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Технологии Машинного Обучения

Лабораторная Работа №5

"Ансамблевые модели машинного обучения."

```python
import pandas as pd
import numpy as np
import seaborn as sns
from sklearn.ensemble import BaggingClassifier, BaggingRegressor
from sklearn.ensemble import RandomForestClassifier, RandomForestRegressor
from catboost import CatBoostClassifier, CatBoostRegressor
```

Продолжим работу с датасетами под классификацию и регрессию. Посмотрим на различные с точки зрения "продвинутости" модели: бэггинг, случайный лес, CatBoost.

Часть 1. Классификация

```python
lab5_cl= pd.read_csv("ML_Datasets/pulsar_train_prepared.csv")
columns = lab5_cl.columns.to_list()
```

```python
from sklearn.model_selection import train_test_split


RANDOM_STATE = 6
lab5_cl_x_train, lab5_cl_x_test, lab5_cl_y_train, lab5_cl_y_test = train_test_split(lab5_cl[columns[:-1]],
                                                                                    lab5_cl[columns[-1]],
                                                                                    train_size = 0.85,
                                                                                    random_state = RANDOM_STAT
```

Бэггинг

Обучим модель, работающую по принципу чистого бэггинга, и посмотрим на показатели:

```python
from sklearn.metrics import balanced_accuracy_score, f1_score, precision_score, recall_score, roc_auc_score
from sklearn.metrics import plot_confusion_matrix


def PrintClassificationMetrics(y_test, y_predicted):
    print("-Погрешность (accuracy, balanced) = {0};\
        \n-Меткость (precision, класс 1) = {1};\
        \n-Полнота (recall, класс 1) = {2};\
        \n-F1 (класс 1) = {3};\
        \n-ROC AUC = {4}.".format(balanced_accuracy_score(y_test, y_predicted),
                            precision_score(y_test, y_predicted, average = "binary"),
                            recall_score(y_test, y_predicted, average = "binary"),
                            f1_score(y_test, y_predicted, average = "binary"),
                            roc_auc_score(y_test, y_predicted)))

def FitPredictCl(model, x_train, x_test, y_train, y_test):
    solver = model
    solver.fit(x_train, y_train)
    prediction = solver.predict(x_test)
    PrintClassificationMetrics(y_test, prediction)
    plot_confusion_matrix(model, x_test, y_test)
```
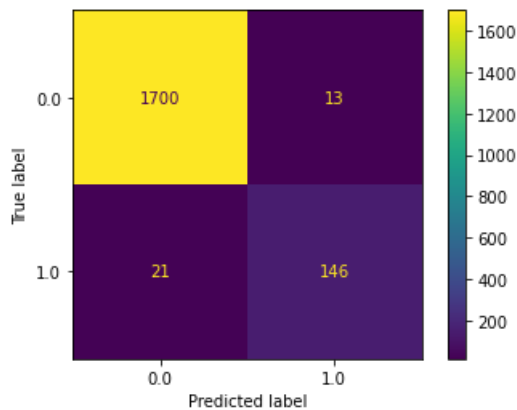
```python
bagging_cl = BaggingClassifier(random_state = RANDOM_STATE)
```

```python
FitPredictCl(bagging_cl, lab5_cl_x_train, lab5_cl_x_test, lab5_cl_y_train, lab5_cl_y_test)
```

-Погрешность (accuracy, balanced) = 0.933331235951914;
-Меткость (precision, класс 1) = 0.9182389937106918;
-Полнота (recall, класс 1) = 0.874251497005988;
-F1 (класс 1) = 0.8957055214723927;
-ROC AUC = 0.933331235951914.

Видим хорошее качество для базового решения: если посмотреть на результаты 4-ой лабораторной, то видим, что метрики напоминают улучшенное дерево решений (чем обученная модель и является).

Теперь воспользуемся решётчатым поиском для поиска наилучшей сильной модели с точки зрения числа слабых.

```python
from sklearn.model_selection import GridSearchCV, StratifiedShuffleSplit


estimators_range = [i for i in range(1, 25)]
cv_scoring_strategies = {"Balanced Accuracy Score" : "balanced_accuracy",
                         "Recall Score (class 1)" : "recall",
                         "Recall Score (weighted avg)" : "recall_weighted",
                         "Precision Score (class 1)" : "precision",
                         "Precision Score (weighted avg)" : "precision_weighted",
                         "ROC AUC Score" : "roc_auc"}

bagging_cl_grid = GridSearchCV(estimator = BaggingClassifier(random_state = RANDOM_STATE),
                          param_grid = [{"n_estimators" : estimators_range}],
                          cv = StratifiedShuffleSplit(random_state = RANDOM_STATE),
                          n_jobs = 8,
                          scoring = cv_scoring_strategies,
                          refit = False,
                          return_train_score = True)

bagging_cl_grid.fit(lab5_cl[columns[:-1]], lab5_cl[columns[-1]])
```

```
GridSearchCV(cv=StratifiedShuffleSplit(n_splits=10, random_state=6, test_size=None,
            train_size=None),
             estimator=BaggingClassifier(random_state=6), n_jobs=8,
             param_grid=[{'n_estimators': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
                                           12, 13, 14, 15, 16, 17, 18, 19, 20,
                                           21, 22, 23, 24]}],
             refit=False, return_train_score=True,
             scoring={'Balanced Accuracy Score': 'balanced_accuracy',
                      'Precision Score (class 1)': 'precision',
                      'Precision Score (weighted avg)': 'precision_weighted',
                      'ROC AUC Score': 'roc_auc',
                      'Recall Score (class 1)': 'recall',
                      'Recall Score (weighted avg)': 'recall_weighted'})
```

```python
import matplotlib.pyplot as plt
%matplotlib inline

def PlotGridSearchResults(strategies, grid, param_range, xmin, xmax, ymin, ymax):
    fig, ax = plt.subplots(1, 1, figsize=(15, 8))

    for strategy in strategies:
        ax.plot(param_range, grid.cv_results_["mean_test_{}".format(strategy)], label = strategy + " (test sco
        #ax.plot(param_range, grid.cv_results_["mean_train_{}".format(strategy)], label = strategy + " (train

    plt.xlim(xmin, xmax)
    plt.ylim(ymin, ymax)
    plt.xticks(param_range)
```
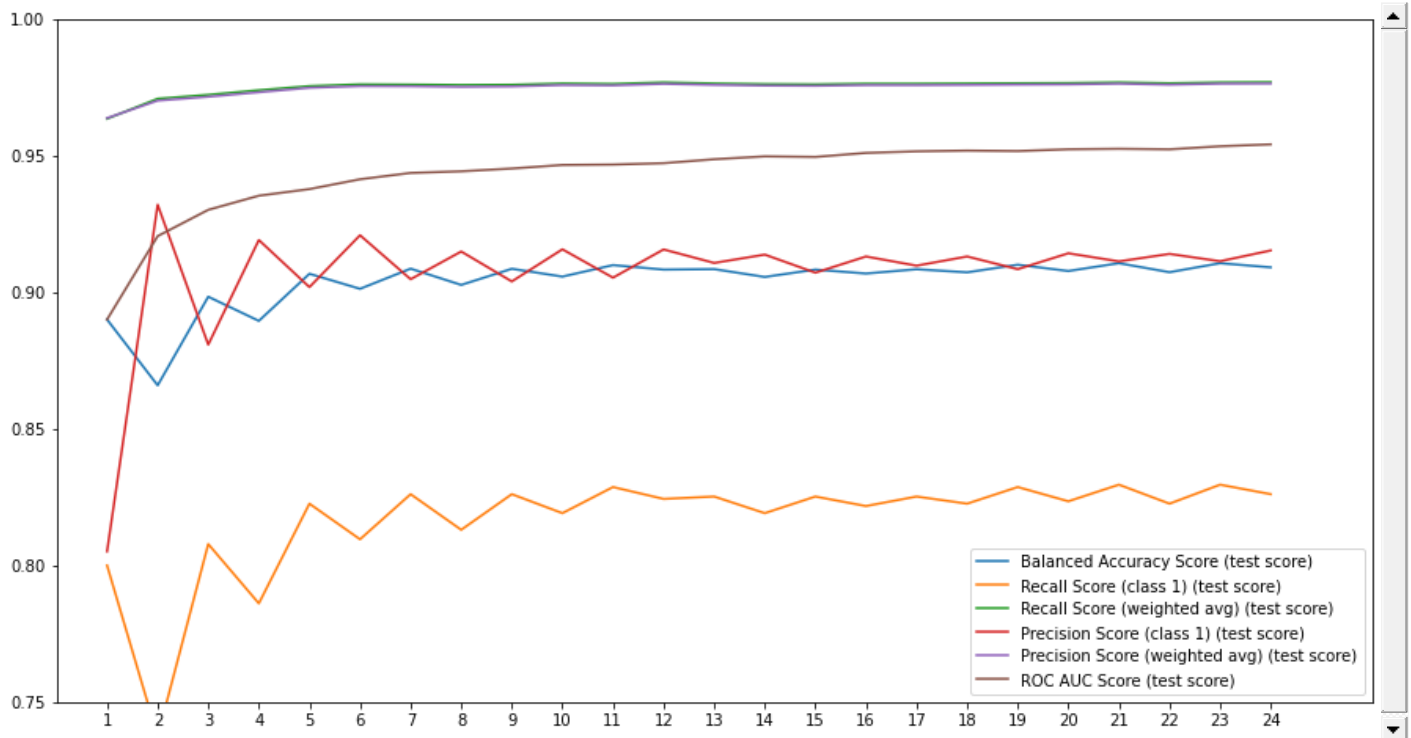
```
plt.legend(loc="best")

plt.show()
```

```
PlotGridSearchResults(cv_scoring_strategies, bagging_cl_grid, estimators_range, 0, 26, 0.75, 1)
```


Результат можно трактовать следующим образом: больше 4 слабых моделей в ансамбле не требуется. Видим, что борьба с переобучение эффективна уже даже для ансамбля из двух деревьев.

Видим другую интересную особенность: график качества по некоторым метрикам напоминает затухающие колебания. С чем это связано - ответить сложно, поскольку интуитивное предположение было бы таким: при чётном количестве слабых моделей взаимная ошибка попарно компенсируется и в итоге складывается лучший результат, нежели для нечётного количества. Однако, работает это не во всех случаях.

Обучать другие модели не будем, поскольку видим, что "из коробки" показатели ничем не уступают.
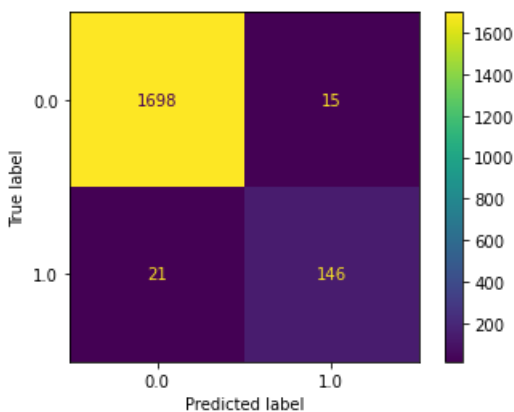
Случайный лес

```
rf_cl = RandomForestClassifier(random_state = RANDOM_STATE)
```

```
FitPredictCl(rf_cl, lab5_cl_x_train, lab5_cl_x_test, lab5_cl_y_train, lab5_cl_y_test)
```

-Погрешность (accuracy, balanced) = 0.9327474647902094;
-Меткость (precision, класс 1) = 0.906832298136646;
-Полнота (recall, класс 1) = 0.874251497005988;
-F1 (класс 1) = 0.8902439024390244;
-ROC AUC = 0.9327474647902094.

Случайный лес на сотне деревьев показывает такие же результаты, как и бэггинг!

Попробуем подобрать гиперпараметры

```python
estimators_range = [i for i in range(1, 102, 4)]
cv_scoring_strategies = {"Balanced Accuracy Score" : "balanced_accuracy",
                         "Recall Score (class 1)" : "recall",
                         "Recall Score (weighted avg)" : "recall_weighted",
                         "Precision Score (class 1)" : "precision",
                         "Precision Score (weighted avg)" : "precision_weighted",
                         "ROC AUC Score" : "roc_auc"}

rf_cl_grid = GridSearchCV(estimator = RandomForestClassifier(random_state = RANDOM_STATE),
                          param_grid = [{"n_estimators" : estimators_range}],
                          cv = StratifiedShuffleSplit(random_state = RANDOM_STATE),
                          n_jobs = 8,
                          scoring = cv_scoring_strategies,
                          refit = False,
                          return_train_score = True)

rf_cl_grid.fit(lab5_cl[columns[:-1]], lab5_cl[columns[-1]])
```

<div align="right">Out[12]:</div>

```
GridSearchCV(cv=StratifiedShuffleSplit(n_splits=10, random_state=6, test_size=None,
            train_size=None),
             estimator=RandomForestClassifier(random_state=6), n_jobs=8,
             param_grid=[{'n_estimators': [1, 5, 9, 13, 17, 21, 25, 29, 33, 37,
                                           41, 45, 49, 53, 57, 61, 65, 69, 73,
                                           77, 81, 85, 89, 93, 97, 101]}],
             refit=False, return_train_score=True,
             scoring={'Balanced Accuracy Score': 'balanced_accuracy',
                      'Precision Score (class 1)': 'precision',
                      'Precision Score (weighted avg)': 'precision_weighted',
                      'ROC AUC Score': 'roc_auc',
                      'Recall Score (class 1)': 'recall',
                      'Recall Score (weighted avg)': 'recall_weighted'})
```
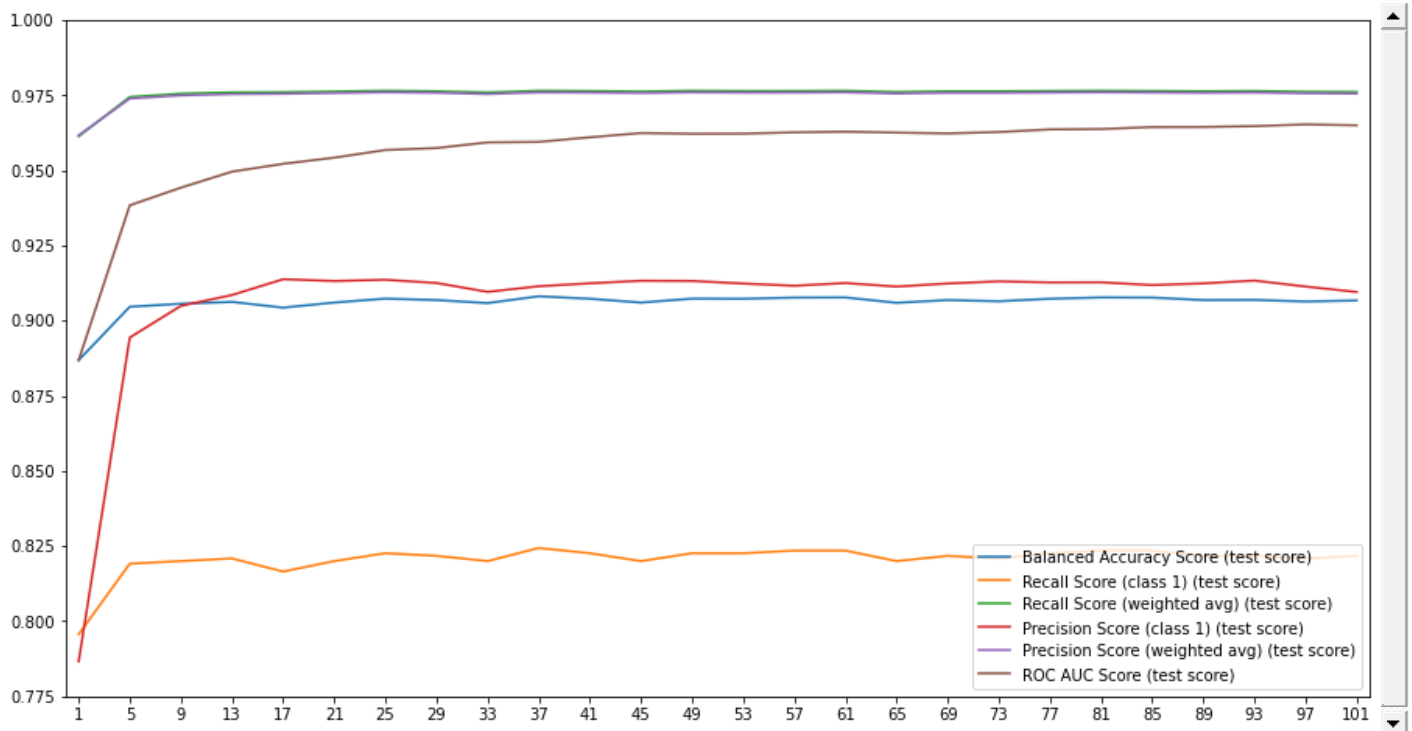
<div align="right">In [13]:</div>

```python
PlotGridSearchResults(cv_scoring_strategies, rf_cl_grid, estimators_range, 0, 102, 0.775, 1)
```


Тоже никаких сюрпризов: однозначные улучшения качества имеются только в диапазоне до 10 слабых моделей, поэтому обучать другие модели не будем.

