        learn: 0.5973313
                                  total: 2.38s
                                                   remaining: 908ms
724:
        learn: 0.5969276
                                  total: 2.38s
                                                   remaining: 905ms
725:
        learn: 0.5964158
                                  total: 2.39s
                                                   remaining: 902ms
726:
        learn: 0.5960987
                                  total: 2.39s
                                                   remaining: 898ms
727:
        learn: 0.5958082
                                  total: 2.4s
                                                   remaining: 896ms
728:
        learn: 0.5951866
                                  total: 2.4s
                                                   remaining: 893ms
729:
        learn: 0.5949171
                                  total: 2.4s
                                                   remaining: 890ms
730:
        learn: 0.5943526
                                  total: 2.41s
                                                   remaining: 886ms
731:
        learn: 0.5939545
                                  total: 2.41s
                                                   remaining: 883ms
732:
        learn: 0.5934567
                                  total: 2.42s
                                                   remaining: 880ms
733:
        learn: 0.5929050
                                  total: 2.42s
                                                   remaining: 876ms
734:
        learn: 0.5924799
                                  total: 2.42s
                                                   remaining: 873ms
                                  total: 2.42s
735:
        learn: 0.5922315
                                                   remaining: 869ms
736:
        learn: 0.5916693
                                  total: 2.43s
                                                   remaining: 866ms
737:
                                  total: 2.43s
        learn: 0.5910448
                                                   remaining: 863ms
738:
        learn: 0.5904933
                                  total: 2.43s
                                                   remaining: 859ms
739:
        learn: 0.5896959
                                  total: 2.44s
                                                   remaining: 856ms
740:
        learn: 0.5891469
                                  total: 2.44s
                                                   remaining: 852ms
741:
        learn: 0.5890210
                                  total: 2.44s
                                                   remaining: 849ms
742:
        learn: 0.5885510
                                  total: 2.44s
                                                   remaining: 846ms
743:
        learn: 0.5880179
                                  total: 2.45s
                                                   remaining: 842ms
                                  total: 2.45s
744:
        learn: 0.5876256
                                                   remaining: 839ms
745:
        learn: 0.5872203
                                  total: 2.45s
                                                   remaining: 835ms
746:
        learn: 0.5868540
                                  total: 2.46s
                                                   remaining: 832ms
747:
        learn: 0.5861493
                                  total: 2.46s
                                                   remaining: 829ms
748:
        learn: 0.5856499
                                  total: 2.46s
                                                   remaining: 825ms
749:
        learn: 0.5850944
                                  total: 2.46s
                                                   remaining: 822ms
750:
        learn: 0.5846957
                                  total: 2.47s
                                                   remaining: 819ms
751:
        learn: 0.5842503
                                  total: 2.47s
                                                   remaining: 815ms
752:
        learn: 0.5837265
                                  total: 2.47s
                                                   remaining: 812ms
753:
        learn: 0.5834018
                                  total: 2.48s
                                                   remaining: 808ms
        learn: 0.5830621
754:
                                  total: 2.48s
                                                   remaining: 805ms
755:
        learn: 0.5828847
                                  total: 2.48s
                                                   remaining: 801ms
756:
        learn: 0.5826698
                                  total: 2.48s
                                                   remaining: 798ms
757:
        learn: 0.5821328
                                  total: 2.49s
                                                   remaining: 795ms
758:
        learn: 0.5818053
                                  total: 2.49s
                                                   remaining: 791ms
759:
        learn: 0.5813277
                                  total: 2.5s
                                                   remaining: 788ms
760:
        learn: 0.5812872
                                  total: 2.5s
                                                   remaining: 785ms
        learn: 0.5806774
761:
                                  total: 2.5s
                                                   remaining: 781ms
762:
        learn: 0.5802455
                                  total: 2.5s
                                                   remaining: 778ms
763:
        learn: 0.5795755
                                  total: 2.51s
                                                   remaining: 774ms
764:
        learn: 0.5792344
                                  total: 2.51s
                                                   remaining: 771ms
765:
        learn: 0.5788259
                                  total: 2.51s
                                                   remaining: 768ms
        learn: 0.5782947
                                  total: 2.52s
                                                   remaining: 764ms
766:
767:
        learn: 0.5778516