CatBoost

<div align="right">In [14]:</div>

```python
cb_cl = CatBoostClassifier(random_seed = RANDOM_STATE)
cb_cl.fit(lab5_cl_x_train, lab5_cl_y_train)
cb_cl_prediction = cb_cl.predict(lab5_cl_x_test)
```

```
Learning rate set to 0.028286
0:      learn: 0.6327847        total: 177ms    remaining: 2m 56s
1:      learn: 0.5796967        total: 189ms    remaining: 1m 34s
2:      learn: 0.5357753        total: 202ms    remaining: 1m 6s
3:      learn: 0.4947306        total: 210ms    remaining: 52.3s
```

```
4: learn: 0.4583833 total: 218ms remaining: 43.3s
5: learn: 0.4209068 total: 225ms remaining: 37.3s
6: learn: 0.3905749 total: 233ms remaining: 33.1s
7: learn: 0.3611025 total: 241ms remaining: 29.9s
8: learn: 0.3349299 total: 250ms remaining: 27.5s
9: learn: 0.3115018 total: 257ms remaining: 25.5s
10: learn: 0.2896160 total: 265ms remaining: 23.8s
11: learn: 0.2706523 total: 273ms remaining: 22.5s
12: learn: 0.2545466 total: 281ms remaining: 21.4s
13: learn: 0.2393243 total: 289ms remaining: 20.4s
14: learn: 0.2252675 total: 297ms remaining: 19.5s
15: learn: 0.2110355 total: 306ms remaining: 18.8s
16: learn: 0.2008552 total: 313ms remaining: 18.1s
17: learn: 0.1904675 total: 321ms remaining: 17.5s
18: learn: 0.1809938 total: 329ms remaining: 17s
19: learn: 0.1728900 total: 337ms remaining: 16.5s
20: learn: 0.1657567 total: 345ms remaining: 16.1s
21: learn: 0.1586522 total: 353ms remaining: 15.7s
22: learn: 0.1521081 total: 361ms remaining: 15.3s
23: learn: 0.1465998 total: 369ms remaining: 15s
24: learn: 0.1419081 total: 377ms remaining: 14.7s
25: learn: 0.1369834 total: 385ms remaining: 14.4s
26: learn: 0.1328466 total: 393ms remaining: 14.2s
27: learn: 0.1285242 total: 401ms remaining: 13.9s
28: learn: 0.1248186 total: 408ms remaining: 13.7s
29: learn: 0.1215050 total: 417ms remaining: 13.5s
30: learn: 0.1182887 total: 425ms remaining: 13.3s
31: learn: 0.1152333 total: 433ms remaining: 13.1s
32: learn: 0.1124900 total: 441ms remaining: 12.9s
33: learn: 0.1100251 total: 449ms remaining: 12.7s
34: learn: 0.1077344 total: 457ms remaining: 12.6s
35: learn: 0.1056174 total: 464ms remaining: 12.4s
36: learn: 0.1036950 total: 473ms remaining: 12.3s
37: learn: 0.1018421 total: 480ms remaining: 12.2s
38: learn: 0.1002779 total: 488ms remaining: 12s
39: learn: 0.0986175 total: 496ms remaining: 11.9s
40: learn: 0.0967291 total: 504ms remaining: 11.8s
41: learn: 0.0957572 total: 511ms remaining: 11.7s
42: learn: 0.0939182 total: 520ms remaining: 11.6s
43: learn: 0.0924139 total: 528ms remaining: 11.5s
44: learn: 0.0912597 total: 536ms remaining: 11.4s
45: learn: 0.0902638 total: 544ms remaining: 11.3s
46: learn: 0.0890863 total: 552ms remaining: 11.2s
47: learn: 0.0881979 total: 560ms remaining: 11.1s
48: learn: 0.0869337 total: 568ms remaining: 11s
49: learn: 0.0861032 total: 576ms remaining: 10.9s
50: learn: 0.0853516 total: 584ms remaining: 10.9s
51: learn: 0.0844406 total: 591ms remaining: 10.8s
52: learn: 0.0836302 total: 600ms remaining: 10.7s
53: learn: 0.0828861 total: 608ms remaining: 10.6s
54: learn: 0.0822640 total: 616ms remaining: 10.6s
55: learn: 0.0816909 total: 624ms remaining: 10.5s
56: learn: 0.0811117 total: 632ms remaining: 10.5s
57: learn: 0.0806397 total: 639ms remaining: 10.4s
58: learn: 0.0801624 total: 647ms remaining: 10.3s
59: learn: 0.0795511 total: 655ms remaining: 10.3s
60: learn: 0.0791080 total: 662ms remaining: 10.2s
61: learn: 0.0785626 total: 670ms remaining: 10.1s
62: learn: 0.0781097 total: 678ms remaining: 10.1s
63: learn: 0.0776854 total: 686ms remaining: 10s
64: learn: 0.0772703 total: 694ms remaining: 9.98s
65: learn: 0.0767184 total: 702ms remaining: 9.94s
66: learn: 0.0764035 total: 710ms remaining: 9.88s
67: learn: 0.0760758 total: 717ms remaining: 9.83s
68: learn: 0.0757697 total: 725ms remaining: 9.78s
69: learn: 0.0753146 total: 733ms remaining: 9.74s
70: learn: 0.0748384 total: 742ms remaining: 9.71s
71: learn: 0.0744676 total: 750ms remaining: 9.66s
72: learn: 0.0741570 total: 757ms remaining: 9.62s
73: learn: 0.0738537 total: 765ms remaining: 9.57s
74: learn: 0.0735502 total: 773ms remaining: 9.54s
75: learn: 0.0731996 total: 781ms remaining: 9.5s
76: learn: 0.0729675 total: 789ms remaining: 9.46s
77: learn: 0.0726610 total: 797ms remaining: 9.43s
78: learn: 0.0723528 total: 805ms remaining: 9.39s
79: learn: 0.0721073 total: 813ms remaining: 9.35s
80: learn: 0.0719143 total: 821ms remaining: 9.32s
```

```
81: learn: 0.0717608 total: 829ms remaining: 9.28s
82: learn: 0.0716004 total: 837ms remaining: 9.24s
83: learn: 0.0713591 total: 844ms remaining: 9.21s
84: learn: 0.0711784 total: 852ms remaining: 9.18s
85: learn: 0.0709887 total: 860ms remaining: 9.14s
86: learn: 0.0707822 total: 868ms remaining: 9.11s
87: learn: 0.0705592 total: 877ms remaining: 9.08s
88: learn: 0.0703843 total: 884ms remaining: 9.05s
89: learn: 0.0702150 total: 893ms remaining: 9.02s
90: learn: 0.0700497 total: 906ms remaining: 9.05s
91: learn: 0.0698488 total: 914ms remaining: 9.02s
92: learn: 0.0696707 total: 922ms remaining: 8.99s
93: learn: 0.0694396 total: 931ms remaining: 8.97s
94: learn: 0.0693265 total: 939ms remaining: 8.94s
95: learn: 0.0691766 total: 946ms remaining: 8.91s
96: learn: 0.0690234 total: 954ms remaining: 8.88s
97: learn: 0.0688609 total: 962ms remaining: 8.85s
98: learn: 0.0686578 total: 970ms remaining: 8.82s
99: learn: 0.0685112 total: 978ms remaining: 8.8s
100: learn: 0.0683904 total: 986ms remaining: 8.77s
101: learn: 0.0682800 total: 993ms remaining: 8.74s
102: learn: 0.0681320 total: 1s remaining: 8.71s
103: learn: 0.0679693 total: 1.01s remaining: 8.69s
104: learn: 0.0678083 total: 1.02s remaining: 8.66s
105: learn: 0.0677031 total: 1.02s remaining: 8.63s
106: learn: 0.0676131 total: 1.03s remaining: 8.61s
107: learn: 0.0674843 total: 1.04s remaining: 8.58s
108: learn: 0.0672899 total: 1.05s remaining: 8.56s
109: learn: 0.0672080 total: 1.05s remaining: 8.54s
110: learn: 0.0671116 total: 1.06s remaining: 8.51s
111: learn: 0.0669384 total: 1.07s remaining: 8.49s
112: learn: 0.0668222 total: 1.08s remaining: 8.46s
113: learn: 0.0667605 total: 1.09s remaining: 8.45s
114: learn: 0.0666288 total: 1.09s remaining: 8.43s
115: learn: 0.0665614 total: 1.1s remaining: 8.41s
116: learn: 0.0664587 total: 1.11s remaining: 8.39s
117: learn: 0.0663224 total: 1.12s remaining: 8.38s
118: learn: 0.0662670 total: 1.13s remaining: 8.36s
119: learn: 0.0661503 total: 1.14s remaining: 8.34s
120: learn: 0.0660458 total: 1.15s remaining: 8.32s
121: learn: 0.0659559 total: 1.15s remaining: 8.3s
122: learn: 0.0658760 total: 1.16s remaining: 8.27s
123: learn: 0.0657635 total: 1.17s remaining: 8.25s
124: learn: 0.0656821 total: 1.18s remaining: 8.23s
125: learn: 0.0656127 total: 1.18s remaining: 8.21s
126: learn: 0.0655471 total: 1.19s remaining: 8.19s
127: learn: 0.0654579 total: 1.2s remaining: 8.17s
128: learn: 0.0653184 total: 1.21s remaining: 8.16s
129: learn: 0.0651876 total: 1.22s remaining: 8.14s
130: learn: 0.0650873 total: 1.23s remaining: 8.14s
131: learn: 0.0649964 total: 1.24s remaining: 8.12s
132: learn: 0.0648595 total: 1.24s remaining: 8.11s
133: learn: 0.0647226 total: 1.25s remaining: 8.1s
134: learn: 0.0646013 total: 1.26s remaining: 8.08s
135: learn: 0.0645057 total: 1.27s remaining: 8.06s
136: learn: 0.0644453 total: 1.28s remaining: 8.05s
137: learn: 0.0643692 total: 1.29s remaining: 8.04s
138: learn: 0.0642724 total: 1.29s remaining: 8.02s
139: learn: 0.0642297 total: 1.3s remaining: 8s
140: learn: 0.0641712 total: 1.31s remaining: 7.98s
141: learn: 0.0641101 total: 1.32s remaining: 7.96s
142: learn: 0.0639816 total: 1.32s remaining: 7.95s
143: learn: 0.0638813 total: 1.33s remaining: 7.93s
144: learn: 0.0637995 total: 1.34s remaining: 7.91s
145: learn: 0.0636843 total: 1.35s remaining: 7.89s
146: learn: 0.0635873 total: 1.36s remaining: 7.88s
147: learn: 0.0635093 total: 1.36s remaining: 7.86s
148: learn: 0.0634434 total: 1.37s remaining: 7.84s
149: learn: 0.0633887 total: 1.38s remaining: 7.83s
150: learn: 0.0633047 total: 1.39s remaining: 7.81s
151: learn: 0.0631746 total: 1.4s remaining: 7.79s
152: learn: 0.0631145 total: 1.4s remaining: 7.78s
153: learn: 0.0630540 total: 1.41s remaining: 7.76s
154: learn: 0.0629318 total: 1.42s remaining: 7.74s
155: learn: 0.0628610 total: 1.43s remaining: 7.72s
156: learn: 0.0627505 total: 1.44s remaining: 7.71s
157: learn: 0.0626578 total: 1.44s remaining: 7.69s
```

```
158: learn: 0.0625329 total: 1.45s remaining: 7.68s
159: learn: 0.0624478 total: 1.46s remaining: 7.66s
160: learn: 0.0623173 total: 1.47s remaining: 7.64s
161: learn: 0.0622358 total: 1.47s remaining: 7.63s
162: learn: 0.0621527 total: 1.48s remaining: 7.61s
163: learn: 0.0620889 total: 1.49s remaining: 7.6s
164: learn: 0.0620376 total: 1.5s remaining: 7.58s
165: learn: 0.0619414 total: 1.51s remaining: 7.57s
166: learn: 0.0618766 total: 1.51s remaining: 7.55s
167: learn: 0.0618131 total: 1.52s remaining: 7.54s
168: learn: 0.0617453 total: 1.53s remaining: 7.52s
169: learn: 0.0617010 total: 1.54s remaining: 7.51s
170: learn: 0.0616719 total: 1.54s remaining: 7.49s
171: learn: 0.0616150 total: 1.55s remaining: 7.48s
172: learn: 0.0615243 total: 1.56s remaining: 7.46s
173: learn: 0.0614273 total: 1.57s remaining: 7.45s
174: learn: 0.0613197 total: 1.58s remaining: 7.44s
175: learn: 0.0611956 total: 1.58s remaining: 7.42s
176: learn: 0.0611123 total: 1.59s remaining: 7.41s
177: learn: 0.0609970 total: 1.6s remaining: 7.4s
178: learn: 0.0609533 total: 1.61s remaining: 7.39s
179: learn: 0.0608832 total: 1.62s remaining: 7.37s
180: learn: 0.0608446 total: 1.63s remaining: 7.36s
181: learn: 0.0607597 total: 1.63s remaining: 7.34s
182: learn: 0.0607195 total: 1.64s remaining: 7.33s
183: learn: 0.0606657 total: 1.65s remaining: 7.32s
184: learn: 0.0605972 total: 1.66s remaining: 7.3s
185: learn: 0.0605502 total: 1.67s remaining: 7.29s
186: learn: 0.0605024 total: 1.67s remaining: 7.28s
187: learn: 0.0604195 total: 1.68s remaining: 7.26s
188: learn: 0.0602848 total: 1.69s remaining: 7.25s
189: learn: 0.0602364 total: 1.7s remaining: 7.24s
190: learn: 0.0601646 total: 1.71s remaining: 7.22s
191: learn: 0.0600407 total: 1.71s remaining: 7.21s
192: learn: 0.0600147 total: 1.72s remaining: 7.2s
193: learn: 0.0599024 total: 1.73s remaining: 7.18s
194: learn: 0.0597865 total: 1.74s remaining: 7.17s
195: learn: 0.0597484 total: 1.74s remaining: 7.16s
196: learn: 0.0596409 total: 1.75s remaining: 7.14s
197: learn: 0.0595753 total: 1.76s remaining: 7.13s
198: learn: 0.0595030 total: 1.77s remaining: 7.12s
199: learn: 0.0594546 total: 1.77s remaining: 7.1s
200: learn: 0.0593775 total: 1.78s remaining: 7.09s
201: learn: 0.0593162 total: 1.79s remaining: 7.08s
202: learn: 0.0592358 total: 1.8s remaining: 7.06s
203: learn: 0.0591420 total: 1.81s remaining: 7.05s
204: learn: 0.0590380 total: 1.81s remaining: 7.03s
205: learn: 0.0589712 total: 1.82s remaining: 7.02s
206: learn: 0.0589066 total: 1.83s remaining: 7.01s
207: learn: 0.0588688 total: 1.84s remaining: 7s
208: learn: 0.0587721 total: 1.84s remaining: 6.99s
209: learn: 0.0586931 total: 1.85s remaining: 6.97s
210: learn: 0.0586131 total: 1.86s remaining: 6.96s
211: learn: 0.0585324 total: 1.87s remaining: 6.95s
212: learn: 0.0584754 total: 1.88s remaining: 6.93s
213: learn: 0.0583553 total: 1.89s remaining: 6.92s
214: learn: 0.0582928 total: 1.89s remaining: 6.91s
215: learn: 0.0582397 total: 1.9s remaining: 6.9s
216: learn: 0.0581777 total: 1.91s remaining: 6.88s
217: learn: 0.0581119 total: 1.92s remaining: 6.87s
218: learn: 0.0580706 total: 1.92s remaining: 6.86s
219: learn: 0.0579856 total: 1.93s remaining: 6.84s
220: learn: 0.0579292 total: 1.94s remaining: 6.83s
221: learn: 0.0579019 total: 1.95s remaining: 6.82s
222: learn: 0.0578546 total: 1.95s remaining: 6.81s
223: learn: 0.0577948 total: 1.96s remaining: 6.79s
224: learn: 0.0577525 total: 1.97s remaining: 6.78s
225: learn: 0.0576767 total: 1.98s remaining: 6.77s
226: learn: 0.0576063 total: 1.98s remaining: 6.76s
227: learn: 0.0575551 total: 1.99s remaining: 6.74s
228: learn: 0.0574713 total: 2s remaining: 6.73s
229: learn: 0.0574346 total: 2.01s remaining: 6.72s
230: learn: 0.0573376 total: 2.02s remaining: 6.71s
231: learn: 0.0572980 total: 2.02s remaining: 6.7s
232: learn: 0.0572785 total: 2.03s remaining: 6.68s
233: learn: 0.0572365 total: 2.04s remaining: 6.67s
234: learn: 0.0571721 total: 2.04s remaining: 6.66s
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235: learn: 0.0571487 total: 2.05s remaining: 6.65s
236: learn: 0.0571229 total: 2.06s remaining: 6.64s
237: learn: 0.0570268 total: 2.07s remaining: 6.63s
238: learn: 0.0569796 total: 2.08s remaining: 6.62s
239: learn: 0.0569178 total: 2.09s remaining: 6.61s
240: learn: 0.0568046 total: 2.09s remaining: 6.59s
241: learn: 0.0567550 total: 2.1s remaining: 6.58s
242: learn: 0.0566763 total: 2.11s remaining: 6.57s
243: learn: 0.0565962 total: 2.12s remaining: 6.56s
244: learn: 0.0565009 total: 2.13s remaining: 6.55s
245: learn: 0.0564639 total: 2.13s remaining: 6.54s
246: learn: 0.0563710 total: 2.14s remaining: 6.53s
247: learn: 0.0563190 total: 2.15s remaining: 6.52s
248: learn: 0.0562606 total: 2.16s remaining: 6.5s
249: learn: 0.0561865 total: 2.16s remaining: 6.49s
250: learn: 0.0561488 total: 2.17s remaining: 6.48s
251: learn: 0.0560944 total: 2.18s remaining: 6.47s
252: learn: 0.0560476 total: 2.19s remaining: 6.46s
253: learn: 0.0559923 total: 2.2s remaining: 6.45s
254: learn: 0.0559362 total: 2.21s remaining: 6.44s
255: learn: 0.0558502 total: 2.21s remaining: 6.43s
256: learn: 0.0557851 total: 2.22s remaining: 6.42s
257: learn: 0.0557486 total: 2.23s remaining: 6.41s
258: learn: 0.0557001 total: 2.24s remaining: 6.4s
259: learn: 0.0556366 total: 2.25s remaining: 6.39s
260: learn: 0.0555880 total: 2.25s remaining: 6.38s
261: learn: 0.0555297 total: 2.26s remaining: 6.37s
262: learn: 0.0554974 total: 2.27s remaining: 6.36s
263: learn: 0.0554693 total: 2.27s remaining: 6.34s
264: learn: 0.0554047 total: 2.28s remaining: 6.33s
265: learn: 0.0553616 total: 2.29s remaining: 6.32s
266: learn: 0.0553129 total: 2.3s remaining: 6.31s
267: learn: 0.0551937 total: 2.31s remaining: 6.3s
268: learn: 0.0551294 total: 2.31s remaining: 6.29s
269: learn: 0.0550618 total: 2.32s remaining: 6.28s
270: learn: 0.0550026 total: 2.33s remaining: 6.27s
271: learn: 0.0549252 total: 2.34s remaining: 6.26s
272: learn: 0.0548753 total: 2.35s remaining: 6.25s
273: learn: 0.0548374 total: 2.35s remaining: 6.24s
274: learn: 0.0547720 total: 2.36s remaining: 6.22s
275: learn: 0.0547016 total: 2.37s remaining: 6.21s
276: learn: 0.0546672 total: 2.38s remaining: 6.2s
277: learn: 0.0546420 total: 2.38s remaining: 6.19s
278: learn: 0.0545941 total: 2.39s remaining: 6.18s
279: learn: 0.0545428 total: 2.4s remaining: 6.17s
280: learn: 0.0544948 total: 2.41s remaining: 6.16s
281: learn: 0.0544223 total: 2.41s remaining: 6.15s
282: learn: 0.0543524 total: 2.42s remaining: 6.14s
283: learn: 0.0542936 total: 2.43s remaining: 6.13s
284: learn: 0.0542013 total: 2.44s remaining: 6.12s
285: learn: 0.0541525 total: 2.45s remaining: 6.11s
286: learn: 0.0540716 total: 2.45s remaining: 6.09s
287: learn: 0.0540009 total: 2.46s remaining: 6.08s
288: learn: 0.0539745 total: 2.47s remaining: 6.07s
289: learn: 0.0538761 total: 2.48s remaining: 6.07s
290: learn: 0.0538586 total: 2.48s remaining: 6.05s
291: learn: 0.0538153 total: 2.49s remaining: 6.04s
292: learn: 0.0537656 total: 2.5s remaining: 6.03s
293: learn: 0.0537451 total: 2.51s remaining: 6.02s
294: learn: 0.0536969 total: 2.52s remaining: 6.01s
295: learn: 0.0536669 total: 2.52s remaining: 6s
296: learn: 0.0536232 total: 2.53s remaining: 5.99s
297: learn: 0.0536032 total: 2.54s remaining: 5.98s
298: learn: 0.0535354 total: 2.54s remaining: 5.97s
299: learn: 0.0534962 total: 2.55s remaining: 5.96s
300: learn: 0.0534598 total: 2.56s remaining: 5.95s
301: learn: 0.0534269 total: 2.57s remaining: 5.93s
302: learn: 0.0533637 total: 2.58s remaining: 5.92s
303: learn: 0.0532917 total: 2.58s remaining: 5.91s
304: learn: 0.0532509 total: 2.59s remaining: 5.9s
305: learn: 0.0531809 total: 2.6s remaining: 5.89s
306: learn: 0.0531360 total: 2.6s remaining: 5.88s
307: learn: 0.0530938 total: 2.61s remaining: 5.87s
308: learn: 0.0530307 total: 2.62s remaining: 5.86s
309: learn: 0.0529374 total: 2.63s remaining: 5.85s
310: learn: 0.0528683 total: 2.64s remaining: 5.84s
311: learn: 0.0528084 total: 2.64s remaining: 5.83s
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311: learn: 0.0528004 total: 2.64s remaining: 5.83s
312: learn: 0.0527511 total: 2.65s remaining: 5.82s
313: learn: 0.0527106 total: 2.66s remaining: 5.81s
314: learn: 0.0526504 total: 2.67s remaining: 5.8s
315: learn: 0.0525745 total: 2.67s remaining: 5.79s
316: learn: 0.0525440 total: 2.68s remaining: 5.78s
317: learn: 0.0525082 total: 2.69s remaining: 5.77s
318: learn: 0.0524379 total: 2.7s remaining: 5.76s
319: learn: 0.0523492 total: 2.71s remaining: 5.75s
320: learn: 0.0523236 total: 2.71s remaining: 5.74s
321: learn: 0.0522998 total: 2.72s remaining: 5.73s
322: learn: 0.0522520 total: 2.73s remaining: 5.71s
323: learn: 0.0522404 total: 2.73s remaining: 5.71s
324: learn: 0.0521913 total: 2.74s remaining: 5.69s
325: learn: 0.0521498 total: 2.75s remaining: 5.68s
326: learn: 0.0520937 total: 2.76s remaining: 5.67s
327: learn: 0.0520380 total: 2.76s remaining: 5.66s
328: learn: 0.0520177 total: 2.77s remaining: 5.65s
329: learn: 0.0519333 total: 2.78s remaining: 5.64s
330: learn: 0.0519006 total: 2.79s remaining: 5.63s
331: learn: 0.0518030 total: 2.79s remaining: 5.62s
332: learn: 0.0517322 total: 2.8s remaining: 5.61s
333: learn: 0.0517020 total: 2.81s remaining: 5.6s
334: learn: 0.0516735 total: 2.82s remaining: 5.59s
335: learn: 0.0516278 total: 2.83s remaining: 5.58s
336: learn: 0.0515641 total: 2.83s remaining: 5.57s
337: learn: 0.0515358 total: 2.84s remaining: 5.56s
338: learn: 0.0514822 total: 2.85s remaining: 5.55s
339: learn: 0.0514420 total: 2.85s remaining: 5.54s
340: learn: 0.0513688 total: 2.86s remaining: 5.53s
341: learn: 0.0513159 total: 2.87s remaining: 5.52s
342: learn: 0.0512656 total: 2.88s remaining: 5.51s
343: learn: 0.0512085 total: 2.88s remaining: 5.5s
344: learn: 0.0511221 total: 2.89s remaining: 5.49s
345: learn: 0.0511064 total: 2.9s remaining: 5.48s
346: learn: 0.0510745 total: 2.91s remaining: 5.47s
347: learn: 0.0510232 total: 2.92s remaining: 5.46s
348: learn: 0.0509980 total: 2.92s remaining: 5.45s
349: learn: 0.0509735 total: 2.93s remaining: 5.44s
350: learn: 0.0509300 total: 2.94s remaining: 5.43s
351: learn: 0.0508909 total: 2.94s remaining: 5.42s
352: learn: 0.0508695 total: 2.95s remaining: 5.41s
353: learn: 0.0508304 total: 2.96s remaining: 5.4s
354: learn: 0.0507724 total: 2.97s remaining: 5.39s
355: learn: 0.0507468 total: 2.98s remaining: 5.38s
356: learn: 0.0507243 total: 2.98s remaining: 5.37s
357: learn: 0.0506519 total: 2.99s remaining: 5.36s
358: learn: 0.0506151 total: 3s remaining: 5.35s
359: learn: 0.0505167 total: 3.01s remaining: 5.34s
360: learn: 0.0504692 total: 3.01s remaining: 5.33s
361: learn: 0.0504309 total: 3.02s remaining: 5.33s
362: learn: 0.0504066 total: 3.03s remaining: 5.32s
363: learn: 0.0503285 total: 3.04s remaining: 5.31s
364: learn: 0.0502753 total: 3.04s remaining: 5.3s
365: learn: 0.0502648 total: 3.05s remaining: 5.29s
366: learn: 0.0502130 total: 3.06s remaining: 5.28s
367: learn: 0.0501817 total: 3.07s remaining: 5.27s
368: learn: 0.0501603 total: 3.07s remaining: 5.26s
369: learn: 0.0501128 total: 3.08s remaining: 5.25s
370: learn: 0.0500600 total: 3.09s remaining: 5.24s
371: learn: 0.0500416 total: 3.1s remaining: 5.23s
372: learn: 0.0499464 total: 3.11s remaining: 5.22s
373: learn: 0.0499215 total: 3.11s remaining: 5.21s
374: learn: 0.0498747 total: 3.12s remaining: 5.2s
375: learn: 0.0498484 total: 3.13s remaining: 5.19s
376: learn: 0.0498165 total: 3.14s remaining: 5.18s
377: learn: 0.0497404 total: 3.15s remaining: 5.17s
378: learn: 0.0496970 total: 3.15s remaining: 5.17s
379: learn: 0.0496814 total: 3.16s remaining: 5.16s
380: learn: 0.0496480 total: 3.17s remaining: 5.15s
381: learn: 0.0496077 total: 3.18s remaining: 5.14s
382: learn: 0.0495908 total: 3.19s remaining: 5.13s
383: learn: 0.0495105 total: 3.19s remaining: 5.13s
384: learn: 0.0494668 total: 3.2s remaining: 5.12s
385: learn: 0.0494346 total: 3.21s remaining: 5.11s
386: learn: 0.0493923 total: 3.22s remaining: 5.1s
387: learn: 0.0493304 total: 3.23s remaining: 5.09s
388: learn: 0.0493073 total: 3.23s remaining: 5.08s
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388: learn: 0.0493073 total: 3.23s remaining: 5.08s
389: learn: 0.0492916 total: 3.24s remaining: 5.07s
390: learn: 0.0492795 total: 3.25s remaining: 5.06s
391: learn: 0.0492488 total: 3.25s remaining: 5.05s
392: learn: 0.0491927 total: 3.26s remaining: 5.04s
393: learn: 0.0490959 total: 3.27s remaining: 5.03s
394: learn: 0.0490170 total: 3.28s remaining: 5.02s
395: learn: 0.0490043 total: 3.29s remaining: 5.01s
396: learn: 0.0489700 total: 3.29s remaining: 5s
397: learn: 0.0489548 total: 3.3s remaining: 4.99s
398: learn: 0.0489204 total: 3.31s remaining: 4.98s
399: learn: 0.0489016 total: 3.31s remaining: 4.97s
400: learn: 0.0488520 total: 3.32s remaining: 4.96s
401: learn: 0.0488131 total: 3.33s remaining: 4.96s
402: learn: 0.0487729 total: 3.34s remaining: 4.95s
403: learn: 0.0487549 total: 3.35s remaining: 4.94s
404: learn: 0.0487277 total: 3.35s remaining: 4.93s
405: learn: 0.0486854 total: 3.36s remaining: 4.92s
406: learn: 0.0486560 total: 3.37s remaining: 4.91s
407: learn: 0.0486402 total: 3.38s remaining: 4.9s
408: learn: 0.0486144 total: 3.38s remaining: 4.89s
409: learn: 0.0485677 total: 3.39s remaining: 4.88s
410: learn: 0.0485517 total: 3.4s remaining: 4.87s
411: learn: 0.0485178 total: 3.41s remaining: 4.86s
412: learn: 0.0484857 total: 3.41s remaining: 4.85s
413: learn: 0.0484640 total: 3.42s remaining: 4.84s
414: learn: 0.0484208 total: 3.43s remaining: 4.83s
415: learn: 0.0483893 total: 3.44s remaining: 4.82s
416: learn: 0.0483515 total: 3.44s remaining: 4.82s
417: learn: 0.0483070 total: 3.45s remaining: 4.81s
418: learn: 0.0482930 total: 3.46s remaining: 4.8s
419: learn: 0.0482689 total: 3.47s remaining: 4.79s
420: learn: 0.0482259 total: 3.47s remaining: 4.78s
421: learn: 0.0481893 total: 3.48s remaining: 4.77s
422: learn: 0.0481497 total: 3.49s remaining: 4.76s
423: learn: 0.0481143 total: 3.5s remaining: 4.75s
424: learn: 0.0480998 total: 3.5s remaining: 4.74s
425: learn: 0.0480090 total: 3.51s remaining: 4.73s
426: learn: 0.0479667 total: 3.52s remaining: 4.72s
427: learn: 0.0479129 total: 3.53s remaining: 4.71s
428: learn: 0.0478167 total: 3.54s remaining: 4.71s
429: learn: 0.0477718 total: 3.54s remaining: 4.7s
430: learn: 0.0477549 total: 3.55s remaining: 4.69s
431: learn: 0.0477252 total: 3.56s remaining: 4.68s
432: learn: 0.0477083 total: 3.56s remaining: 4.67s
433: learn: 0.0476839 total: 3.57s remaining: 4.66s
434: learn: 0.0476415 total: 3.58s remaining: 4.65s
435: learn: 0.0476146 total: 3.59s remaining: 4.64s
436: learn: 0.0475892 total: 3.6s remaining: 4.63s
437: learn: 0.0475259 total: 3.6s remaining: 4.62s
438: learn: 0.0474607 total: 3.61s remaining: 4.61s
439: learn: 0.0474218 total: 3.62s remaining: 4.61s
440: learn: 0.0473993 total: 3.63s remaining: 4.59s
441: learn: 0.0473641 total: 3.63s remaining: 4.59s
442: learn: 0.0473544 total: 3.64s remaining: 4.58s
443: learn: 0.0473328 total: 3.65s remaining: 4.57s
444: learn: 0.0472835 total: 3.65s remaining: 4.56s
445: learn: 0.0472156 total: 3.66s remaining: 4.55s
446: learn: 0.0471857 total: 3.67s remaining: 4.54s
447: learn: 0.0471521 total: 3.68s remaining: 4.53s
448: learn: 0.0471357 total: 3.69s remaining: 4.52s
449: learn: 0.0470944 total: 3.69s remaining: 4.51s
450: learn: 0.0470694 total: 3.7s remaining: 4.5s
451: learn: 0.0470399 total: 3.71s remaining: 4.5s
452: learn: 0.0470277 total: 3.71s remaining: 4.49s
453: learn: 0.0470006 total: 3.72s remaining: 4.48s
454: learn: 0.0469713 total: 3.73s remaining: 4.47s
455: learn: 0.0469551 total: 3.74s remaining: 4.46s
456: learn: 0.0469308 total: 3.74s remaining: 4.45s
457: learn: 0.0468933 total: 3.75s remaining: 4.44s
458: learn: 0.0468596 total: 3.76s remaining: 4.43s
459: learn: 0.0468313 total: 3.77s remaining: 4.42s
460: learn: 0.0467785 total: 3.77s remaining: 4.41s
461: learn: 0.0467557 total: 3.78s remaining: 4.4s
462: learn: 0.0467159 total: 3.79s remaining: 4.39s
463: learn: 0.0466465 total: 3.8s remaining: 4.39s
464: learn: 0.0466127 total: 3.81s remaining: 4.38s
465: learn: 0.0466037 total: 3.81s remaining: 4.37s
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465: learn: 0.0466657 total: 3.81s remaining: 4.37s
466: learn: 0.0465075 total: 3.82s remaining: 4.36s
467: learn: 0.0464749 total: 3.83s remaining: 4.35s
468: learn: 0.0463828 total: 3.84s remaining: 4.34s
469: learn: 0.0463480 total: 3.84s remaining: 4.33s
470: learn: 0.0463178 total: 3.85s remaining: 4.33s
471: learn: 0.0462515 total: 3.86s remaining: 4.32s
472: learn: 0.0462370 total: 3.87s remaining: 4.31s
473: learn: 0.0462063 total: 3.87s remaining: 4.3s
474: learn: 0.0460833 total: 3.88s remaining: 4.29s
475: learn: 0.0460255 total: 3.89s remaining: 4.28s
476: learn: 0.0459625 total: 3.9s remaining: 4.27s
477: learn: 0.0458650 total: 3.91s remaining: 4.27s
478: learn: 0.0458338 total: 3.91s remaining: 4.26s
479: learn: 0.0457569 total: 3.92s remaining: 4.25s
480: learn: 0.0457359 total: 3.93s remaining: 4.24s
481: learn: 0.0456401 total: 3.94s remaining: 4.23s
482: learn: 0.0456197 total: 3.94s remaining: 4.22s
483: learn: 0.0455117 total: 3.95s remaining: 4.21s
484: learn: 0.0454507 total: 3.96s remaining: 4.21s
485: learn: 0.0453815 total: 3.97s remaining: 4.2s
486: learn: 0.0453486 total: 3.98s remaining: 4.19s
487: learn: 0.0453289 total: 3.98s remaining: 4.18s
488: learn: 0.0452984 total: 3.99s remaining: 4.17s
489: learn: 0.0452793 total: 4s remaining: 4.16s
490: learn: 0.0452520 total: 4.01s remaining: 4.15s
491: learn: 0.0452404 total: 4.01s remaining: 4.14s
492: learn: 0.0451904 total: 4.02s remaining: 4.14s
493: learn: 0.0451032 total: 4.03s remaining: 4.13s
494: learn: 0.0450457 total: 4.04s remaining: 4.12s
495: learn: 0.0449819 total: 4.04s remaining: 4.11s
496: learn: 0.0449520 total: 4.05s remaining: 4.1s
497: learn: 0.0449361 total: 4.06s remaining: 4.09s
498: learn: 0.0449153 total: 4.07s remaining: 4.08s
499: learn: 0.0448928 total: 4.08s remaining: 4.08s
500: learn: 0.0448504 total: 4.08s remaining: 4.07s
501: learn: 0.0448348 total: 4.09s remaining: 4.06s
502: learn: 0.0448220 total: 4.1s remaining: 4.05s
503: learn: 0.0447498 total: 4.11s remaining: 4.04s
504: learn: 0.0447320 total: 4.11s remaining: 4.03s
505: learn: 0.0446476 total: 4.12s remaining: 4.02s
506: learn: 0.0446395 total: 4.13s remaining: 4.01s
507: learn: 0.0446137 total: 4.14s remaining: 4.01s
508: learn: 0.0445946 total: 4.15s remaining: 4s
509: learn: 0.0445763 total: 4.16s remaining: 3.99s
510: learn: 0.0445086 total: 4.16s remaining: 3.98s
511: learn: 0.0444578 total: 4.17s remaining: 3.98s
512: learn: 0.0444416 total: 4.18s remaining: 3.97s
513: learn: 0.0444167 total: 4.18s remaining: 3.96s
514: learn: 0.0444091 total: 4.19s remaining: 3.95s
515: learn: 0.0443643 total: 4.2s remaining: 3.94s
516: learn: 0.0442978 total: 4.21s remaining: 3.93s
517: learn: 0.0442726 total: 4.21s remaining: 3.92s
518: learn: 0.0442215 total: 4.22s remaining: 3.91s
519: learn: 0.0442024 total: 4.23s remaining: 3.9s
520: learn: 0.0441851 total: 4.24s remaining: 3.9s
521: learn: 0.0441173 total: 4.25s remaining: 3.89s
522: learn: 0.0440744 total: 4.25s remaining: 3.88s
523: learn: 0.0440606 total: 4.26s remaining: 3.87s
524: learn: 0.0440421 total: 4.27s remaining: 3.86s
525: learn: 0.0439818 total: 4.28s remaining: 3.85s
526: learn: 0.0439219 total: 4.28s remaining: 3.85s
527: learn: 0.0438754 total: 4.29s remaining: 3.84s
528: learn: 0.0438312 total: 4.3s remaining: 3.83s
529: learn: 0.0438067 total: 4.31s remaining: 3.82s
530: learn: 0.0437568 total: 4.32s remaining: 3.81s
531: learn: 0.0437403 total: 4.32s remaining: 3.8s
532: learn: 0.0436878 total: 4.33s remaining: 3.79s
533: learn: 0.0436646 total: 4.34s remaining: 3.79s
534: learn: 0.0436496 total: 4.34s remaining: 3.78s
535: learn: 0.0435827 total: 4.35s remaining: 3.77s
536: learn: 0.0435007 total: 4.36s remaining: 3.76s
537: learn: 0.0434561 total: 4.37s remaining: 3.75s
538: learn: 0.0434328 total: 4.38s remaining: 3.74s
539: learn: 0.0434137 total: 4.38s remaining: 3.73s
540: learn: 0.0433409 total: 4.39s remaining: 3.73s
541: learn: 0.0433263 total: 4.4s remaining: 3.72s
542: learn: 0.0432192 total: 4.41s remaining: 3.71s
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542: learn: 0.0432192 total: 4.41s remaining: 3.71s
543: learn: 0.0431213 total: 4.42s remaining: 3.7s
544: learn: 0.0430445 total: 4.42s remaining: 3.69s
545: learn: 0.0430197 total: 4.43s remaining: 3.69s
546: learn: 0.0429944 total: 4.44s remaining: 3.68s
547: learn: 0.0429032 total: 4.45s remaining: 3.67s
548: learn: 0.0428904 total: 4.46s remaining: 3.66s
549: learn: 0.0428737 total: 4.46s remaining: 3.65s
550: learn: 0.0428301 total: 4.47s remaining: 3.64s
551: learn: 0.0428058 total: 4.48s remaining: 3.63s
552: learn: 0.0427734 total: 4.49s remaining: 3.63s
553: learn: 0.0427537 total: 4.49s remaining: 3.62s
554: learn: 0.0427320 total: 4.5s remaining: 3.61s
555: learn: 0.0426910 total: 4.51s remaining: 3.6s
556: learn: 0.0426774 total: 4.52s remaining: 3.59s
557: learn: 0.0426516 total: 4.52s remaining: 3.58s
558: learn: 0.0426339 total: 4.53s remaining: 3.58s
559: learn: 0.0426224 total: 4.54s remaining: 3.57s
560: learn: 0.0425635 total: 4.55s remaining: 3.56s
561: learn: 0.0425498 total: 4.55s remaining: 3.55s
562: learn: 0.0425030 total: 4.56s remaining: 3.54s
563: learn: 0.0424111 total: 4.57s remaining: 3.53s
564: learn: 0.0423937 total: 4.58s remaining: 3.52s
565: learn: 0.0423542 total: 4.59s remaining: 3.52s
566: learn: 0.0423006 total: 4.59s remaining: 3.51s
567: learn: 0.0422878 total: 4.6s remaining: 3.5s
568: learn: 0.0422242 total: 4.61s remaining: 3.49s
569: learn: 0.0422013 total: 4.62s remaining: 3.48s
570: learn: 0.0421837 total: 4.63s remaining: 3.48s
571: learn: 0.0421137 total: 4.63s remaining: 3.47s
572: learn: 0.0421051 total: 4.64s remaining: 3.46s
573: learn: 0.0420608 total: 4.65s remaining: 3.45s
574: learn: 0.0420475 total: 4.66s remaining: 3.44s
575: learn: 0.0419870 total: 4.66s remaining: 3.43s
576: learn: 0.0419696 total: 4.67s remaining: 3.42s
577: learn: 0.0419490 total: 4.68s remaining: 3.42s
578: learn: 0.0418838 total: 4.69s remaining: 3.41s
579: learn: 0.0418656 total: 4.7s remaining: 3.4s
580: learn: 0.0418112 total: 4.7s remaining: 3.39s
581: learn: 0.0417966 total: 4.71s remaining: 3.38s
582: learn: 0.0417744 total: 4.72s remaining: 3.37s
583: learn: 0.0417554 total: 4.72s remaining: 3.37s
584: learn: 0.0417368 total: 4.73s remaining: 3.36s
585: learn: 0.0417067 total: 4.74s remaining: 3.35s
586: learn: 0.0416378 total: 4.75s remaining: 3.34s
587: learn: 0.0416198 total: 4.76s remaining: 3.33s
588: learn: 0.0415516 total: 4.76s remaining: 3.32s
589: learn: 0.0415238 total: 4.77s remaining: 3.32s
590: learn: 0.0414616 total: 4.78s remaining: 3.31s
591: learn: 0.0414145 total: 4.79s remaining: 3.3s
592: learn: 0.0413942 total: 4.79s remaining: 3.29s
593: learn: 0.0413742 total: 4.8s remaining: 3.28s
594: learn: 0.0413087 total: 4.81s remaining: 3.27s
595: learn: 0.0412850 total: 4.82s remaining: 3.27s
596: learn: 0.0412391 total: 4.83s remaining: 3.26s
597: learn: 0.0411840 total: 4.83s remaining: 3.25s
598: learn: 0.0411274 total: 4.84s remaining: 3.24s
599: learn: 0.0410593 total: 4.85s remaining: 3.23s
600: learn: 0.0410499 total: 4.86s remaining: 3.22s
601: learn: 0.0410095 total: 4.87s remaining: 3.22s
602: learn: 0.0409690 total: 4.87s remaining: 3.21s
603: learn: 0.0409482 total: 4.88s remaining: 3.2s
604: learn: 0.0408959 total: 4.89s remaining: 3.19s
605: learn: 0.0408788 total: 4.9s remaining: 3.18s
606: learn: 0.0408657 total: 4.9s remaining: 3.17s
607: learn: 0.0408266 total: 4.91s remaining: 3.17s
608: learn: 0.0408056 total: 4.92s remaining: 3.16s
609: learn: 0.0407561 total: 4.93s remaining: 3.15s
610: learn: 0.0406585 total: 4.93s remaining: 3.14s
611: learn: 0.0406496 total: 4.94s remaining: 3.13s
612: learn: 0.0406371 total: 4.95s remaining: 3.12s
613: learn: 0.0406221 total: 4.96s remaining: 3.12s
614: learn: 0.0405578 total: 4.97s remaining: 3.11s
615: learn: 0.0405246 total: 4.97s remaining: 3.1s
616: learn: 0.0405090 total: 4.98s remaining: 3.09s
617: learn: 0.0404667 total: 4.99s remaining: 3.08s
618: learn: 0.0404176 total: 5s remaining: 3.08s
619: learn: 0.0403698 total: 5s remaining: 3.07s
```

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619: learn: 0.0403698 total: 5s remaining: 3.07s
620: learn: 0.0403534 total: 5.01s remaining: 3.06s
621: learn: 0.0403446 total: 5.02s remaining: 3.05s
622: learn: 0.0403257 total: 5.03s remaining: 3.04s
623: learn: 0.0402730 total: 5.04s remaining: 3.03s
624: learn: 0.0402532 total: 5.04s remaining: 3.02s
625: learn: 0.0402390 total: 5.05s remaining: 3.02s
626: learn: 0.0402022 total: 5.06s remaining: 3.01s
627: learn: 0.0401486 total: 5.07s remaining: 3s
628: learn: 0.0401413 total: 5.07s remaining: 2.99s
629: learn: 0.0401286 total: 5.08s remaining: 2.98s
630: learn: 0.0400591 total: 5.09s remaining: 2.98s
631: learn: 0.0400391 total: 5.1s remaining: 2.97s
632: learn: 0.0400153 total: 5.11s remaining: 2.96s
633: learn: 0.0400030 total: 5.12s remaining: 2.95s
634: learn: 0.0399172 total: 5.12s remaining: 2.94s
635: learn: 0.0399093 total: 5.13s remaining: 2.94s
636: learn: 0.0398521 total: 5.14s remaining: 2.93s
637: learn: 0.0397877 total: 5.15s remaining: 2.92s
638: learn: 0.0397176 total: 5.16s remaining: 2.92s
639: learn: 0.0397010 total: 5.17s remaining: 2.91s
640: learn: 0.0396548 total: 5.18s remaining: 2.9s
641: learn: 0.0395735 total: 5.18s remaining: 2.89s
642: learn: 0.0395532 total: 5.19s remaining: 2.88s
643: learn: 0.0394987 total: 5.2s remaining: 2.88s
644: learn: 0.0394471 total: 5.21s remaining: 2.87s
645: learn: 0.0394032 total: 5.22s remaining: 2.86s
646: learn: 0.0393834 total: 5.22s remaining: 2.85s
647: learn: 0.0393220 total: 5.23s remaining: 2.84s
648: learn: 0.0393078 total: 5.24s remaining: 2.83s
649: learn: 0.0391941 total: 5.25s remaining: 2.83s
650: learn: 0.0391582 total: 5.26s remaining: 2.82s
651: learn: 0.0391086 total: 5.27s remaining: 2.81s
652: learn: 0.0390518 total: 5.28s remaining: 2.8s
653: learn: 0.0389865 total: 5.29s remaining: 2.8s
654: learn: 0.0389449 total: 5.29s remaining: 2.79s
655: learn: 0.0389335 total: 5.3s remaining: 2.78s
656: learn: 0.0388661 total: 5.31s remaining: 2.77s
657: learn: 0.0388213 total: 5.32s remaining: 2.76s
658: learn: 0.0387712 total: 5.33s remaining: 2.76s
659: learn: 0.0387099 total: 5.33s remaining: 2.75s
660: learn: 0.0386790 total: 5.34s remaining: 2.74s
661: learn: 0.0386348 total: 5.35s remaining: 2.73s
662: learn: 0.0385797 total: 5.36s remaining: 2.72s
663: learn: 0.0385601 total: 5.37s remaining: 2.71s
664: learn: 0.0385307 total: 5.38s remaining: 2.71s
665: learn: 0.0385111 total: 5.38s remaining: 2.7s
666: learn: 0.0384672 total: 5.39s remaining: 2.69s
667: learn: 0.0383895 total: 5.4s remaining: 2.68s
668: learn: 0.0383554 total: 5.41s remaining: 2.67s
669: learn: 0.0383351 total: 5.42s remaining: 2.67s
670: learn: 0.0383178 total: 5.42s remaining: 2.66s
671: learn: 0.0382677 total: 5.43s remaining: 2.65s
672: learn: 0.0382347 total: 5.44s remaining: 2.64s
673: learn: 0.0382116 total: 5.45s remaining: 2.63s
674: learn: 0.0381725 total: 5.46s remaining: 2.63s
675: learn: 0.0381602 total: 5.47s remaining: 2.62s
676: learn: 0.0381412 total: 5.47s remaining: 2.61s
677: learn: 0.0381191 total: 5.48s remaining: 2.6s
678: learn: 0.0380795 total: 5.49s remaining: 2.6s
679: learn: 0.0380625 total: 5.5s remaining: 2.59s
680: learn: 0.0379880 total: 5.51s remaining: 2.58s
681: learn: 0.0379735 total: 5.51s remaining: 2.57s
682: learn: 0.0379303 total: 5.52s remaining: 2.56s
683: learn: 0.0378814 total: 5.53s remaining: 2.56s
684: learn: 0.0378667 total: 5.54s remaining: 2.55s
685: learn: 0.0378248 total: 5.55s remaining: 2.54s
686: learn: 0.0377756 total: 5.55s remaining: 2.53s
687: learn: 0.0377290 total: 5.56s remaining: 2.52s
688: learn: 0.0377076 total: 5.57s remaining: 2.52s
689: learn: 0.0376894 total: 5.58s remaining: 2.51s
690: learn: 0.0376608 total: 5.59s remaining: 2.5s
691: learn: 0.0376048 total: 5.6s remaining: 2.49s
692: learn: 0.0375876 total: 5.6s remaining: 2.48s
693: learn: 0.0375765 total: 5.61s remaining: 2.47s
694: learn: 0.0375236 total: 5.62s remaining: 2.47s
695: learn: 0.0374985 total: 5.63s remaining: 2.46s
696: learn: 0.0374841 total: 5.63s remaining: 2.45s
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696: learn: 0.0374841 total: 5.63s remaining: 2.45s
697: learn: 0.0374035 total: 5.64s remaining: 2.44s
698: learn: 0.0373927 total: 5.65s remaining: 2.43s
699: learn: 0.0373490 total: 5.66s remaining: 2.43s
700: learn: 0.0373396 total: 5.67s remaining: 2.42s
701: learn: 0.0372709 total: 5.68s remaining: 2.41s
702: learn: 0.0372067 total: 5.68s remaining: 2.4s
703: learn: 0.0371890 total: 5.69s remaining: 2.39s
704: learn: 0.0371234 total: 5.7s remaining: 2.38s
705: learn: 0.0371087 total: 5.71s remaining: 2.38s
706: learn: 0.0370848 total: 5.72s remaining: 2.37s
707: learn: 0.0370537 total: 5.72s remaining: 2.36s
708: learn: 0.0370441 total: 5.73s remaining: 2.35s
709: learn: 0.0370378 total: 5.74s remaining: 2.34s
710: learn: 0.0370133 total: 5.75s remaining: 2.34s
711: learn: 0.0369733 total: 5.76s remaining: 2.33s
712: learn: 0.0369571 total: 5.76s remaining: 2.32s
713: learn: 0.0368940 total: 5.77s remaining: 2.31s
714: learn: 0.0368513 total: 5.78s remaining: 2.3s
715: learn: 0.0368406 total: 5.79s remaining: 2.3s
716: learn: 0.0368126 total: 5.8s remaining: 2.29s
717: learn: 0.0367953 total: 5.8s remaining: 2.28s
718: learn: 0.0367761 total: 5.81s remaining: 2.27s
719: learn: 0.0367372 total: 5.82s remaining: 2.26s
720: learn: 0.0366792 total: 5.83s remaining: 2.26s
721: learn: 0.0366394 total: 5.84s remaining: 2.25s
722: learn: 0.0366139 total: 5.84s remaining: 2.24s
723: learn: 0.0365974 total: 5.85s remaining: 2.23s
724: learn: 0.0365723 total: 5.86s remaining: 2.22s
725: learn: 0.0365489 total: 5.87s remaining: 2.21s
726: learn: 0.0365322 total: 5.88s remaining: 2.21s
727: learn: 0.0365044 total: 5.89s remaining: 2.2s
728: learn: 0.0364451 total: 5.89s remaining: 2.19s
729: learn: 0.0364317 total: 5.9s remaining: 2.18s
730: learn: 0.0363706 total: 5.91s remaining: 2.17s
731: learn: 0.0363029 total: 5.92s remaining: 2.17s
732: learn: 0.0362738 total: 5.93s remaining: 2.16s
733: learn: 0.0362520 total: 5.94s remaining: 2.15s
734: learn: 0.0362310 total: 5.95s remaining: 2.14s
735: learn: 0.0361927 total: 5.96s remaining: 2.14s
736: learn: 0.0361719 total: 5.96s remaining: 2.13s
737: learn: 0.0361561 total: 5.97s remaining: 2.12s
738: learn: 0.0361137 total: 5.98s remaining: 2.11s
739: learn: 0.0361038 total: 5.99s remaining: 2.1s
740: learn: 0.0360482 total: 6s remaining: 2.1s
741: learn: 0.0360340 total: 6s remaining: 2.09s
742: learn: 0.0360216 total: 6.01s remaining: 2.08s
743: learn: 0.0360104 total: 6.02s remaining: 2.07s
744: learn: 0.0359738 total: 6.03s remaining: 2.06s
745: learn: 0.0359687 total: 6.04s remaining: 2.06s
746: learn: 0.0359541 total: 6.04s remaining: 2.05s
747: learn: 0.0359356 total: 6.05s remaining: 2.04s
748: learn: 0.0358664 total: 6.06s remaining: 2.03s
749: learn: 0.0358476 total: 6.07s remaining: 2.02s
750: learn: 0.0357924 total: 6.08s remaining: 2.02s
751: learn: 0.0357586 total: 6.09s remaining: 2.01s
752: learn: 0.0357466 total: 6.09s remaining: 2s
753: learn: 0.0357288 total: 6.1s remaining: 1.99s
754: learn: 0.0356999 total: 6.11s remaining: 1.98s
755: learn: 0.0356677 total: 6.12s remaining: 1.97s
756: learn: 0.0356456 total: 6.13s remaining: 1.97s
757: learn: 0.0356281 total: 6.13s remaining: 1.96s
758: learn: 0.0355914 total: 6.14s remaining: 1.95s
759: learn: 0.0355784 total: 6.15s remaining: 1.94s
760: learn: 0.0355602 total: 6.16s remaining: 1.93s
761: learn: 0.0355433 total: 6.16s remaining: 1.92s
762: learn: 0.0355255 total: 6.17s remaining: 1.92s
763: learn: 0.0355196 total: 6.18s remaining: 1.91s
764: learn: 0.0355087 total: 6.18s remaining: 1.9s
765: learn: 0.0354815 total: 6.19s remaining: 1.89s
766: learn: 0.0354559 total: 6.2s remaining: 1.88s
767: learn: 0.0354479 total: 6.21s remaining: 1.88s
768: learn: 0.0354391 total: 6.21s remaining: 1.87s
769: learn: 0.0354212 total: 6.22s remaining: 1.86s
770: learn: 0.0354035 total: 6.23s remaining: 1.85s
771: learn: 0.0353519 total: 6.24s remaining: 1.84s
772: learn: 0.0353058 total: 6.25s remaining: 1.83s
773: learn: 0.0352573 total: 6.25s remaining: 1.83s
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773: learn: 0.0352573 total: 6.25s remaining: 1.83s
774: learn: 0.0352239 total: 6.26s remaining: 1.82s
775: learn: 0.0351847 total: 6.27s remaining: 1.81s
776: learn: 0.0351546 total: 6.28s remaining: 1.8s
777: learn: 0.0350876 total: 6.29s remaining: 1.79s
778: learn: 0.0350608 total: 6.29s remaining: 1.78s
779: learn: 0.0350519 total: 6.3s remaining: 1.78s
780: learn: 0.0350288 total: 6.31s remaining: 1.77s
781: learn: 0.0349499 total: 6.32s remaining: 1.76s
782: learn: 0.0349381 total: 6.32s remaining: 1.75s
783: learn: 0.0349200 total: 6.33s remaining: 1.74s
784: learn: 0.0348709 total: 6.34s remaining: 1.74s
785: learn: 0.0348632 total: 6.35s remaining: 1.73s
786: learn: 0.0348176 total: 6.35s remaining: 1.72s
787: learn: 0.0347982 total: 6.36s remaining: 1.71s
788: learn: 0.0347866 total: 6.37s remaining: 1.7s
789: learn: 0.0347471 total: 6.38s remaining: 1.7s
790: learn: 0.0346833 total: 6.38s remaining: 1.69s
791: learn: 0.0346748 total: 6.39s remaining: 1.68s
792: learn: 0.0346636 total: 6.4s remaining: 1.67s
793: learn: 0.0346448 total: 6.41s remaining: 1.66s
794: learn: 0.0345987 total: 6.41s remaining: 1.65s
795: learn: 0.0345903 total: 6.42s remaining: 1.65s
796: learn: 0.0345444 total: 6.43s remaining: 1.64s
797: learn: 0.0345274 total: 6.44s remaining: 1.63s
798: learn: 0.0345190 total: 6.45s remaining: 1.62s
799: learn: 0.0345137 total: 6.45s remaining: 1.61s
800: learn: 0.0345030 total: 6.46s remaining: 1.6s
801: learn: 0.0344861 total: 6.47s remaining: 1.6s
802: learn: 0.0344744 total: 6.47s remaining: 1.59s
803: learn: 0.0344656 total: 6.48s remaining: 1.58s
804: learn: 0.0344314 total: 6.49s remaining: 1.57s
805: learn: 0.0343897 total: 6.5s remaining: 1.56s
806: learn: 0.0343789 total: 6.5s remaining: 1.55s
807: learn: 0.0343620 total: 6.51s remaining: 1.55s
808: learn: 0.0343409 total: 6.52s remaining: 1.54s
809: learn: 0.0343217 total: 6.53s remaining: 1.53s
810: learn: 0.0343076 total: 6.53s remaining: 1.52s
811: learn: 0.0342893 total: 6.54s remaining: 1.51s
812: learn: 0.0342730 total: 6.55s remaining: 1.51s
813: learn: 0.0342431 total: 6.56s remaining: 1.5s
814: learn: 0.0341762 total: 6.57s remaining: 1.49s
815: learn: 0.0341039 total: 6.57s remaining: 1.48s
816: learn: 0.0340627 total: 6.58s remaining: 1.47s
817: learn: 0.0340263 total: 6.59s remaining: 1.47s
818: learn: 0.0340065 total: 6.59s remaining: 1.46s
819: learn: 0.0339957 total: 6.6s remaining: 1.45s
820: learn: 0.0339820 total: 6.61s remaining: 1.44s
821: learn: 0.0339250 total: 6.62s remaining: 1.43s
822: learn: 0.0338837 total: 6.63s remaining: 1.43s
823: learn: 0.0338484 total: 6.63s remaining: 1.42s
824: learn: 0.0338372 total: 6.64s remaining: 1.41s
825: learn: 0.0338069 total: 6.65s remaining: 1.4s
826: learn: 0.0337720 total: 6.66s remaining: 1.39s
827: learn: 0.0337425 total: 6.66s remaining: 1.38s
828: learn: 0.0337350 total: 6.67s remaining: 1.38s
829: learn: 0.0337244 total: 6.68s remaining: 1.37s
830: learn: 0.0337041 total: 6.68s remaining: 1.36s
831: learn: 0.0336698 total: 6.69s remaining: 1.35s
832: learn: 0.0336558 total: 6.7s remaining: 1.34s
833: learn: 0.0336106 total: 6.71s remaining: 1.33s
834: learn: 0.0335872 total: 6.72s remaining: 1.33s
835: learn: 0.0335796 total: 6.72s remaining: 1.32s
836: learn: 0.0335710 total: 6.73s remaining: 1.31s
837: learn: 0.0335604 total: 6.74s remaining: 1.3s
838: learn: 0.0335176 total: 6.75s remaining: 1.29s
839: learn: 0.0335057 total: 6.75s remaining: 1.29s
840: learn: 0.0334895 total: 6.76s remaining: 1.28s
841: learn: 0.0334297 total: 6.77s remaining: 1.27s
842: learn: 0.0334065 total: 6.78s remaining: 1.26s
843: learn: 0.0333857 total: 6.78s remaining: 1.25s
844: learn: 0.0333463 total: 6.79s remaining: 1.25s
845: learn: 0.0333327 total: 6.8s remaining: 1.24s
846: learn: 0.0332733 total: 6.81s remaining: 1.23s
847: learn: 0.0332391 total: 6.81s remaining: 1.22s
848: learn: 0.0331955 total: 6.82s remaining: 1.21s
849: learn: 0.0331879 total: 6.83s remaining: 1.21s
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850: learn: 0.0331616 total: 6.84s remaining: 1.2s
851: learn: 0.0331549 total: 6.84s remaining: 1.19s
852: learn: 0.0331444 total: 6.85s remaining: 1.18s
853: learn: 0.0331211 total: 6.86s remaining: 1.17s
854: learn: 0.0331055 total: 6.87s remaining: 1.16s
855: learn: 0.0330689 total: 6.87s remaining: 1.16s
856: learn: 0.0330510 total: 6.88s remaining: 1.15s
857: learn: 0.0330431 total: 6.89s remaining: 1.14s
858: learn: 0.0330251 total: 6.9s remaining: 1.13s
859: learn: 0.0330055 total: 6.91s remaining: 1.12s
860: learn: 0.0329378 total: 6.91s remaining: 1.12s
861: learn: 0.0329286 total: 6.92s remaining: 1.11s
862: learn: 0.0329168 total: 6.93s remaining: 1.1s
863: learn: 0.0328770 total: 6.93s remaining: 1.09s
864: learn: 0.0328592 total: 6.94s remaining: 1.08s
865: learn: 0.0328335 total: 6.95s remaining: 1.07s
866: learn: 0.0328070 total: 6.96s remaining: 1.07s
867: learn: 0.0327999 total: 6.96s remaining: 1.06s
868: learn: 0.0327871 total: 6.97s remaining: 1.05s
869: learn: 0.0327595 total: 6.98s remaining: 1.04s
870: learn: 0.0327511 total: 6.99s remaining: 1.03s
871: learn: 0.0327357 total: 7s remaining: 1.03s
872: learn: 0.0327084 total: 7s remaining: 1.02s
873: learn: 0.0326958 total: 7.01s remaining: 1.01s
874: learn: 0.0326746 total: 7.02s remaining: 1s
875: learn: 0.0326589 total: 7.03s remaining: 995ms
876: learn: 0.0326210 total: 7.04s remaining: 987ms
877: learn: 0.0326121 total: 7.04s remaining: 979ms
878: learn: 0.0325628 total: 7.05s remaining: 971ms
879: learn: 0.0325410 total: 7.06s remaining: 963ms
880: learn: 0.0325294 total: 7.07s remaining: 955ms
881: learn: 0.0325102 total: 7.08s remaining: 947ms
882: learn: 0.0324920 total: 7.08s remaining: 939ms
883: learn: 0.0324727 total: 7.09s remaining: 931ms
884: learn: 0.0324630 total: 7.1s remaining: 923ms
885: learn: 0.0324267 total: 7.11s remaining: 915ms
886: learn: 0.0324081 total: 7.12s remaining: 907ms
887: learn: 0.0323529 total: 7.12s remaining: 899ms
888: learn: 0.0323437 total: 7.13s remaining: 890ms
889: learn: 0.0323330 total: 7.14s remaining: 882ms
890: learn: 0.0323054 total: 7.15s remaining: 874ms
891: learn: 0.0322672 total: 7.15s remaining: 866ms
892: learn: 0.0322543 total: 7.16s remaining: 858ms
893: learn: 0.0322033 total: 7.17s remaining: 850ms
894: learn: 0.0321927 total: 7.18s remaining: 842ms
895: learn: 0.0321832 total: 7.18s remaining: 834ms
896: learn: 0.0321762 total: 7.19s remaining: 826ms
897: learn: 0.0321694 total: 7.2s remaining: 818ms
898: learn: 0.0321335 total: 7.21s remaining: 810ms
899: learn: 0.0321180 total: 7.21s remaining: 802ms
900: learn: 0.0321030 total: 7.22s remaining: 794ms
901: learn: 0.0320868 total: 7.23s remaining: 786ms
902: learn: 0.0320620 total: 7.24s remaining: 778ms
903: learn: 0.0320414 total: 7.25s remaining: 769ms
904: learn: 0.0320266 total: 7.25s remaining: 761ms
905: learn: 0.0319990 total: 7.26s remaining: 753ms
906: learn: 0.0319927 total: 7.27s remaining: 745ms
907: learn: 0.0319806 total: 7.28s remaining: 737ms
908: learn: 0.0319737 total: 7.28s remaining: 729ms
909: learn: 0.0319648 total: 7.29s remaining: 721ms
910: learn: 0.0319502 total: 7.3s remaining: 713ms
911: learn: 0.0319357 total: 7.31s remaining: 705ms
912: learn: 0.0318963 total: 7.31s remaining: 697ms
913: learn: 0.0318671 total: 7.32s remaining: 689ms
914: learn: 0.0318523 total: 7.33s remaining: 681ms
915: learn: 0.0318188 total: 7.34s remaining: 673ms
916: learn: 0.0318005 total: 7.34s remaining: 665ms
917: learn: 0.0317829 total: 7.35s remaining: 657ms
918: learn: 0.0317729 total: 7.36s remaining: 649ms
919: learn: 0.0317615 total: 7.37s remaining: 641ms
920: learn: 0.0317540 total: 7.37s remaining: 633ms
921: learn: 0.0317370 total: 7.38s remaining: 624ms
922: learn: 0.0317200 total: 7.39s remaining: 616ms
923: learn: 0.0317109 total: 7.4s remaining: 608ms
924: learn: 0.0316780 total: 7.4s remaining: 600ms
925: learn: 0.0316231 total: 7.41s remaining: 592ms
926: learn: 0.0316070 total: 7.42s remaining: 584ms
```