                                  total: 2.52s
                                                   remaining: 761ms
                                  total: 2.52s
768:
        learn: 0.5774508
                                                   remaining: 757ms
769:
        learn: 0.5768692
                                  total: 2.53s
                                                   remaining: 757ms
770:
        learn: 0.5768406
                                  total: 2.54s
                                                   remaining: 756ms
771:
        learn: 0.5764785
                                  total: 2.56s
                                                   remaining: 755ms
772:
                                  total: 2.57s
        learn: 0.5760453
                                                   remaining: 755ms
773:
        learn: 0.5754766
                                  total: 2.58s
                                                   remaining: 753ms
        learn: 0.5750793
774:
                                  total: 2.58s
                                                   remaining: 750ms
775:
        learn: 0.5745750
                                  total: 2.58s
                                                   remaining: 746ms
776:
                                  total: 2.59s
                                                   remaining: 743ms
        learn: 0.5741805
777:
        learn: 0.5736998
                                  total: 2.59s
                                                   remaining: 740ms
778:
        learn: 0.5732585
                                  total: 2.59s
                                                   remaining: 736ms
```

```
779:
        learn: 0.5730062
                                  total: 2.6s
                                                   remaining: 733ms
780:
        learn: 0.5725646
                                  total: 2.6s
                                                   remaining: 729ms
781:
        learn: 0.5715701
                                  total: 2.6s
                                                   remaining: 726ms
782:
        learn: 0.5709490
                                  total: 2.61s
                                                   remaining: 723ms
783:
        learn: 0.5700811
                                  total: 2.61s
                                                   remaining: 719ms
784:
        learn: 0.5697194
                                  total: 2.61s
                                                   remaining: 716ms
785:
        learn: 0.5697108
                                  total: 2.62s
                                                   remaining: 713ms
786:
        learn: 0.5693088
                                  total: 2.62s
                                                   remaining: 709ms
787:
        learn: 0.5687078
                                  total: 2.62s
                                                   remaining: 706ms
788:
        learn: 0.5681147
                                  total: 2.63s
                                                   remaining: 702ms
                                  total: 2.63s
789:
        learn: 0.5680043
                                                   remaining: 699ms
790:
        learn: 0.5671350
                                  total: 2.63s
                                                   remaining: 696ms
791:
        learn: 0.5667081
                                  total: 2.64s
                                                   remaining: 692ms
792:
        learn: 0.5660549
                                  total: 2.64s
                                                   remaining: 689ms
793:
        learn: 0.5656731
                                  total: 2.64s
                                                   remaining: 686ms
794:
        learn: 0.5650182
                                  total: 2.65s
                                                   remaining: 682ms
                                  total: 2.65s
795:
        learn: 0.5647291
                                                   remaining: 679ms
796:
        learn: 0.5645890
                                  total: 2.65s
                                                   remaining: 675ms
797:
                                  total: 2.65s
        learn: 0.5642441
                                                   remaining: 672ms
798:
        learn: 0.5641531
                                  total: 2.66s
                                                   remaining: 668ms
799:
        learn: 0.5640724
                                  total: 2.66s
                                                   remaining: 665ms
:008
        learn: 0.5633071
                                  total: 2.66s
                                                   remaining: 661ms
801:
        learn: 0.5628100
                                  total: 2.67s
                                                   remaining: 658ms
802:
        learn: 0.5625234
                                  total: 2.67s
                                                   remaining: 655ms
803:
        learn: 0.5620841
                                  total: 2.67s
                                                   remaining: 651ms
                                  total: 2.67s
804:
        learn: 0.5615525
                                                   remaining: 648ms
805:
        learn: 0.5612295
                                  total: 2.68s
                                                   remaining: 644ms
806:
        learn: 0.5608098
                                  total: 2.68s
                                                   remaining: 641ms
807:
        learn: 0.5601221
                                  total: 2.68s
                                                   remaining: 637ms
808:
        learn: 0.5597759
                                  total: 2.69s
                                                   remaining: 634ms
809:
        learn: 0.5592852
                                  total: 2.69s
                                                   remaining: 631ms
810:
        learn: 0.5592057
                                  total: 2.69s
                                                   remaining: 627ms
811:
        learn: 0.5586285