```
927: learn: 0.0315957	total: 7.43s	remaining: 576ms
928: learn: 0.0315864	total: 7.43s	remaining: 568ms
929: learn: 0.0315636	total: 7.44s	remaining: 560ms
930: learn: 0.0315435	total: 7.45s	remaining: 552ms
931: learn: 0.0315301	total: 7.46s	remaining: 544ms
932: learn: 0.0315172	total: 7.46s	remaining: 536ms
933: learn: 0.0314794	total: 7.47s	remaining: 528ms
934: learn: 0.0314664	total: 7.48s	remaining: 520ms
935: learn: 0.0314530	total: 7.49s	remaining: 512ms
936: learn: 0.0314160	total: 7.5s	remaining: 504ms
937: learn: 0.0313693	total: 7.5s	remaining: 496ms
938: learn: 0.0313349	total: 7.51s	remaining: 488ms
939: learn: 0.0313133	total: 7.52s	remaining: 480ms
940: learn: 0.0313018	total: 7.53s	remaining: 472ms
941: learn: 0.0312816	total: 7.53s	remaining: 464ms
942: learn: 0.0312498	total: 7.54s	remaining: 456ms
943: learn: 0.0312211	total: 7.55s	remaining: 448ms
944: learn: 0.0312052	total: 7.56s	remaining: 440ms
945: learn: 0.0311979	total: 7.56s	remaining: 432ms
946: learn: 0.0311815	total: 7.57s	remaining: 424ms
947: learn: 0.0311471	total: 7.58s	remaining: 416ms
948: learn: 0.0311346	total: 7.59s	remaining: 408ms
949: learn: 0.0311108	total: 7.59s	remaining: 400ms
950: learn: 0.0311030	total: 7.6s	remaining: 392ms
951: learn: 0.0310820	total: 7.61s	remaining: 384ms
952: learn: 0.0310512	total: 7.62s	remaining: 376ms
953: learn: 0.0310186	total: 7.62s	remaining: 368ms
954: learn: 0.0309777	total: 7.63s	remaining: 360ms
955: learn: 0.0309692	total: 7.64s	remaining: 352ms
956: learn: 0.0309583	total: 7.65s	remaining: 344ms
957: learn: 0.0309112	total: 7.65s	remaining: 336ms
958: learn: 0.0308774	total: 7.66s	remaining: 328ms
959: learn: 0.0308194	total: 7.67s	remaining: 320ms
960: learn: 0.0308068	total: 7.68s	remaining: 312ms
961: learn: 0.0307623	total: 7.68s	remaining: 304ms
962: learn: 0.0307550	total: 7.69s	remaining: 296ms
963: learn: 0.0307305	total: 7.7s	remaining: 288ms
964: learn: 0.0306967	total: 7.71s	remaining: 280ms
965: learn: 0.0306769	total: 7.71s	remaining: 272ms
966: learn: 0.0306545	total: 7.72s	remaining: 264ms
967: learn: 0.0306459	total: 7.73s	remaining: 256ms
968: learn: 0.0306379	total: 7.74s	remaining: 248ms
969: learn: 0.0305934	total: 7.74s	remaining: 240ms
970: learn: 0.0305828	total: 7.75s	remaining: 232ms
971: learn: 0.0305559	total: 7.76s	remaining: 224ms
972: learn: 0.0305261	total: 7.77s	remaining: 216ms
973: learn: 0.0305170	total: 7.77s	remaining: 208ms
974: learn: 0.0304927	total: 7.78s	remaining: 200ms
975: learn: 0.0304517	total: 7.79s	remaining: 192ms
976: learn: 0.0304154	total: 7.8s	remaining: 184ms
977: learn: 0.0304087	total: 7.8s	remaining: 176ms
978: learn: 0.0303745	total: 7.81s	remaining: 168ms
979: learn: 0.0303372	total: 7.82s	remaining: 160ms
980: learn: 0.0303227	total: 7.83s	remaining: 152ms
981: learn: 0.0302798	total: 7.83s	remaining: 144ms
982: learn: 0.0302623	total: 7.84s	remaining: 136ms
983: learn: 0.0302297	total: 7.85s	remaining: 128ms
984: learn: 0.0302221	total: 7.86s	remaining: 120ms
985: learn: 0.0302081	total: 7.87s	remaining: 112ms
986: learn: 0.0301753	total: 7.87s	remaining: 104ms
987: learn: 0.0301558	total: 7.88s	remaining: 95.7ms
988: learn: 0.0301254	total: 7.89s	remaining: 87.8ms
989: learn: 0.0300748	total: 7.9s	remaining: 79.8ms
990: learn: 0.0300631	total: 7.91s	remaining: 71.8ms
991: learn: 0.0300512	total: 7.91s	remaining: 63.8ms
992: learn: 0.0300313	total: 7.92s	remaining: 55.8ms
993: learn: 0.0300195	total: 7.93s	remaining: 47.9ms
994: learn: 0.0300131	total: 7.93s	remaining: 39.9ms
995: learn: 0.0299837	total: 7.94s	remaining: 31.9ms
996: learn: 0.0299707	total: 7.95s	remaining: 23.9ms
997: learn: 0.0299244	total: 7.96s	remaining: 15.9ms
998: learn: 0.0299029	total: 7.96s	remaining: 7.97ms
999: learn: 0.0298965	total: 7.97s	remaining: 0us
```