                                  total: 2.69s
                                                   remaining: 624ms
812:
        learn: 0.5581148
                                  total: 2.7s
                                                   remaining: 620ms
        learn: 0.5577729
813:
                                  total: 2.7s
                                                   remaining: 617ms
814:
        learn: 0.5572494
                                  total: 2.7s
                                                   remaining: 614ms
        learn: 0.5570989
815:
                                  total: 2.71s
                                                   remaining: 610ms
816:
        learn: 0.5567708
                                  total: 2.71s
                                                   remaining: 607ms
817:
        learn: 0.5562621
                                  total: 2.71s
                                                   remaining: 604ms
818:
        learn: 0.5557506
                                  total: 2.71s
                                                   remaining: 600ms
819:
        learn: 0.5553856
                                  total: 2.72s
                                                   remaining: 597ms
820:
        learn: 0.5550515
                                  total: 2.72s
                                                   remaining: 593ms
        learn: 0.5543882
821:
                                  total: 2.72s
                                                   remaining: 590ms
822:
        learn: 0.5540898
                                  total: 2.73s
                                                   remaining: 587ms
823:
        learn: 0.5533915
                                  total: 2.73s
                                                   remaining: 583ms
824:
        learn: 0.5529416
                                  total: 2.73s
                                                   remaining: 580ms
825:
        learn: 0.5526571
                                  total: 2.74s
                                                   remaining: 577ms
        learn: 0.5520772
                                  total: 2.74s
                                                   remaining: 574ms
826:
                                  total: 2.75s
827:
        learn: 0.5515419
                                                   remaining: 571ms
                                  total: 2.75s
828:
        learn: 0.5512765
                                                   remaining: 568ms
829:
        learn: 0.5512692
                                  total: 2.76s
                                                   remaining: 565ms
830:
        learn: 0.5507280
                                  total: 2.76s
                                                   remaining: 562ms
831:
        learn: 0.5503785
                                  total: 2.76s
                                                   remaining: 558ms
832:
                                  total: 2.77s
        learn: 0.5499766
                                                   remaining: 555ms
833:
        learn: 0.5496995
                                  total: 2.77s
                                                   remaining: 552ms
        learn: 0.5493831
834:
                                  total: 2.77s
                                                   remaining: 548ms
835:
        learn: 0.5490012
                                  total: 2.78s
                                                   remaining: 545ms
836:
                                  total: 2.78s
        learn: 0.5485979
                                                   remaining: 541ms
837:
        learn: 0.5483129
                                  total: 2.78s
                                                   remaining: 538ms
838:
        learn: 0.5482384
                                  total: 2.78s
                                                   remaining: 534ms
```

```
839:
        learn: 0.5482091
                                  total: 2.79s
                                                   remaining: 531ms
840:
        learn: 0.5477158
                                  total: 2.79s
                                                   remaining: 528ms
841:
        learn: 0.5472162
                                  total: 2.79s
                                                   remaining: 524ms
                                  total: 2.79s
842:
        learn: 0.5471223
                                                   remaining: 521ms
843:
        learn: 0.5466194
                                  total: 2.8s
                                                   remaining: 517ms
844:
        learn: 0.5464666
                                  total: 2.8s
                                                   remaining: 514ms
845:
        learn: 0.5460423
                                  total: 2.8s
                                                   remaining: 510ms
846:
        learn: 0.5456156
                                  total: 2.81s
                                                   remaining: 507ms
847:
        learn: 0.5452469
                                  total: 2.81s
                                                   remaining: 504ms
848:
        learn: 0.5447750
                                  total: 2.81s
                                                   remaining: 500ms
849:
        learn: 0.5445123
                                  total: 2.82s
                                                   remaining: 497ms
850:
        learn: 0.5441224
                                  total: 2.82s
                                                   remaining: 494ms
851:
        learn: 0.5437963
                                  total: 2.82s
                                                   remaining: 490ms
852:
        learn: 0.5434163
                                  total: 2.82s
                                                   remaining: 487ms
853:
        learn: 0.5428916
                                  total: 2.83s
                                                   remaining: 483ms
854:
        learn: 0.5425038
                                  total: 2.83s
                                                   remaining: 480ms
                                  total: 2.83s
855:
        learn: 0.5421418
                                                   remaining: 477ms
856:
        learn: 0.5417916
                                  total: 2.84s
                                                   remaining: 473ms
        learn: 0.5415783
                                  total: 2.84s
857:
                                                   remaining: 470ms
858:
        learn: 0.5413349
                                  total: 2.84s
                                                   remaining: 466ms
859:
        learn: 0.5409462
                                  total: 2.84s
                                                   remaining: 463ms
860:
        learn: 0.5407288
                                  total: 2.85s
                                                   remaining: 460ms
861:
        learn: 0.5405131
                                  total: 2.85s
                                                   remaining: 456ms
        learn: 0.5402001
862:
                                  total: 2.85s
                                                   remaining: 453ms
863:
        learn: 0.5398652
                                  total: 2.86s
                                                   remaining: 450ms
                                  total: 2.86s
864:
        learn: 0.5392393
                                                   remaining: 446ms
        learn: 0.5385937
865:
                                  total: 2.86s
                                                   remaining: 443ms
866:
        learn: 0.5381510
                                  total: 2.87s
                                                   remaining: 440ms
867:
        learn: 0.5374619
                                  total: 2.87s
                                                   remaining: 436ms
868:
        learn: 0.5371759
                                  total: 2.87s
                                                   remaining: 433ms
869:
        learn: 0.5369828
                                  total: 2.87s
                                                   remaining: 429ms
870:
        learn: 0.5364452
                                  total: 2.88s
                                                   remaining: 426ms
871:
        learn: 0.5361619
                                  total: 2.88s
                                                   remaining: 423ms
872:
        learn: 0.5358644
                                  total: 2.88s
                                                   remaining: 419ms
873:
        learn: 0.5356053
                                  total: 2.88s
                                                   remaining: 416ms
874:
        learn: 0.5354866
                                  total: 2.89s
                                                   remaining: 412ms
875:
        learn: 0.5352163
                                  total: 2.89s
                                                   remaining: 409ms
876:
        learn: 0.5350748
                                  total: 2.89s
                                                   remaining: 406ms
877:
        learn: 0.5348751
                                  total: 2.9s
                                                   remaining: 402ms
878:
        learn: 0.5342672
                                  total: 2.9s
                                                   remaining: 399ms
879:
        learn: 0.5337392
                                  total: 2.9s
                                                   remaining: 396ms
880:
        learn: 0.5334068
                                  total: 2.9s
                                                   remaining: 392ms
        learn: 0.5331562
881:
                                  total: 2.91s
                                                   remaining: 389ms
882:
        learn: 0.5326378
                                  total: 2.91s
                                                   remaining: 386ms
883:
        learn: 0.5323443
                                  total: 2.91s
                                                   remaining: 382ms
884:
        learn: 0.5321285
                                  total: 2.92s
                                                   remaining: 379ms
885:
        learn: 0.5319409
                                  total: 2.92s
                                                   remaining: 376ms
        learn: 0.5315109
                                  total: 2.92s
                                                   remaining: 372ms
886:
887:
        learn: 0.5311545
                                  total: 2.92s
                                                   remaining: 369ms
                                  total: 2.93s
888:
        learn: 0.5306859
                                                   remaining: 366ms
889:
        learn: 0.5305031
                                  total: 2.93s
                                                   remaining: 362ms
890:
        learn: 0.5304327
                                  total: 2.93s
                                                   remaining: 359ms
891:
        learn: 0.5300888
                                  total: 2.94s
                                                   remaining: 356ms
892:
                                  total: 2.94s
        learn: 0.5295517
                                                   remaining: 353ms
893:
        learn: 0.5292703
                                  total: 2.95s
                                                   remaining: 349ms
        learn: 0.5287296
894:
                                  total: 2.95s
                                                   remaining: 346ms
895:
        learn: 0.5285991
                                  total: 2.95s
                                                   remaining: 343ms
                                  total: 2.96s
896:
        learn: 0.5282753
                                                   remaining: 340ms
                                  total: 2.96s
897:
        learn: 0.5278640
                                                   remaining: 336ms
898:
        learn: 0.5277739
                                  total: 2.96s
                                                   remaining: 333ms
```

```
899:
        learn: 0.5275105
                                  total: 2.97s