```python
PrintClassificationMetrics(lab5_cl_y_test, cb_cl_prediction)
```
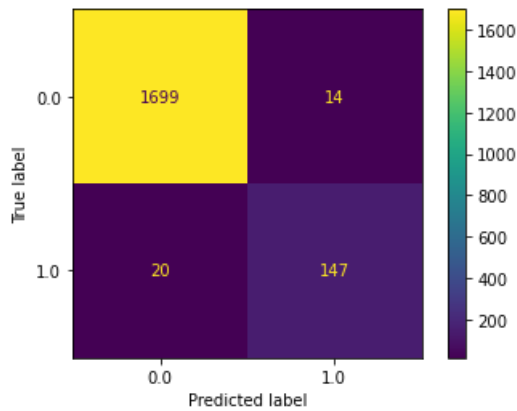
```
-Погрешность (accuracy, balanced) = 0.9360333623471097;
-Меткость (precision, класс 1) = 0.9130434782608695;
-Полнота (recall, класс 1) = 0.8802395209580839;
-F1 (класс 1) = 0.8963414634146342;
-ROC AUC = 0.9360333623471097.
```

```
 plot_confusion_matrix(cb_cl, lab5_cl_x_test, lab5_cl_y_test)
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at 0x26851b80430>
```


Видим небольшое улучшение на уровне статистической погрешности.

Попробуем рандомизированный поиск для оптимизации гиперпараметров:

```
 lr_range = np.array(np.geomspace(1e-08, 1e+00, num = 9))
 cb_cl_new = CatBoostClassifier(random_seed = RANDOM_STATE)
 results = cb_cl_new.randomized_search({"learning_rate": lr_range},
                                        lab5_cl_x_train,
                                        lab5_cl_y_train,
                                        search_by_train_test_split = False,
                                        verbose = False,
                                        plot = True)
```

```
0: learn: 0.6931450 test: 0.6931450 best: 0.6931450 (0)
1: learn: 0.6931428 test: 0.6931428 best: 0.6931428 (1)
2: learn: 0.6931408 test: 0.6931409 best: 0.6931409 (2)
3: learn: 0.6931387 test: 0.6931387 best: 0.6931387 (3)
4: learn: 0.6931367 test: 0.6931367 best: 0.6931367 (4)
5: learn: 0.6931345 test: 0.6931345 best: 0.6931345 (5)
6: learn: 0.6931324 test: 0.6931325 best: 0.6931325 (6)
7: learn: 0.6931303 test: 0.6931303 best: 0.6931303 (7)
8: learn: 0.6931282 test: 0.6931282 best: 0.6931282 (8)
9: learn: 0.6931261 test: 0.6931261 best: 0.6931261 (9)
10: learn: 0.6931239 test: 0.6931239 best: 0.6931239 (10)
11: learn: 0.6931218 test: 0.6931218 best: 0.6931218 (11)
12: learn: 0.6931198 test: 0.6931199 best: 0.6931199 (12) total: 358ms remaining: 27.2s
13: learn: 0.6931178 test: 0.6931179 best: 0.6931179 (13)
14: learn: 0.6931156 test: 0.6931156 best: 0.6931156 (14)
15: learn: 0.6931133 test: 0.6931133 best: 0.6931133 (15)
16: learn: 0.6931112 test: 0.6931113 best: 0.6931113 (16)
17: learn: 0.6931091 test: 0.6931092 best: 0.6931092 (17)
18: learn: 0.6931069 test: 0.6931070 best: 0.6931070 (18)
19: learn: 0.6931049 test: 0.6931050 best: 0.6931050 (19)
20: learn: 0.6931028 test: 0.6931029 best: 0.6931029 (20)
21: learn: 0.6931008 test: 0.6931008 best: 0.6931008 (21)
22: learn: 0.6930986 test: 0.6930987 best: 0.6930987 (22)
23: learn: 0.6930965 test: 0.6930966 best: 0.6930966 (23)
24: learn: 0.6930946 test: 0.6930947 best: 0.6930947 (24)
25: learn: 0.6930926 test: 0.6930927 best: 0.6930927 (25)
26: learn: 0.6930906 test: 0.6930907 best: 0.6930907 (26)
27: learn: 0.6930886 test: 0.6930887 best: 0.6930887 (27)
28: learn: 0.6930864 test: 0.6930865 best: 0.6930865 (28)
29: learn: 0.6930844 test: 0.6930845 best: 0.6930845 (29)
30: learn: 0.6930823 test: 0.6930824 best: 0.6930824 (30)
31: learn: 0.6930803 test: 0.6930804 best: 0.6930804 (31)
32: learn: 0.6930781 test: 0.6930782 best: 0.6930782 (32)
33: learn: 0.6930758 test: 0.6930759 best: 0.6930759 (33) total: 812ms remaining: 23.1s
34: learn: 0.6930738 test: 0.6930739 best: 0.6930739 (34)
35: learn: 0.6930718 test: 0.6930719 best: 0.6930719 (35)
36: learn: 0.6930697 test: 0.6930698 best: 0.6930698 (36)
37: learn: 0.6930677 test: 0.6930678 best: 0.6930678 (37)
```

```
37: learn: 0.6930677 test: 0.6930678 best: 0.6930678 (37)
38: learn: 0.6930657 test: 0.6930658 best: 0.6930658 (38)
39: learn: 0.6930636 test: 0.6930637 best: 0.6930637 (39)
40: learn: 0.6930613 test: 0.6930615 best: 0.6930615 (40)
41: learn: 0.6930594 test: 0.6930596 best: 0.6930596 (41)
42: learn: 0.6930571 test: 0.6930573 best: 0.6930573 (42)
43: learn: 0.6930549 test: 0.6930551 best: 0.6930551 (43)
44: learn: 0.6930529 test: 0.6930531 best: 0.6930531 (44)
45: learn: 0.6930509 test: 0.6930511 best: 0.6930511 (45)
46: learn: 0.6930487 test: 0.6930489 best: 0.6930489 (46)
47: learn: 0.6930468 test: 0.6930469 best: 0.6930469 (47)
48: learn: 0.6930448 test: 0.6930449 best: 0.6930449 (48)
49: learn: 0.6930427 test: 0.6930429 best: 0.6930429 (49)
50: learn: 0.6930405 test: 0.6930407 best: 0.6930407 (50)
51: learn: 0.6930386 test: 0.6930388 best: 0.6930388 (51)
52: learn: 0.6930365 test: 0.6930367 best: 0.6930367 (52)
53: learn: 0.6930343 test: 0.6930345 best: 0.6930345 (53)
54: learn: 0.6930323 test: 0.6930325 best: 0.6930325 (54)
55: learn: 0.6930302 test: 0.6930305 best: 0.6930305 (55)
56: learn: 0.6930282 test: 0.6930284 best: 0.6930284 (56)
57: learn: 0.6930260 test: 0.6930262 best: 0.6930262 (57)
58: learn: 0.6930239 test: 0.6930241 best: 0.6930241 (58)
59: learn: 0.6930218 test: 0.6930220 best: 0.6930220 (59)
60: learn: 0.6930197 test: 0.6930200 best: 0.6930200 (60)
61: learn: 0.6930178 test: 0.6930180 best: 0.6930180 (61)
62: learn: 0.6930154 test: 0.6930156 best: 0.6930156 (62)
63: learn: 0.6930132 test: 0.6930134 best: 0.6930134 (63)
64: learn: 0.6930110 test: 0.6930112 best: 0.6930112 (64)
65: learn: 0.6930089 test: 0.6930091 best: 0.6930091 (65)
66: learn: 0.6930070 test: 0.6930072 best: 0.6930072 (66)
67: learn: 0.6930048 test: 0.6930051 best: 0.6930051 (67)
68: learn: 0.6930027 test: 0.6930029 best: 0.6930029 (68)
69: learn: 0.6930005 test: 0.6930008 best: 0.6930008 (69)
70: learn: 0.6929985 test: 0.6929988 best: 0.6929988 (70)
71: learn: 0.6929965 test: 0.6929967 best: 0.6929967 (71)
72: learn: 0.6929942 test: 0.6929945 best: 0.6929945 (72)
73: learn: 0.6929921 test: 0.6929924 best: 0.6929924 (73)
74: learn: 0.6929900 test: 0.6929902 best: 0.6929902 (74)
75: learn: 0.6929878 test: 0.6929881 best: 0.6929881 (75)
76: learn: 0.6929858 test: 0.6929861 best: 0.6929861 (76)
77: learn: 0.6929837 test: 0.6929840 best: 0.6929840 (77)
78: learn: 0.6929817 test: 0.6929819 best: 0.6929819 (78)
79: learn: 0.6929795 test: 0.6929798 best: 0.6929798 (79)
80: learn: 0.6929776 test: 0.6929779 best: 0.6929779 (80)
81: learn: 0.6929753 test: 0.6929756 best: 0.6929756 (81)
82: learn: 0.6929735 test: 0.6929738 best: 0.6929738 (82)
83: learn: 0.6929714 test: 0.6929717 best: 0.6929717 (83)
84: learn: 0.6929694 test: 0.6929697 best: 0.6929697 (84)
85: learn: 0.6929673 test: 0.6929676 best: 0.6929676 (85)
86: learn: 0.6929652 test: 0.6929655 best: 0.6929655 (86)
87: learn: 0.6929630 test: 0.6929633 best: 0.6929633 (87)
88: learn: 0.6929608 test: 0.6929611 best: 0.6929611 (88)
89: learn: 0.6929588 test: 0.6929592 best: 0.6929592 (89)
90: learn: 0.6929566 test: 0.6929569 best: 0.6929569 (90)
91: learn: 0.6929547 test: 0.6929550 best: 0.6929550 (91)
92: learn: 0.6929524 test: 0.6929527 best: 0.6929527 (92)
93: learn: 0.6929503 test: 0.6929506 best: 0.6929506 (93)
94: learn: 0.6929484 test: 0.6929487 best: 0.6929487 (94)
95: learn: 0.6929465 test: 0.6929468 best: 0.6929468 (95)
96: learn: 0.6929444 test: 0.6929447 best: 0.6929447 (96)
97: learn: 0.6929424 test: 0.6929428 best: 0.6929428 (97)
98: learn: 0.6929405 test: 0.6929408 best: 0.6929408 (98)
99: learn: 0.6929384 test: 0.6929388 best: 0.6929388 (99)
100: learn: 0.6929364 test: 0.6929367 best: 0.6929367 (100)
101: learn: 0.6929343 test: 0.6929347 best: 0.6929347 (101)
102: learn: 0.6929324 test: 0.6929328 best: 0.6929328 (102)
103: learn: 0.6929301 test: 0.6929305 best: 0.6929305 (103)
104: learn: 0.6929282 test: 0.6929286 best: 0.6929286 (104)
105: learn: 0.6929261 test: 0.6929265 best: 0.6929265 (105)
106: learn: 0.6929239 test: 0.6929243 best: 0.6929243 (106)
107: learn: 0.6929217 test: 0.6929221 best: 0.6929221 (107)
108: learn: 0.6929197 test: 0.6929201 best: 0.6929201 (108)
109: learn: 0.6929176 test: 0.6929180 best: 0.6929180 (109)
110: learn: 0.6929156 test: 0.6929160 best: 0.6929160 (110)
111: learn: 0.6929136 test: 0.6929140 best: 0.6929140 (111)
112: learn: 0.6929116 test: 0.6929120 best: 0.6929120 (112)
113: learn: 0.6929095 test: 0.6929099 best: 0.6929099 (113)
114: learn: 0.6929074 test: 0.6929078 best: 0.6929078 (114)
```