                                                   remaining: 330ms
900:
        learn: 0.5271104
                                  total: 2.97s
                                                   remaining: 326ms
        learn: 0.5266433
                                  total: 2.97s
901:
                                                   remaining: 323ms
                                  total: 2.98s
902:
        learn: 0.5258664
                                                   remaining: 320ms
903:
        learn: 0.5256989
                                  total: 2.98s
                                                   remaining: 316ms
904:
        learn: 0.5251171
                                  total: 2.98s
                                                   remaining: 313ms
905:
        learn: 0.5245182
                                  total: 2.98s
                                                   remaining: 310ms
906:
        learn: 0.5244165
                                  total: 2.99s
                                                   remaining: 306ms
907:
        learn: 0.5239520
                                  total: 2.99s
                                                   remaining: 303ms
908:
        learn: 0.5236574
                                  total: 2.99s
                                                   remaining: 300ms
909:
        learn: 0.5232315
                                  total: 3s
                                                   remaining: 297ms
910:
        learn: 0.5229373
                                  total: 3s
                                                   remaining: 293ms
911:
        learn: 0.5226835
                                  total: 3s
                                                   remaining: 290ms
912:
        learn: 0.5222754
                                  total: 3.01s
                                                   remaining: 287ms
913:
        learn: 0.5219820
                                  total: 3.01s
                                                   remaining: 283ms
914:
        learn: 0.5215850
                                  total: 3.01s
                                                   remaining: 280ms
915:
        learn: 0.5212119
                                  total: 3.02s
                                                   remaining: 277ms
916:
        learn: 0.5208165
                                  total: 3.02s
                                                   remaining: 273ms
917:
        learn: 0.5205880
                                  total: 3.02s
                                                   remaining: 270ms
918:
        learn: 0.5202099
                                  total: 3.02s
                                                   remaining: 267ms
919:
        learn: 0.5196798
                                  total: 3.03s
                                                   remaining: 263ms
920:
        learn: 0.5194944
                                  total: 3.03s
                                                   remaining: 260ms
921:
        learn: 0.5191522
                                  total: 3.03s
                                                   remaining: 257ms
922:
        learn: 0.5190473
                                  total: 3.04s
                                                   remaining: 253ms
923:
        learn: 0.5188354
                                  total: 3.04s
                                                   remaining: 250ms
924:
        learn: 0.5186125
                                  total: 3.04s
                                                   remaining: 247ms
925:
                                  total: 3.04s
                                                   remaining: 243ms
        learn: 0.5183741
926:
        learn: 0.5181923
                                  total: 3.05s
                                                   remaining: 240ms
927:
        learn: 0.5179661
                                  total: 3.05s
                                                   remaining: 237ms
928:
        learn: 0.5173800
                                  total: 3.05s
                                                   remaining: 233ms
929:
        learn: 0.5173747
                                  total: 3.06s
                                                   remaining: 230ms
930:
        learn: 0.5172075
                                  total: 3.06s
                                                   remaining: 227ms
931:
        learn: 0.5169253
                                  total: 3.06s
                                                   remaining: 223ms
932:
        learn: 0.5166005
                                  total: 3.06s
                                                   remaining: 220ms
        learn: 0.5162998
933:
                                  total: 3.07s
                                                   remaining: 217ms
934:
        learn: 0.5161349
                                  total: 3.07s
                                                   remaining: 213ms
935:
        learn: 0.5157134
                                  total: 3.07s
                                                   remaining: 210ms
936:
        learn: 0.5154920
                                  total: 3.08s
                                                   remaining: 207ms
937:
        learn: 0.5152054
                                  total: 3.08s
                                                   remaining: 204ms
938:
        learn: 0.5149717
                                  total: 3.08s
                                                   remaining: 200ms
939:
        learn: 0.5144505
                                  total: 3.09s
                                                   remaining: 197ms
940:
        learn: 0.5139164
                                  total: 3.09s
                                                   remaining: 194ms
941:
        learn: 0.5139110
                                  total: 3.09s
                                                   remaining: 190ms
942:
        learn: 0.5137275
                                  total: 3.1s
                                                   remaining: 187ms
943:
        learn: 0.5134037
                                  total: 3.1s