```
114: learn: 0.6929071 test: 0.6929076 best: 0.6929076 (114)
115: learn: 0.6929053 test: 0.6929058 best: 0.6929058 (115)
116: learn: 0.6929032 test: 0.6929036 best: 0.6929036 (116)
117: learn: 0.6929012 test: 0.6929016 best: 0.6929016 (117)
118: learn: 0.6928990 test: 0.6928994 best: 0.6928994 (118)
119: learn: 0.6928969 test: 0.6928973 best: 0.6928973 (119)
120: learn: 0.6928949 test: 0.6928954 best: 0.6928954 (120)
121: learn: 0.6928929 test: 0.6928933 best: 0.6928933 (121)
122: learn: 0.6928906 test: 0.6928911 best: 0.6928911 (122) total: 2.34s remaining: 16.7s
123: learn: 0.6928885 test: 0.6928890 best: 0.6928890 (123)
124: learn: 0.6928866 test: 0.6928870 best: 0.6928870 (124)
125: learn: 0.6928843 test: 0.6928848 best: 0.6928848 (125)
126: learn: 0.6928821 test: 0.6928826 best: 0.6928826 (126)
127: learn: 0.6928798 test: 0.6928803 best: 0.6928803 (127)
128: learn: 0.6928779 test: 0.6928784 best: 0.6928784 (128)
129: learn: 0.6928758 test: 0.6928762 best: 0.6928762 (129)
130: learn: 0.6928736 test: 0.6928741 best: 0.6928741 (130)
131: learn: 0.6928716 test: 0.6928721 best: 0.6928721 (131)
132: learn: 0.6928695 test: 0.6928700 best: 0.6928700 (132)
133: learn: 0.6928674 test: 0.6928679 best: 0.6928679 (133)
134: learn: 0.6928653 test: 0.6928658 best: 0.6928658 (134)
135: learn: 0.6928630 test: 0.6928635 best: 0.6928635 (135)
136: learn: 0.6928611 test: 0.6928616 best: 0.6928616 (136)
137: learn: 0.6928593 test: 0.6928598 best: 0.6928598 (137)
138: learn: 0.6928573 test: 0.6928578 best: 0.6928578 (138)
139: learn: 0.6928552 test: 0.6928557 best: 0.6928557 (139)
140: learn: 0.6928530 test: 0.6928535 best: 0.6928535 (140)
141: learn: 0.6928508 test: 0.6928514 best: 0.6928514 (141)
142: learn: 0.6928487 test: 0.6928492 best: 0.6928492 (142)
143: learn: 0.6928465 test: 0.6928470 best: 0.6928470 (143)
144: learn: 0.6928446 test: 0.6928451 best: 0.6928451 (144)
145: learn: 0.6928425 test: 0.6928431 best: 0.6928431 (145)
146: learn: 0.6928404 test: 0.6928409 best: 0.6928409 (146)
147: learn: 0.6928383 test: 0.6928388 best: 0.6928388 (147)
148: learn: 0.6928361 test: 0.6928366 best: 0.6928366 (148)
149: learn: 0.6928340 test: 0.6928345 best: 0.6928345 (149)
150: learn: 0.6928319 test: 0.6928325 best: 0.6928325 (150)
151: learn: 0.6928300 test: 0.6928305 best: 0.6928305 (151)
152: learn: 0.6928278 test: 0.6928284 best: 0.6928284 (152)
153: learn: 0.6928258 test: 0.6928264 best: 0.6928264 (153)
154: learn: 0.6928238 test: 0.6928244 best: 0.6928244 (154)
155: learn: 0.6928219 test: 0.6928224 best: 0.6928224 (155)
156: learn: 0.6928199 test: 0.6928205 best: 0.6928205 (156)
157: learn: 0.6928177 test: 0.6928183 best: 0.6928183 (157)
158: learn: 0.6928157 test: 0.6928163 best: 0.6928163 (158)
159: learn: 0.6928135 test: 0.6928141 best: 0.6928141 (159)
160: learn: 0.6928113 test: 0.6928119 best: 0.6928119 (160)
161: learn: 0.6928091 test: 0.6928097 best: 0.6928097 (161)
162: learn: 0.6928071 test: 0.6928078 best: 0.6928078 (162)
163: learn: 0.6928049 test: 0.6928056 best: 0.6928056 (163)
164: learn: 0.6928029 test: 0.6928035 best: 0.6928035 (164)
165: learn: 0.6928008 test: 0.6928014 best: 0.6928014 (165)
166: learn: 0.6927989 test: 0.6927995 best: 0.6927995 (166)
167: learn: 0.6927967 test: 0.6927974 best: 0.6927974 (167)
168: learn: 0.6927947 test: 0.6927953 best: 0.6927953 (168)
169: learn: 0.6927925 test: 0.6927931 best: 0.6927931 (169)
170: learn: 0.6927904 test: 0.6927911 best: 0.6927911 (170)
171: learn: 0.6927882 test: 0.6927889 best: 0.6927889 (171)
172: learn: 0.6927863 test: 0.6927869 best: 0.6927869 (172)
173: learn: 0.6927841 test: 0.6927847 best: 0.6927847 (173)
174: learn: 0.6927820 test: 0.6927826 best: 0.6927826 (174)
175: learn: 0.6927800 test: 0.6927806 best: 0.6927806 (175)
176: learn: 0.6927778 test: 0.6927784 best: 0.6927784 (176)
177: learn: 0.6927757 test: 0.6927764 best: 0.6927764 (177)
178: learn: 0.6927735 test: 0.6927741 best: 0.6927741 (178)
179: learn: 0.6927715 test: 0.6927721 best: 0.6927721 (179)
180: learn: 0.6927693 test: 0.6927699 best: 0.6927699 (180)
181: learn: 0.6927672 test: 0.6927679 best: 0.6927679 (181)
182: learn: 0.6927652 test: 0.6927659 best: 0.6927659 (182)
183: learn: 0.6927631 test: 0.6927638 best: 0.6927638 (183)
184: learn: 0.6927611 test: 0.6927618 best: 0.6927618 (184)
185: learn: 0.6927590 test: 0.6927597 best: 0.6927597 (185)
186: learn: 0.6927570 test: 0.6927577 best: 0.6927577 (186)
187: learn: 0.6927550 test: 0.6927557 best: 0.6927557 (187)
188: learn: 0.6927530 test: 0.6927537 best: 0.6927537 (188)
189: learn: 0.6927510 test: 0.6927517 best: 0.6927517 (189)
190: learn: 0.6927491 test: 0.6927497 best: 0.6927497 (190)
191: learn: 0.6927470 test: 0.6927477 best: 0.6927477 (191)
```

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191: learn: 0.6927470 test: 0.6927477 best: 0.6927477 (191)
192: learn: 0.6927449 test: 0.6927456 best: 0.6927456 (192)
193: learn: 0.6927428 test: 0.6927436 best: 0.6927436 (193)
194: learn: 0.6927406 test: 0.6927413 best: 0.6927413 (194)
195: learn: 0.6927387 test: 0.6927394 best: 0.6927394 (195)
196: learn: 0.6927366 test: 0.6927373 best: 0.6927373 (196)
197: learn: 0.6927345 test: 0.6927352 best: 0.6927352 (197)
198: learn: 0.6927324 test: 0.6927332 best: 0.6927332 (198)
199: learn: 0.6927302 test: 0.6927309 best: 0.6927309 (199)
200: learn: 0.6927282 test: 0.6927290 best: 0.6927290 (200)
201: learn: 0.6927260 test: 0.6927267 best: 0.6927267 (201)
202: learn: 0.6927237 test: 0.6927245 best: 0.6927245 (202)
203: learn: 0.6927216 test: 0.6927223 best: 0.6927223 (203)
204: learn: 0.6927196 test: 0.6927203 best: 0.6927203 (204)
205: learn: 0.6927176 test: 0.6927184 best: 0.6927184 (205)
206: learn: 0.6927156 test: 0.6927163 best: 0.6927163 (206)
207: learn: 0.6927133 test: 0.6927141 best: 0.6927141 (207)
208: learn: 0.6927112 test: 0.6927120 best: 0.6927120 (208)
209: learn: 0.6927091 test: 0.6927099 best: 0.6927099 (209) total: 3.81s remaining: 14.3s
210: learn: 0.6927070 test: 0.6927078 best: 0.6927078 (210)
211: learn: 0.6927049 test: 0.6927056 best: 0.6927056 (211)
212: learn: 0.6927029 test: 0.6927036 best: 0.6927036 (212)
213: learn: 0.6927008 test: 0.6927016 best: 0.6927016 (213)
214: learn: 0.6926990 test: 0.6926997 best: 0.6926997 (214)
215: learn: 0.6926968 test: 0.6926975 best: 0.6926975 (215)
216: learn: 0.6926948 test: 0.6926956 best: 0.6926956 (216)
217: learn: 0.6926926 test: 0.6926933 best: 0.6926933 (217)
218: learn: 0.6926905 test: 0.6926913 best: 0.6926913 (218)
219: learn: 0.6926884 test: 0.6926892 best: 0.6926892 (219)
220: learn: 0.6926863 test: 0.6926870 best: 0.6926870 (220)
221: learn: 0.6926840 test: 0.6926848 best: 0.6926848 (221)
222: learn: 0.6926820 test: 0.6926828 best: 0.6926828 (222)
223: learn: 0.6926799 test: 0.6926807 best: 0.6926807 (223)
224: learn: 0.6926779 test: 0.6926787 best: 0.6926787 (224)
225: learn: 0.6926758 test: 0.6926766 best: 0.6926766 (225)
226: learn: 0.6926738 test: 0.6926746 best: 0.6926746 (226)
227: learn: 0.6926716 test: 0.6926724 best: 0.6926724 (227)
228: learn: 0.6926694 test: 0.6926703 best: 0.6926703 (228)
229: learn: 0.6926675 test: 0.6926683 best: 0.6926683 (229)
230: learn: 0.6926652 test: 0.6926661 best: 0.6926661 (230)
231: learn: 0.6926633 test: 0.6926641 best: 0.6926641 (231)
232: learn: 0.6926612 test: 0.6926620 best: 0.6926620 (232)
233: learn: 0.6926592 test: 0.6926600 best: 0.6926600 (233)
234: learn: 0.6926572 test: 0.6926580 best: 0.6926580 (234)
235: learn: 0.6926549 test: 0.6926558 best: 0.6926558 (235)
236: learn: 0.6926527 test: 0.6926536 best: 0.6926536 (236)
237: learn: 0.6926507 test: 0.6926516 best: 0.6926516 (237)
238: learn: 0.6926485 test: 0.6926494 best: 0.6926494 (238)
239: learn: 0.6926464 test: 0.6926473 best: 0.6926473 (239)
240: learn: 0.6926444 test: 0.6926452 best: 0.6926452 (240)
241: learn: 0.6926421 test: 0.6926430 best: 0.6926430 (241)
242: learn: 0.6926399 test: 0.6926408 best: 0.6926408 (242)
243: learn: 0.6926378 test: 0.6926387 best: 0.6926387 (243)
244: learn: 0.6926356 test: 0.6926365 best: 0.6926365 (244) total: 4.43s remaining: 13.6s
245: learn: 0.6926335 test: 0.6926343 best: 0.6926343 (245)
246: learn: 0.6926314 test: 0.6926322 best: 0.6926322 (246)
247: learn: 0.6926293 test: 0.6926302 best: 0.6926302 (247)
248: learn: 0.6926272 test: 0.6926281 best: 0.6926281 (248)
249: learn: 0.6926252 test: 0.6926261 best: 0.6926261 (249)
250: learn: 0.6926231 test: 0.6926240 best: 0.6926240 (250)
251: learn: 0.6926211 test: 0.6926220 best: 0.6926220 (251)
252: learn: 0.6926190 test: 0.6926199 best: 0.6926199 (252)
253: learn: 0.6926167 test: 0.6926176 best: 0.6926176 (253)
254: learn: 0.6926147 test: 0.6926156 best: 0.6926156 (254)
255: learn: 0.6926126 test: 0.6926134 best: 0.6926134 (255)
256: learn: 0.6926104 test: 0.6926113 best: 0.6926113 (256)
257: learn: 0.6926083 test: 0.6926092 best: 0.6926092 (257)
258: learn: 0.6926060 test: 0.6926069 best: 0.6926069 (258)
259: learn: 0.6926039 test: 0.6926048 best: 0.6926048 (259)
260: learn: 0.6926020 test: 0.6926029 best: 0.6926029 (260)
261: learn: 0.6925998 test: 0.6926007 best: 0.6926007 (261)
262: learn: 0.6925977 test: 0.6925986 best: 0.6925986 (262)
263: learn: 0.6925956 test: 0.6925965 best: 0.6925965 (263)
264: learn: 0.6925935 test: 0.6925944 best: 0.6925944 (264)
265: learn: 0.6925916 test: 0.6925925 best: 0.6925925 (265)
266: learn: 0.6925896 test: 0.6925905 best: 0.6925905 (266)
267: learn: 0.6925874 test: 0.6925884 best: 0.6925884 (267)
268: learn: 0.6925854 test: 0.6925864 best: 0.6925864 (268)
```

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268: learn: 0.6925854 test: 0.6925864 best: 0.6925864 (268)
269: learn: 0.6925835 test: 0.6925844 best: 0.6925844 (269)
270: learn: 0.6925813 test: 0.6925822 best: 0.6925822 (270)
271: learn: 0.6925792 test: 0.6925801 best: 0.6925801 (271) total: 4.92s remaining: 13.2s
272: learn: 0.6925774 test: 0.6925783 best: 0.6925783 (272)
273: learn: 0.6925751 test: 0.6925760 best: 0.6925760 (273)
274: learn: 0.6925730 test: 0.6925740 best: 0.6925740 (274)
275: learn: 0.6925709 test: 0.6925718 best: 0.6925718 (275)
276: learn: 0.6925688 test: 0.6925698 best: 0.6925698 (276)
277: learn: 0.6925669 test: 0.6925678 best: 0.6925678 (277)
278: learn: 0.6925649 test: 0.6925659 best: 0.6925659 (278)
279: learn: 0.6925628 test: 0.6925638 best: 0.6925638 (279)
280: learn: 0.6925608 test: 0.6925618 best: 0.6925618 (280)
281: learn: 0.6925586 test: 0.6925596 best: 0.6925596 (281)
282: learn: 0.6925566 test: 0.6925576 best: 0.6925576 (282)
283: learn: 0.6925547 test: 0.6925557 best: 0.6925557 (283)
284: learn: 0.6925527 test: 0.6925537 best: 0.6925537 (284)
285: learn: 0.6925507 test: 0.6925517 best: 0.6925517 (285)
286: learn: 0.6925484 test: 0.6925494 best: 0.6925494 (286)
287: learn: 0.6925463 test: 0.6925474 best: 0.6925474 (287)
288: learn: 0.6925443 test: 0.6925453 best: 0.6925453 (288)
289: learn: 0.6925421 test: 0.6925432 best: 0.6925432 (289)
290: learn: 0.6925399 test: 0.6925410 best: 0.6925410 (290)
291: learn: 0.6925380 test: 0.6925390 best: 0.6925390 (291)
292: learn: 0.6925359 test: 0.6925369 best: 0.6925369 (292)
293: learn: 0.6925337 test: 0.6925348 best: 0.6925348 (293)
294: learn: 0.6925315 test: 0.6925326 best: 0.6925326 (294)
295: learn: 0.6925293 test: 0.6925304 best: 0.6925304 (295)
296: learn: 0.6925274 test: 0.6925284 best: 0.6925284 (296)
297: learn: 0.6925252 test: 0.6925263 best: 0.6925263 (297)
298: learn: 0.6925234 test: 0.6925245 best: 0.6925245 (298)
299: learn: 0.6925212 test: 0.6925223 best: 0.6925223 (299)
300: learn: 0.6925192 test: 0.6925203 best: 0.6925203 (300)
301: learn: 0.6925170 test: 0.6925180 best: 0.6925180 (301)
302: learn: 0.6925149 test: 0.6925160 best: 0.6925160 (302)
303: learn: 0.6925128 test: 0.6925139 best: 0.6925139 (303)
304: learn: 0.6925109 test: 0.6925120 best: 0.6925120 (304)
305: learn: 0.6925088 test: 0.6925100 best: 0.6925100 (305)
306: learn: 0.6925066 test: 0.6925077 best: 0.6925077 (306)
307: learn: 0.6925046 test: 0.6925057 best: 0.6925057 (307)
308: learn: 0.6925025 test: 0.6925036 best: 0.6925036 (308)
309: learn: 0.6925002 test: 0.6925014 best: 0.6925014 (309)
310: learn: 0.6924983 test: 0.6924994 best: 0.6924994 (310)
311: learn: 0.6924960 test: 0.6924971 best: 0.6924971 (311)
312: learn: 0.6924939 test: 0.6924951 best: 0.6924951 (312)
313: learn: 0.6924919 test: 0.6924931 best: 0.6924931 (313)
314: learn: 0.6924899 test: 0.6924910 best: 0.6924910 (314)
315: learn: 0.6924877 test: 0.6924888 best: 0.6924888 (315)
316: learn: 0.6924856 test: 0.6924868 best: 0.6924868 (316)
317: learn: 0.6924837 test: 0.6924849 best: 0.6924849 (317)
318: learn: 0.6924816 test: 0.6924827 best: 0.6924827 (318)
319: learn: 0.6924794 test: 0.6924806 best: 0.6924806 (319)
320: learn: 0.6924773 test: 0.6924785 best: 0.6924785 (320)
321: learn: 0.6924751 test: 0.6924763 best: 0.6924763 (321) total: 5.79s remaining: 12.2s
322: learn: 0.6924730 test: 0.6924742 best: 0.6924742 (322)
323: learn: 0.6924711 test: 0.6924723 best: 0.6924723 (323)
324: learn: 0.6924690 test: 0.6924702 best: 0.6924702 (324)
325: learn: 0.6924668 test: 0.6924680 best: 0.6924680 (325)
326: learn: 0.6924647 test: 0.6924659 best: 0.6924659 (326)
327: learn: 0.6924625 test: 0.6924637 best: 0.6924637 (327)
328: learn: 0.6924605 test: 0.6924617 best: 0.6924617 (328)
329: learn: 0.6924585 test: 0.6924597 best: 0.6924597 (329)
330: learn: 0.6924563 test: 0.6924575 best: 0.6924575 (330)
331: learn: 0.6924542 test: 0.6924554 best: 0.6924554 (331)
332: learn: 0.6924522 test: 0.6924535 best: 0.6924535 (332)
333: learn: 0.6924501 test: 0.6924513 best: 0.6924513 (333)
334: learn: 0.6924480 test: 0.6924493 best: 0.6924493 (334)
335: learn: 0.6924459 test: 0.6924471 best: 0.6924471 (335)
336: learn: 0.6924437 test: 0.6924450 best: 0.6924450 (336)
337: learn: 0.6924417 test: 0.6924429 best: 0.6924429 (337)
338: learn: 0.6924395 test: 0.6924408 best: 0.6924408 (338)
339: learn: 0.6924375 test: 0.6924387 best: 0.6924387 (339)
340: learn: 0.6924355 test: 0.6924368 best: 0.6924368 (340)
341: learn: 0.6924333 test: 0.6924346 best: 0.6924346 (341)
342: learn: 0.6924313 test: 0.6924326 best: 0.6924326 (342)
343: learn: 0.6924291 test: 0.6924304 best: 0.6924304 (343)
344: learn: 0.6924272 test: 0.6924285 best: 0.6924285 (344)
345: learn: 0.6924252 test: 0.6924265 best: 0.6924265 (345)
```

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345: learn: 0.6924252 test: 0.6924265 best: 0.6924265 (345)
346: learn: 0.6924231 test: 0.6924244 best: 0.6924244 (346)
347: learn: 0.6924209 test: 0.6924222 best: 0.6924222 (347)
348: learn: 0.6924188 test: 0.6924200 best: 0.6924200 (348)
349: learn: 0.6924167 test: 0.6924180 best: 0.6924180 (349)
350: learn: 0.6924147 test: 0.6924160 best: 0.6924160 (350)
351: learn: 0.6924127 test: 0.6924140 best: 0.6924140 (351)
352: learn: 0.6924105 test: 0.6924118 best: 0.6924118 (352)
353: learn: 0.6924082 test: 0.6924095 best: 0.6924095 (353)
354: learn: 0.6924060 test: 0.6924073 best: 0.6924073 (354)
355: learn: 0.6924040 test: 0.6924053 best: 0.6924053 (355)
356: learn: 0.6924020 test: 0.6924033 best: 0.6924033 (356)
357: learn: 0.6924000 test: 0.6924013 best: 0.6924013 (357)
358: learn: 0.6923978 test: 0.6923991 best: 0.6923991 (358)
359: learn: 0.6923958 test: 0.6923971 best: 0.6923971 (359)
360: learn: 0.6923936 test: 0.6923949 best: 0.6923949 (360)
361: learn: 0.6923917 test: 0.6923931 best: 0.6923931 (361)
362: learn: 0.6923896 test: 0.6923909 best: 0.6923909 (362)
363: learn: 0.6923875 test: 0.6923889 best: 0.6923889 (363)
364: learn: 0.6923853 test: 0.6923867 best: 0.6923867 (364)
365: learn: 0.6923833 test: 0.6923846 best: 0.6923846 (365)
366: learn: 0.6923811 test: 0.6923824 best: 0.6923824 (366)
367: learn: 0.6923791 test: 0.6923805 best: 0.6923805 (367)
368: learn: 0.6923772 test: 0.6923786 best: 0.6923786 (368)
369: learn: 0.6923750 test: 0.6923764 best: 0.6923764 (369)
370: learn: 0.6923729 test: 0.6923743 best: 0.6923743 (370)
371: learn: 0.6923709 test: 0.6923722 best: 0.6923722 (371)
372: learn: 0.6923687 test: 0.6923701 best: 0.6923701 (372)
373: learn: 0.6923667 test: 0.6923680 best: 0.6923680 (373)
374: learn: 0.6923646 test: 0.6923660 best: 0.6923660 (374)
375: learn: 0.6923625 test: 0.6923639 best: 0.6923639 (375)
376: learn: 0.6923603 test: 0.6923617 best: 0.6923617 (376)
377: learn: 0.6923583 test: 0.6923597 best: 0.6923597 (377)
378: learn: 0.6923560 test: 0.6923574 best: 0.6923574 (378)
379: learn: 0.6923541 test: 0.6923555 best: 0.6923555 (379)
380: learn: 0.6923519 test: 0.6923533 best: 0.6923533 (380)
381: learn: 0.6923497 test: 0.6923511 best: 0.6923511 (381)
382: learn: 0.6923475 test: 0.6923489 best: 0.6923489 (382)
383: learn: 0.6923453 test: 0.6923467 best: 0.6923467 (383)
384: learn: 0.6923431 test: 0.6923445 best: 0.6923445 (384)
385: learn: 0.6923412 test: 0.6923426 best: 0.6923426 (385)
386: learn: 0.6923390 test: 0.6923404 best: 0.6923404 (386)
387: learn: 0.6923373 test: 0.6923387 best: 0.6923387 (387)
388: learn: 0.6923352 test: 0.6923366 best: 0.6923366 (388)
389: learn: 0.6923331 test: 0.6923345 best: 0.6923345 (389)
390: learn: 0.6923310 test: 0.6923324 best: 0.6923324 (390)
391: learn: 0.6923288 test: 0.6923303 best: 0.6923303 (391)
392: learn: 0.6923268 test: 0.6923282 best: 0.6923282 (392)
393: learn: 0.6923246 test: 0.6923261 best: 0.6923261 (393)
394: learn: 0.6923226 test: 0.6923241 best: 0.6923241 (394)
395: learn: 0.6923205 test: 0.6923220 best: 0.6923220 (395)
396: learn: 0.6923186 test: 0.6923200 best: 0.6923200 (396)
397: learn: 0.6923164 test: 0.6923179 best: 0.6923179 (397)
398: learn: 0.6923143 test: 0.6923158 best: 0.6923158 (398)
399: learn: 0.6923123 test: 0.6923138 best: 0.6923138 (399)
400: learn: 0.6923102 test: 0.6923117 best: 0.6923117 (400)
401: learn: 0.6923081 test: 0.6923096 best: 0.6923096 (401)
402: learn: 0.6923060 test: 0.6923075 best: 0.6923075 (402)
403: learn: 0.6923039 test: 0.6923054 best: 0.6923054 (403)
404: learn: 0.6923017 test: 0.6923032 best: 0.6923032 (404)
405: learn: 0.6922997 test: 0.6923012 best: 0.6923012 (405)
406: learn: 0.6922977 test: 0.6922992 best: 0.6922992 (406)
407: learn: 0.6922957 test: 0.6922972 best: 0.6922972 (407)
408: learn: 0.6922936 test: 0.6922951 best: 0.6922951 (408)
409: learn: 0.6922916 test: 0.6922931 best: 0.6922931 (409)
410: learn: 0.6922895 test: 0.6922911 best: 0.6922911 (410) total: 7.26s remaining: 10.4s
411: learn: 0.6922873 test: 0.6922889 best: 0.6922889 (411)
412: learn: 0.6922852 test: 0.6922867 best: 0.6922867 (412)
413: learn: 0.6922831 test: 0.6922847 best: 0.6922847 (413)
414: learn: 0.6922812 test: 0.6922827 best: 0.6922827 (414)
415: learn: 0.6922790 test: 0.6922806 best: 0.6922806 (415)
416: learn: 0.6922770 test: 0.6922786 best: 0.6922786 (416)
417: learn: 0.6922749 test: 0.6922765 best: 0.6922765 (417)
418: learn: 0.6922730 test: 0.6922745 best: 0.6922745 (418)
419: learn: 0.6922710 test: 0.6922725 best: 0.6922725 (419)
420: learn: 0.6922687 test: 0.6922703 best: 0.6922703 (420)
421: learn: 0.6922667 test: 0.6922682 best: 0.6922682 (421)
422: learn: 0.6922646 test: 0.6922662 best: 0.6922662 (422)
```