                                                   remaining: 184ms
944:
        learn: 0.5131653
                                  total: 3.1s
                                                   remaining: 181ms
945:
        learn: 0.5128482
                                  total: 3.11s
                                                   remaining: 177ms
        learn: 0.5126443
946:
                                  total: 3.11s
                                                   remaining: 174ms
947:
        learn: 0.5125096
                                  total: 3.11s
                                                   remaining: 171ms
948:
        learn: 0.5121840
                                  total: 3.12s
                                                   remaining: 167ms
949:
        learn: 0.5115811
                                  total: 3.12s
                                                   remaining: 164ms
950:
        learn: 0.5113894
                                  total: 3.12s
                                                   remaining: 161ms
951:
        learn: 0.5113848
                                  total: 3.12s
                                                   remaining: 158ms
952:
        learn: 0.5110740
                                  total: 3.13s
                                                   remaining: 154ms
953:
        learn: 0.5108175
                                  total: 3.13s
                                                   remaining: 151ms
        learn: 0.5102872
954:
                                  total: 3.14s
                                                   remaining: 148ms
955:
        learn: 0.5097655
                                  total: 3.14s
                                                   remaining: 145ms
956:
        learn: 0.5093200
                                  total: 3.14s
                                                   remaining: 141ms
957:
        learn: 0.5090466
                                  total: 3.15s
                                                   remaining: 138ms
958:
        learn: 0.5088079
                                  total: 3.15s
                                                   remaining: 135ms
```

```
959:
                  learn: 0.5083453
                                            total: 3.15s
                                                            remaining: 131ms
          960:
                  learn: 0.5082340
                                            total: 3.16s
                                                            remaining: 128ms
          961:
                  learn: 0.5079439
                                            total: 3.16s
                                                            remaining: 125ms
                  learn: 0.5076374
                                                            remaining: 122ms
          962:
                                            total: 3.16s
          963:
                  learn: 0.5072250
                                            total: 3.17s
                                                            remaining: 118ms
          964:
                  learn: 0.5070150
                                            total: 3.17s
                                                            remaining: 115ms
          965:
                  learn: 0.5067416
                                            total: 3.17s
                                                            remaining: 112ms
          966:
                  learn: 0.5064285
                                            total: 3.17s
                                                            remaining: 108ms
          967:
                  learn: 0.5062607
                                            total: 3.18s
                                                            remaining: 105ms
          968:
                  learn: 0.5060584
                                            total: 3.18s
                                                            remaining: 102ms
          969:
                  learn: 0.5054475
                                                            remaining: 98.5ms
                                            total: 3.18s
                                            total: 3.19s
          970:
                  learn: 0.5052798
                                                            remaining: 95.2ms
          971:
                  learn: 0.5051439
                                            total: 3.19s
                                                            remaining: 91.9ms
          972:
                  learn: 0.5048534
                                            total: 3.19s
                                                            remaining: 88.6ms
                  learn: 0.5046739
          973:
                                            total: 3.19s
                                                            remaining: 85.3ms
          974:
                  learn: 0.5044998
                                            total: 3.2s
                                                            remaining: 82ms
          975:
                  learn: 0.5040951
                                            total: 3.2s
                                                            remaining: 78.7ms
          976:
                  learn: 0.5038872
                                            total: 3.2s
                                                            remaining: 75.4ms
          977:
                  learn: 0.5038838
                                                            remaining: 72.1ms
                                            total: 3.21s
                  learn: 0.5036164
          978:
                                            total: 3.21s
                                                            remaining: 68.9ms
          979:
                  learn: 0.5031450
                                            total: 3.22s
                                                            remaining: 65.7ms
          980:
                  learn: 0.5028053
                                            total: 3.22s
                                                            remaining: 62.4ms
          981:
                  learn: 0.5025576
                                            total: 3.23s