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422: learn: 0.6922646 test: 0.6922662 best: 0.6922662 (422)
423: learn: 0.6922625 test: 0.6922641 best: 0.6922641 (423)
424: learn: 0.6922606 test: 0.6922621 best: 0.6922621 (424)
425: learn: 0.6922583 test: 0.6922599 best: 0.6922599 (425)
426: learn: 0.6922563 test: 0.6922579 best: 0.6922579 (426)
427: learn: 0.6922543 test: 0.6922559 best: 0.6922559 (427)
428: learn: 0.6922521 test: 0.6922537 best: 0.6922537 (428)
429: learn: 0.6922501 test: 0.6922517 best: 0.6922517 (429)
430: learn: 0.6922479 test: 0.6922495 best: 0.6922495 (430)
431: learn: 0.6922458 test: 0.6922474 best: 0.6922474 (431)
432: learn: 0.6922437 test: 0.6922453 best: 0.6922453 (432)
433: learn: 0.6922416 test: 0.6922432 best: 0.6922432 (433)
434: learn: 0.6922395 test: 0.6922411 best: 0.6922411 (434)
435: learn: 0.6922373 test: 0.6922390 best: 0.6922390 (435)
436: learn: 0.6922353 test: 0.6922369 best: 0.6922369 (436)
437: learn: 0.6922331 test: 0.6922348 best: 0.6922348 (437)
438: learn: 0.6922309 test: 0.6922325 best: 0.6922325 (438)
439: learn: 0.6922288 test: 0.6922304 best: 0.6922304 (439)
440: learn: 0.6922267 test: 0.6922283 best: 0.6922283 (440)
441: learn: 0.6922246 test: 0.6922263 best: 0.6922263 (441)
442: learn: 0.6922226 test: 0.6922242 best: 0.6922242 (442)
443: learn: 0.6922207 test: 0.6922223 best: 0.6922223 (443)
444: learn: 0.6922185 test: 0.6922202 best: 0.6922202 (444)
445: learn: 0.6922164 test: 0.6922180 best: 0.6922180 (445)
446: learn: 0.6922143 test: 0.6922160 best: 0.6922160 (446)
447: learn: 0.6922121 test: 0.6922138 best: 0.6922138 (447)
448: learn: 0.6922100 test: 0.6922116 best: 0.6922116 (448)
449: learn: 0.6922078 test: 0.6922094 best: 0.6922094 (449)
450: learn: 0.6922057 test: 0.6922074 best: 0.6922074 (450)
451: learn: 0.6922036 test: 0.6922053 best: 0.6922053 (451)
452: learn: 0.6922014 test: 0.6922031 best: 0.6922031 (452)
453: learn: 0.6921992 test: 0.6922008 best: 0.6922008 (453)
454: learn: 0.6921970 test: 0.6921987 best: 0.6921987 (454)
455: learn: 0.6921948 test: 0.6921965 best: 0.6921965 (455)
456: learn: 0.6921928 test: 0.6921945 best: 0.6921945 (456)
457: learn: 0.6921907 test: 0.6921924 best: 0.6921924 (457)
458: learn: 0.6921885 test: 0.6921902 best: 0.6921902 (458)
459: learn: 0.6921863 test: 0.6921881 best: 0.6921881 (459)
460: learn: 0.6921842 test: 0.6921859 best: 0.6921859 (460)
461: learn: 0.6921821 test: 0.6921839 best: 0.6921839 (461)
462: learn: 0.6921799 test: 0.6921816 best: 0.6921816 (462)
463: learn: 0.6921778 test: 0.6921795 best: 0.6921795 (463)
464: learn: 0.6921756 test: 0.6921774 best: 0.6921774 (464)
465: learn: 0.6921736 test: 0.6921754 best: 0.6921754 (465)
466: learn: 0.6921715 test: 0.6921733 best: 0.6921733 (466)
467: learn: 0.6921694 test: 0.6921711 best: 0.6921711 (467)
468: learn: 0.6921673 test: 0.6921690 best: 0.6921690 (468)
469: learn: 0.6921652 test: 0.6921670 best: 0.6921670 (469)
470: learn: 0.6921633 test: 0.6921651 best: 0.6921651 (470)
471: learn: 0.6921611 test: 0.6921629 best: 0.6921629 (471)
472: learn: 0.6921592 test: 0.6921609 best: 0.6921609 (472)
473: learn: 0.6921570 test: 0.6921588 best: 0.6921588 (473)
474: learn: 0.6921549 test: 0.6921567 best: 0.6921567 (474)
475: learn: 0.6921528 test: 0.6921546 best: 0.6921546 (475)
476: learn: 0.6921506 test: 0.6921524 best: 0.6921524 (476)
477: learn: 0.6921485 test: 0.6921503 best: 0.6921503 (477)
478: learn: 0.6921464 test: 0.6921482 best: 0.6921482 (478)
479: learn: 0.6921444 test: 0.6921462 best: 0.6921462 (479)
480: learn: 0.6921423 test: 0.6921441 best: 0.6921441 (480)
481: learn: 0.6921401 test: 0.6921420 best: 0.6921420 (481)
482: learn: 0.6921381 test: 0.6921399 best: 0.6921399 (482)
483: learn: 0.6921359 test: 0.6921378 best: 0.6921378 (483)
484: learn: 0.6921338 test: 0.6921356 best: 0.6921356 (484)
485: learn: 0.6921316 test: 0.6921335 best: 0.6921335 (485)
486: learn: 0.6921296 test: 0.6921315 best: 0.6921315 (486)
487: learn: 0.6921275 test: 0.6921294 best: 0.6921294 (487)
488: learn: 0.6921255 test: 0.6921273 best: 0.6921273 (488)
489: learn: 0.6921233 test: 0.6921252 best: 0.6921252 (489)
490: learn: 0.6921212 test: 0.6921231 best: 0.6921231 (490)
491: learn: 0.6921190 test: 0.6921209 best: 0.6921209 (491)
492: learn: 0.6921168 test: 0.6921187 best: 0.6921187 (492)
493: learn: 0.6921147 test: 0.6921166 best: 0.6921166 (493)
494: learn: 0.6921125 test: 0.6921144 best: 0.6921144 (494)
495: learn: 0.6921106 test: 0.6921125 best: 0.6921125 (495)
496: learn: 0.6921084 test: 0.6921103 best: 0.6921103 (496)
497: learn: 0.6921063 test: 0.6921082 best: 0.6921082 (497)
498: learn: 0.6921042 test: 0.6921061 best: 0.6921061 (498)
499: learn: 0.6921021 test: 0.6921040 best: 0.6921040 (499) total: 8.79s remaining: 8.79s
```

```
499: learn: 0.6921021 test: 0.6921040 best: 0.6921040 (499) total: 8.79s remaining: 8.79s
500: learn: 0.6920999 test: 0.6921018 best: 0.6921018 (500)
501: learn: 0.6920977 test: 0.6920996 best: 0.6920996 (501)
502: learn: 0.6920956 test: 0.6920975 best: 0.6920975 (502)
503: learn: 0.6920935 test: 0.6920954 best: 0.6920954 (503)
504: learn: 0.6920914 test: 0.6920933 best: 0.6920933 (504)
505: learn: 0.6920893 test: 0.6920912 best: 0.6920912 (505)
506: learn: 0.6920872 test: 0.6920892 best: 0.6920892 (506)
507: learn: 0.6920851 test: 0.6920870 best: 0.6920870 (507)
508: learn: 0.6920830 test: 0.6920850 best: 0.6920850 (508)
509: learn: 0.6920809 test: 0.6920829 best: 0.6920829 (509)
510: learn: 0.6920788 test: 0.6920807 best: 0.6920807 (510)
511: learn: 0.6920766 test: 0.6920786 best: 0.6920786 (511)
512: learn: 0.6920745 test: 0.6920765 best: 0.6920765 (512)
513: learn: 0.6920724 test: 0.6920744 best: 0.6920744 (513)
514: learn: 0.6920702 test: 0.6920721 best: 0.6920721 (514)
515: learn: 0.6920680 test: 0.6920700 best: 0.6920700 (515)
516: learn: 0.6920658 test: 0.6920678 best: 0.6920678 (516)
517: learn: 0.6920637 test: 0.6920657 best: 0.6920657 (517)
518: learn: 0.6920617 test: 0.6920637 best: 0.6920637 (518)
519: learn: 0.6920596 test: 0.6920616 best: 0.6920616 (519)
520: learn: 0.6920575 test: 0.6920595 best: 0.6920595 (520)
521: learn: 0.6920555 test: 0.6920574 best: 0.6920574 (521)
522: learn: 0.6920534 test: 0.6920554 best: 0.6920554 (522)
523: learn: 0.6920514 test: 0.6920534 best: 0.6920534 (523)
524: learn: 0.6920492 test: 0.6920512 best: 0.6920512 (524)
525: learn: 0.6920470 test: 0.6920490 best: 0.6920490 (525)
526: learn: 0.6920450 test: 0.6920471 best: 0.6920471 (526)
527: learn: 0.6920429 test: 0.6920449 best: 0.6920449 (527)
528: learn: 0.6920410 test: 0.6920430 best: 0.6920430 (528) total: 9.33s remaining: 8.3s
529: learn: 0.6920388 test: 0.6920408 best: 0.6920408 (529)
530: learn: 0.6920367 test: 0.6920387 best: 0.6920387 (530)
531: learn: 0.6920346 test: 0.6920366 best: 0.6920366 (531)
532: learn: 0.6920326 test: 0.6920346 best: 0.6920346 (532)
533: learn: 0.6920303 test: 0.6920323 best: 0.6920323 (533)
534: learn: 0.6920282 test: 0.6920303 best: 0.6920303 (534)
535: learn: 0.6920262 test: 0.6920282 best: 0.6920282 (535)
536: learn: 0.6920241 test: 0.6920262 best: 0.6920262 (536)
537: learn: 0.6920220 test: 0.6920240 best: 0.6920240 (537)
538: learn: 0.6920199 test: 0.6920219 best: 0.6920219 (538)
539: learn: 0.6920178 test: 0.6920198 best: 0.6920198 (539)
540: learn: 0.6920155 test: 0.6920176 best: 0.6920176 (540)
541: learn: 0.6920134 test: 0.6920154 best: 0.6920154 (541)
542: learn: 0.6920113 test: 0.6920133 best: 0.6920133 (542)
543: learn: 0.6920092 test: 0.6920113 best: 0.6920113 (543)
544: learn: 0.6920071 test: 0.6920092 best: 0.6920092 (544)
545: learn: 0.6920049 test: 0.6920070 best: 0.6920070 (545)
546: learn: 0.6920028 test: 0.6920049 best: 0.6920049 (546)
547: learn: 0.6920008 test: 0.6920029 best: 0.6920029 (547)
548: learn: 0.6919987 test: 0.6920008 best: 0.6920008 (548)
549: learn: 0.6919967 test: 0.6919988 best: 0.6919988 (549)
550: learn: 0.6919947 test: 0.6919968 best: 0.6919968 (550)
551: learn: 0.6919925 test: 0.6919946 best: 0.6919946 (551)
552: learn: 0.6919903 test: 0.6919924 best: 0.6919924 (552)
553: learn: 0.6919881 test: 0.6919902 best: 0.6919902 (553)
554: learn: 0.6919860 test: 0.6919881 best: 0.6919881 (554)
555: learn: 0.6919838 test: 0.6919859 best: 0.6919859 (555)
556: learn: 0.6919818 test: 0.6919839 best: 0.6919839 (556)
557: learn: 0.6919796 test: 0.6919817 best: 0.6919817 (557)
558: learn: 0.6919775 test: 0.6919796 best: 0.6919796 (558)
559: learn: 0.6919753 test: 0.6919775 best: 0.6919775 (559)
560: learn: 0.6919734 test: 0.6919755 best: 0.6919755 (560)
561: learn: 0.6919713 test: 0.6919734 best: 0.6919734 (561)
562: learn: 0.6919691 test: 0.6919713 best: 0.6919713 (562)
563: learn: 0.6919670 test: 0.6919692 best: 0.6919692 (563)
564: learn: 0.6919651 test: 0.6919673 best: 0.6919673 (564)
565: learn: 0.6919629 test: 0.6919650 best: 0.6919650 (565)
566: learn: 0.6919608 test: 0.6919629 best: 0.6919629 (566)
567: learn: 0.6919585 test: 0.6919607 best: 0.6919607 (567)
568: learn: 0.6919565 test: 0.6919586 best: 0.6919586 (568)
569: learn: 0.6919544 test: 0.6919565 best: 0.6919565 (569)
570: learn: 0.6919523 test: 0.6919545 best: 0.6919545 (570)
571: learn: 0.6919501 test: 0.6919523 best: 0.6919523 (571)
572: learn: 0.6919480 test: 0.6919502 best: 0.6919502 (572)
573: learn: 0.6919459 test: 0.6919481 best: 0.6919481 (573)
574: learn: 0.6919437 test: 0.6919459 best: 0.6919459 (574)
575: learn: 0.6919416 test: 0.6919438 best: 0.6919438 (575)
576: learn: 0.6919394 test: 0.6919416 best: 0.6919416 (576)
```