                                                            remaining: 59.1ms
          982:
                  learn: 0.5024213
                                            total: 3.23s
                                                            remaining: 55.8ms
          983:
                  learn: 0.5022025
                                            total: 3.23s
                                                            remaining: 52.5ms
                  learn: 0.5016977
                                            total: 3.23s
          984:
                                                            remaining: 49.3ms
          985:
                  learn: 0.5015110
                                                            remaining: 46ms
                                            total: 3.24s
                  learn: 0.5010695
          986:
                                            total: 3.24s
                                                            remaining: 42.7ms
                  learn: 0.5009636
          987:
                                            total: 3.24s
                                                            remaining: 39.4ms
          988:
                  learn: 0.5006842
                                            total: 3.25s
                                                            remaining: 36.1ms
          989:
                  learn: 0.5000761
                                            total: 3.25s
                                                            remaining: 32.8ms
          990:
                  learn: 0.4998355
                                            total: 3.25s
                                                            remaining: 29.5ms
                  learn: 0.4993855
          991:
                                            total: 3.25s
                                                            remaining: 26.3ms
          992:
                  learn: 0.4991846
                                            total: 3.26s
                                                            remaining: 23ms
                  learn: 0.4989407
                                            total: 3.26s
          993:
                                                            remaining: 19.7ms
                                            total: 3.26s
          994:
                  learn: 0.4986020
                                                            remaining: 16.4ms
          995:
                  learn: 0.4984136
                                            total: 3.27s
                                                            remaining: 13.1ms
          996:
                  learn: 0.4984093
                                            total: 3.27s
                                                            remaining: 9.84ms
          997:
                  learn: 0.4982120
                                            total: 3.27s
                                                            remaining: 6.56ms
                                                            remaining: 3.28ms
          998:
                  learn: 0.4980619
                                            total: 3.27s
          999:
                  learn: 0.4978440
                                            total: 3.28s
                                                            remaining: Ous
                                  Pipeline
Out[84]:
                     preprocessor: ColumnTransformer
                 ordinal
                                       num
                                                     remainder
            OrdinalEncoder
                               StandardScaler
                                                   passthrough
                            CatBoostRegressor
In [85]:
          pipeline.predict(sample)
```

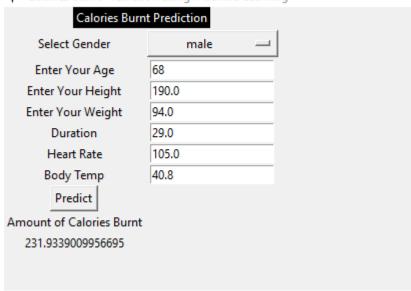
```
Out[85]: array([231.933901])
In [87]: pickle.dump(pipeline,open('calories_burnt_prediction.pkl','wb'))
```

```
model = pickle.load(open('calories_burnt_prediction.pkl','rb'))
In [88]:
In [89]: result = pipeline.predict(sample)
         result
In [901:
         array([231.933901])
Out[90]:
In [92]: import pickle
         import pandas as pd
         from tkinter import *
         def show_entry():
              with open('calories_burnt_prediction.pkl','rb') as f:
                  pipeline = pickle.load(f)
              p1 = str(clicked.get())
             p2 = float(e2.get())
             p3 = float(e3.get())
              p4 = float(e4.get())
              p5 = float(e5.get())
             p6 = float(e6.get())
             p7 = float(e7.get())
              sample = pd.DataFrame({
              'Gender':[p1],
              'Age':[p2],
              'Height':[p3],
              'Weight':[p4],
              'Duration':[p5],
              'Heart_Rate':[p6],
              'Body_Temp':[p7],
         },index=[0])
              result = pipeline.predict(sample)
              print(result)
              Label(master, text='Amount of Calories Burnt').grid(row=13)
              Label(master, text=result[0]).grid(row=14)
         master =Tk()
         master.title('Calories Burnt Prediction using Machine Learning')
         label = Label(master,text='Calories Burnt Prediction',bg='black',
                         fg='white').grid(row=0,columnspan=2)
         Label(master,text = 'Select Gender').grid(row=1)
         Label(master,text = 'Enter Your Age').grid(row=2)
         Label(master,text = 'Enter Your Height').grid(row=3)
         Label(master,text = 'Enter Your Weight').grid(row=4)
         Label(master,text = 'Duration').grid(row=5)
         Label(master,text = 'Heart Rate').grid(row=6)
         Label(master,text = 'Body Temp').grid(row=7)
         clicked = StringVar()
         options = ['male', 'female']
         e1 = OptionMenu(master , clicked , *options )
```

```
e1.configure(width=15)
e2 = Entry(master)
e3 = Entry(master)
e4 = Entry(master)
e5 = Entry(master)
e6 = Entry(master)
e7 = Entry(master)
e1.grid(row=1,column=1)
e2.grid(row=2,column=1)
e3.grid(row=3,column=1)
e4.grid(row=4,column=1)
e5.grid(row=5,column=1)
e6.grid(row=6,column=1)
e7.grid(row=7,column=1)
Button(master,text='Predict',command=show_entry).grid()
mainloop()
```

## [231.933901]

Calories Burnt Prediction using Machine Learning



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