```
576: learn: 0.6919394 test: 0.6919416 best: 0.6919416 (576)
577: learn: 0.6919373 test: 0.6919395 best: 0.6919395 (577)
578: learn: 0.6919351 test: 0.6919372 best: 0.6919372 (578)
579: learn: 0.6919328 test: 0.6919350 best: 0.6919350 (579)
580: learn: 0.6919306 test: 0.6919328 best: 0.6919328 (580)
581: learn: 0.6919287 test: 0.6919308 best: 0.6919308 (581)
582: learn: 0.6919264 test: 0.6919286 best: 0.6919286 (582)
583: learn: 0.6919244 test: 0.6919266 best: 0.6919266 (583)
584: learn: 0.6919224 test: 0.6919246 best: 0.6919246 (584)
585: learn: 0.6919203 test: 0.6919225 best: 0.6919225 (585)
586: learn: 0.6919181 test: 0.6919203 best: 0.6919203 (586)
587: learn: 0.6919160 test: 0.6919182 best: 0.6919182 (587)
588: learn: 0.6919137 test: 0.6919160 best: 0.6919160 (588)
589: learn: 0.6919117 test: 0.6919139 best: 0.6919139 (589)
590: learn: 0.6919096 test: 0.6919119 best: 0.6919119 (590)
591: learn: 0.6919075 test: 0.6919098 best: 0.6919098 (591)
592: learn: 0.6919053 test: 0.6919076 best: 0.6919076 (592)
593: learn: 0.6919032 test: 0.6919054 best: 0.6919054 (593)
594: learn: 0.6919010 test: 0.6919033 best: 0.6919033 (594)
595: learn: 0.6918990 test: 0.6919012 best: 0.6919012 (595)
596: learn: 0.6918967 test: 0.6918990 best: 0.6918990 (596)
597: learn: 0.6918948 test: 0.6918970 best: 0.6918970 (597)
598: learn: 0.6918927 test: 0.6918950 best: 0.6918950 (598)
599: learn: 0.6918907 test: 0.6918929 best: 0.6918929 (599)
600: learn: 0.6918886 test: 0.6918909 best: 0.6918909 (600)
601: learn: 0.6918865 test: 0.6918887 best: 0.6918887 (601)
602: learn: 0.6918844 test: 0.6918867 best: 0.6918867 (602)
603: learn: 0.6918824 test: 0.6918847 best: 0.6918847 (603)
604: learn: 0.6918804 test: 0.6918827 best: 0.6918827 (604)
605: learn: 0.6918783 test: 0.6918806 best: 0.6918806 (605)
606: learn: 0.6918763 test: 0.6918786 best: 0.6918786 (606)
607: learn: 0.6918741 test: 0.6918765 best: 0.6918765 (607)
608: learn: 0.6918720 test: 0.6918744 best: 0.6918744 (608)
609: learn: 0.6918701 test: 0.6918724 best: 0.6918724 (609)
610: learn: 0.6918679 test: 0.6918702 best: 0.6918702 (610)
611: learn: 0.6918658 test: 0.6918681 best: 0.6918681 (611)
612: learn: 0.6918638 test: 0.6918661 best: 0.6918661 (612)
613: learn: 0.6918615 test: 0.6918639 best: 0.6918639 (613)
614: learn: 0.6918594 test: 0.6918618 best: 0.6918618 (614)
615: learn: 0.6918574 test: 0.6918597 best: 0.6918597 (615) total: 10.8s remaining: 6.75s
616: learn: 0.6918554 test: 0.6918578 best: 0.6918578 (616)
617: learn: 0.6918533 test: 0.6918556 best: 0.6918556 (617)
618: learn: 0.6918514 test: 0.6918538 best: 0.6918538 (618)
619: learn: 0.6918493 test: 0.6918517 best: 0.6918517 (619)
620: learn: 0.6918471 test: 0.6918495 best: 0.6918495 (620)
621: learn: 0.6918451 test: 0.6918474 best: 0.6918474 (621)
622: learn: 0.6918429 test: 0.6918453 best: 0.6918453 (622)
623: learn: 0.6918408 test: 0.6918432 best: 0.6918432 (623)
624: learn: 0.6918388 test: 0.6918412 best: 0.6918412 (624)
625: learn: 0.6918366 test: 0.6918390 best: 0.6918390 (625)
626: learn: 0.6918348 test: 0.6918372 best: 0.6918372 (626)
627: learn: 0.6918327 test: 0.6918351 best: 0.6918351 (627)
628: learn: 0.6918307 test: 0.6918331 best: 0.6918331 (628)
629: learn: 0.6918287 test: 0.6918311 best: 0.6918311 (629)
630: learn: 0.6918266 test: 0.6918290 best: 0.6918290 (630)
631: learn: 0.6918245 test: 0.6918269 best: 0.6918269 (631)
632: learn: 0.6918226 test: 0.6918250 best: 0.6918250 (632)
633: learn: 0.6918204 test: 0.6918229 best: 0.6918229 (633)
634: learn: 0.6918185 test: 0.6918209 best: 0.6918209 (634)
635: learn: 0.6918163 test: 0.6918187 best: 0.6918187 (635)
636: learn: 0.6918142 test: 0.6918167 best: 0.6918167 (636)
637: learn: 0.6918120 test: 0.6918145 best: 0.6918145 (637)
638: learn: 0.6918098 test: 0.6918122 best: 0.6918122 (638)
639: learn: 0.6918077 test: 0.6918101 best: 0.6918101 (639)
640: learn: 0.6918056 test: 0.6918081 best: 0.6918081 (640)
641: learn: 0.6918036 test: 0.6918061 best: 0.6918061 (641)
642: learn: 0.6918014 test: 0.6918038 best: 0.6918038 (642)
643: learn: 0.6917994 test: 0.6918019 best: 0.6918019 (643)
644: learn: 0.6917973 test: 0.6917998 best: 0.6917998 (644)
645: learn: 0.6917951 test: 0.6917976 best: 0.6917976 (645)
646: learn: 0.6917931 test: 0.6917956 best: 0.6917956 (646)
647: learn: 0.6917910 test: 0.6917935 best: 0.6917935 (647)
648: learn: 0.6917888 test: 0.6917913 best: 0.6917913 (648)
649: learn: 0.6917868 test: 0.6917893 best: 0.6917893 (649)
650: learn: 0.6917847 test: 0.6917872 best: 0.6917872 (650)
651: learn: 0.6917828 test: 0.6917853 best: 0.6917853 (651)
652: learn: 0.6917808 test: 0.6917833 best: 0.6917833 (652) total: 11.5s remaining: 6.09s
```

```
653: learn: 0.6917788 test: 0.6917813 best: 0.6917813 (653)
654: learn: 0.6917767 test: 0.6917792 best: 0.6917792 (654)
655: learn: 0.6917745 test: 0.6917770 best: 0.6917770 (655)
656: learn: 0.6917724 test: 0.6917749 best: 0.6917749 (656)
657: learn: 0.6917703 test: 0.6917729 best: 0.6917729 (657)
658: learn: 0.6917683 test: 0.6917708 best: 0.6917708 (658)
659: learn: 0.6917661 test: 0.6917686 best: 0.6917686 (659)
660: learn: 0.6917639 test: 0.6917665 best: 0.6917665 (660)
661: learn: 0.6917618 test: 0.6917643 best: 0.6917643 (661)
662: learn: 0.6917597 test: 0.6917622 best: 0.6917622 (662)
663: learn: 0.6917576 test: 0.6917602 best: 0.6917602 (663)
664: learn: 0.6917555 test: 0.6917581 best: 0.6917581 (664)
665: learn: 0.6917535 test: 0.6917561 best: 0.6917561 (665)
666: learn: 0.6917512 test: 0.6917538 best: 0.6917538 (666)
667: learn: 0.6917493 test: 0.6917519 best: 0.6917519 (667)
668: learn: 0.6917471 test: 0.6917497 best: 0.6917497 (668)
669: learn: 0.6917451 test: 0.6917477 best: 0.6917477 (669)
670: learn: 0.6917431 test: 0.6917457 best: 0.6917457 (670)
671: learn: 0.6917411 test: 0.6917437 best: 0.6917437 (671)
672: learn: 0.6917390 test: 0.6917415 best: 0.6917415 (672)
673: learn: 0.6917369 test: 0.6917395 best: 0.6917395 (673)
674: learn: 0.6917348 test: 0.6917374 best: 0.6917374 (674)
675: learn: 0.6917329 test: 0.6917355 best: 0.6917355 (675)
676: learn: 0.6917309 test: 0.6917335 best: 0.6917335 (676)
677: learn: 0.6917288 test: 0.6917314 best: 0.6917314 (677)
678: learn: 0.6917270 test: 0.6917296 best: 0.6917296 (678)
679: learn: 0.6917248 test: 0.6917274 best: 0.6917274 (679)
680: learn: 0.6917227 test: 0.6917253 best: 0.6917253 (680)
681: learn: 0.6917206 test: 0.6917233 best: 0.6917233 (681)
682: learn: 0.6917184 test: 0.6917210 best: 0.6917210 (682)
683: learn: 0.6917162 test: 0.6917189 best: 0.6917189 (683)
684: learn: 0.6917142 test: 0.6917169 best: 0.6917169 (684)
685: learn: 0.6917121 test: 0.6917147 best: 0.6917147 (685) total: 12.1s remaining: 5.53s
686: learn: 0.6917098 test: 0.6917124 best: 0.6917124 (686)
687: learn: 0.6917076 test: 0.6917103 best: 0.6917103 (687)
688: learn: 0.6917055 test: 0.6917081 best: 0.6917081 (688)
689: learn: 0.6917034 test: 0.6917060 best: 0.6917060 (689)
690: learn: 0.6917012 test: 0.6917038 best: 0.6917038 (690)
691: learn: 0.6916991 test: 0.6917018 best: 0.6917018 (691)
692: learn: 0.6916972 test: 0.6916998 best: 0.6916998 (692)
693: learn: 0.6916949 test: 0.6916976 best: 0.6916976 (693)
694: learn: 0.6916928 test: 0.6916954 best: 0.6916954 (694)
695: learn: 0.6916906 test: 0.6916933 best: 0.6916933 (695)
696: learn: 0.6916886 test: 0.6916912 best: 0.6916912 (696)
697: learn: 0.6916866 test: 0.6916892 best: 0.6916892 (697)
698: learn: 0.6916846 test: 0.6916872 best: 0.6916872 (698)
699: learn: 0.6916826 test: 0.6916853 best: 0.6916853 (699)
700: learn: 0.6916804 test: 0.6916831 best: 0.6916831 (700)
701: learn: 0.6916783 test: 0.6916810 best: 0.6916810 (701)
702: learn: 0.6916761 test: 0.6916788 best: 0.6916788 (702)
703: learn: 0.6916741 test: 0.6916768 best: 0.6916768 (703)
704: learn: 0.6916721 test: 0.6916748 best: 0.6916748 (704)
705: learn: 0.6916700 test: 0.6916727 best: 0.6916727 (705)
706: learn: 0.6916679 test: 0.6916706 best: 0.6916706 (706)
707: learn: 0.6916658 test: 0.6916685 best: 0.6916685 (707)
708: learn: 0.6916636 test: 0.6916663 best: 0.6916663 (708)
709: learn: 0.6916615 test: 0.6916642 best: 0.6916642 (709)
710: learn: 0.6916595 test: 0.6916622 best: 0.6916622 (710)
711: learn: 0.6916574 test: 0.6916601 best: 0.6916601 (711)
712: learn: 0.6916552 test: 0.6916579 best: 0.6916579 (712)
713: learn: 0.6916532 test: 0.6916559 best: 0.6916559 (713)
714: learn: 0.6916512 test: 0.6916539 best: 0.6916539 (714)
715: learn: 0.6916490 test: 0.6916517 best: 0.6916517 (715)
716: learn: 0.6916469 test: 0.6916496 best: 0.6916496 (716)
717: learn: 0.6916448 test: 0.6916475 best: 0.6916475 (717)
718: learn: 0.6916427 test: 0.6916454 best: 0.6916454 (718)
719: learn: 0.6916406 test: 0.6916433 best: 0.6916433 (719)
720: learn: 0.6916385 test: 0.6916412 best: 0.6916412 (720)
721: learn: 0.6916364 test: 0.6916391 best: 0.6916391 (721)
722: learn: 0.6916344 test: 0.6916372 best: 0.6916372 (722)
723: learn: 0.6916323 test: 0.6916350 best: 0.6916350 (723)
724: learn: 0.6916302 test: 0.6916329 best: 0.6916329 (724)
725: learn: 0.6916280 test: 0.6916308 best: 0.6916308 (725)
726: learn: 0.6916260 test: 0.6916287 best: 0.6916287 (726)
727: learn: 0.6916239 test: 0.6916267 best: 0.6916267 (727)
728: learn: 0.6916219 test: 0.6916246 best: 0.6916246 (728)
729: learn: 0.6916199 test: 0.6916226 best: 0.6916226 (729)
```

```
730: learn: 0.6916177 test: 0.6916205 best: 0.6916205 (730)
731: learn: 0.6916156 test: 0.6916184 best: 0.6916184 (731)
732: learn: 0.6916134 test: 0.6916162 best: 0.6916162 (732)
733: learn: 0.6916115 test: 0.6916142 best: 0.6916142 (733)
734: learn: 0.6916095 test: 0.6916123 best: 0.6916123 (734)
735: learn: 0.6916073 test: 0.6916101 best: 0.6916101 (735)
736: learn: 0.6916053 test: 0.6916081 best: 0.6916081 (736)
737: learn: 0.6916033 test: 0.6916061 best: 0.6916061 (737)
738: learn: 0.6916011 test: 0.6916039 best: 0.6916039 (738)
739: learn: 0.6915990 test: 0.6916018 best: 0.6916018 (739)
740: learn: 0.6915968 test: 0.6915996 best: 0.6915996 (740)
741: learn: 0.6915947 test: 0.6915975 best: 0.6915975 (741)
742: learn: 0.6915926 test: 0.6915954 best: 0.6915954 (742)
743: learn: 0.6915904 test: 0.6915932 best: 0.6915932 (743)
744: learn: 0.6915884 test: 0.6915912 best: 0.6915912 (744)
745: learn: 0.6915862 test: 0.6915890 best: 0.6915890 (745)
746: learn: 0.6915841 test: 0.6915869 best: 0.6915869 (746)
747: learn: 0.6915821 test: 0.6915849 best: 0.6915849 (747)
748: learn: 0.6915800 test: 0.6915828 best: 0.6915828 (748)
749: learn: 0.6915779 test: 0.6915807 best: 0.6915807 (749)
750: learn: 0.6915757 test: 0.6915786 best: 0.6915786 (750)
751: learn: 0.6915736 test: 0.6915764 best: 0.6915764 (751)
752: learn: 0.6915717 test: 0.6915745 best: 0.6915745 (752)
753: learn: 0.6915696 test: 0.6915724 best: 0.6915724 (753)
754: learn: 0.6915675 test: 0.6915704 best: 0.6915704 (754)
755: learn: 0.6915653 test: 0.6915682 best: 0.6915682 (755)
756: learn: 0.6915633 test: 0.6915662 best: 0.6915662 (756)
757: learn: 0.6915611 test: 0.6915640 best: 0.6915640 (757)
758: learn: 0.6915591 test: 0.6915620 best: 0.6915620 (758)
759: learn: 0.6915570 test: 0.6915598 best: 0.6915598 (759)
760: learn: 0.6915549 test: 0.6915578 best: 0.6915578 (760)
761: learn: 0.6915528 test: 0.6915557 best: 0.6915557 (761)
762: learn: 0.6915506 test: 0.6915535 best: 0.6915535 (762)
763: learn: 0.6915487 test: 0.6915516 best: 0.6915516 (763)
764: learn: 0.6915467 test: 0.6915496 best: 0.6915496 (764)
765: learn: 0.6915447 test: 0.6915476 best: 0.6915476 (765)
766: learn: 0.6915428 test: 0.6915457 best: 0.6915457 (766)
767: learn: 0.6915408 test: 0.6915437 best: 0.6915437 (767)
768: learn: 0.6915385 test: 0.6915414 best: 0.6915414 (768)
769: learn: 0.6915364 test: 0.6915393 best: 0.6915393 (769)
770: learn: 0.6915344 test: 0.6915373 best: 0.6915373 (770)
771: learn: 0.6915322 test: 0.6915351 best: 0.6915351 (771)
772: learn: 0.6915300 test: 0.6915330 best: 0.6915330 (772) total: 13.7s remaining: 4.01s
773: learn: 0.6915280 test: 0.6915310 best: 0.6915310 (773)
774: learn: 0.6915259 test: 0.6915288 best: 0.6915288 (774)
775: learn: 0.6915238 test: 0.6915268 best: 0.6915268 (775)
776: learn: 0.6915216 test: 0.6915246 best: 0.6915246 (776)
777: learn: 0.6915195 test: 0.6915224 best: 0.6915224 (777)
778: learn: 0.6915174 test: 0.6915203 best: 0.6915203 (778)
779: learn: 0.6915154 test: 0.6915184 best: 0.6915184 (779)
780: learn: 0.6915133 test: 0.6915162 best: 0.6915162 (780)
781: learn: 0.6915111 test: 0.6915141 best: 0.6915141 (781)
782: learn: 0.6915091 test: 0.6915121 best: 0.6915121 (782)
783: learn: 0.6915070 test: 0.6915100 best: 0.6915100 (783)
784: learn: 0.6915050 test: 0.6915079 best: 0.6915079 (784)
785: learn: 0.6915029 test: 0.6915059 best: 0.6915059 (785)
786: learn: 0.6915009 test: 0.6915039 best: 0.6915039 (786)
787: learn: 0.6914988 test: 0.6915018 best: 0.6915018 (787)
788: learn: 0.6914967 test: 0.6914997 best: 0.6914997 (788)
789: learn: 0.6914947 test: 0.6914977 best: 0.6914977 (789)
790: learn: 0.6914925 test: 0.6914955 best: 0.6914955 (790)
791: learn: 0.6914903 test: 0.6914933 best: 0.6914933 (791)
792: learn: 0.6914882 test: 0.6914912 best: 0.6914912 (792)
793: learn: 0.6914862 test: 0.6914892 best: 0.6914892 (793)
794: learn: 0.6914841 test: 0.6914871 best: 0.6914871 (794)
795: learn: 0.6914821 test: 0.6914851 best: 0.6914851 (795)
796: learn: 0.6914799 test: 0.6914829 best: 0.6914829 (796)
797: learn: 0.6914778 test: 0.6914808 best: 0.6914808 (797)
798: learn: 0.6914756 test: 0.6914786 best: 0.6914786 (798)
799: learn: 0.6914735 test: 0.6914765 best: 0.6914765 (799) total: 14.2s remaining: 3.56s
800: learn: 0.6914714 test: 0.6914744 best: 0.6914744 (800)
801: learn: 0.6914692 test: 0.6914722 best: 0.6914722 (801)
802: learn: 0.6914672 test: 0.6914702 best: 0.6914702 (802)
803: learn: 0.6914651 test: 0.6914681 best: 0.6914681 (803)
804: learn: 0.6914630 test: 0.6914660 best: 0.6914660 (804)
805: learn: 0.6914609 test: 0.6914640 best: 0.6914640 (805)
806: learn: 0.6914589 test: 0.6914620 best: 0.6914620 (806)
```

```
807: learn: 0.6914568 test: 0.6914598 best: 0.6914598 (807)
808: learn: 0.6914547 test: 0.6914577 best: 0.6914577 (808)
809: learn: 0.6914525 test: 0.6914556 best: 0.6914556 (809)
810: learn: 0.6914503 test: 0.6914534 best: 0.6914534 (810)
811: learn: 0.6914483 test: 0.6914514 best: 0.6914514 (811)
812: learn: 0.6914462 test: 0.6914493 best: 0.6914493 (812)
813: learn: 0.6914439 test: 0.6914470 best: 0.6914470 (813)
814: learn: 0.6914417 test: 0.6914448 best: 0.6914448 (814)
815: learn: 0.6914396 test: 0.6914427 best: 0.6914427 (815)
816: learn: 0.6914376 test: 0.6914407 best: 0.6914407 (816)
817: learn: 0.6914355 test: 0.6914386 best: 0.6914386 (817)
818: learn: 0.6914334 test: 0.6914365 best: 0.6914365 (818)
819: learn: 0.6914312 test: 0.6914343 best: 0.6914343 (819)
820: learn: 0.6914291 test: 0.6914322 best: 0.6914322 (820)
821: learn: 0.6914269 test: 0.6914300 best: 0.6914300 (821)
822: learn: 0.6914248 test: 0.6914279 best: 0.6914279 (822)
823: learn: 0.6914228 test: 0.6914259 best: 0.6914259 (823)
824: learn: 0.6914208 test: 0.6914239 best: 0.6914239 (824)
825: learn: 0.6914187 test: 0.6914218 best: 0.6914218 (825)
826: learn: 0.6914167 test: 0.6914198 best: 0.6914198 (826)
827: learn: 0.6914146 test: 0.6914178 best: 0.6914178 (827) total: 14.7s remaining: 3.06s
828: learn: 0.6914126 test: 0.6914158 best: 0.6914158 (828)
829: learn: 0.6914105 test: 0.6914136 best: 0.6914136 (829)
830: learn: 0.6914083 test: 0.6914115 best: 0.6914115 (830)
831: learn: 0.6914063 test: 0.6914094 best: 0.6914094 (831)
832: learn: 0.6914042 test: 0.6914074 best: 0.6914074 (832)
833: learn: 0.6914021 test: 0.6914053 best: 0.6914053 (833)
834: learn: 0.6913999 test: 0.6914031 best: 0.6914031 (834)
835: learn: 0.6913979 test: 0.6914010 best: 0.6914010 (835)
836: learn: 0.6913958 test: 0.6913990 best: 0.6913990 (836)
837: learn: 0.6913937 test: 0.6913968 best: 0.6913968 (837)
838: learn: 0.6913916 test: 0.6913947 best: 0.6913947 (838)
839: learn: 0.6913894 test: 0.6913926 best: 0.6913926 (839)
840: learn: 0.6913874 test: 0.6913906 best: 0.6913906 (840)
841: learn: 0.6913853 test: 0.6913885 best: 0.6913885 (841)
842: learn: 0.6913833 test: 0.6913865 best: 0.6913865 (842)
843: learn: 0.6913812 test: 0.6913844 best: 0.6913844 (843)
844: learn: 0.6913790 test: 0.6913822 best: 0.6913822 (844)
845: learn: 0.6913768 test: 0.6913801 best: 0.6913801 (845)
846: learn: 0.6913748 test: 0.6913780 best: 0.6913780 (846)
847: learn: 0.6913727 test: 0.6913759 best: 0.6913759 (847)
848: learn: 0.6913706 test: 0.6913738 best: 0.6913738 (848)
849: learn: 0.6913683 test: 0.6913715 best: 0.6913715 (849)
850: learn: 0.6913661 test: 0.6913693 best: 0.6913693 (850)
851: learn: 0.6913640 test: 0.6913673 best: 0.6913673 (851)
852: learn: 0.6913618 test: 0.6913651 best: 0.6913651 (852)
853: learn: 0.6913597 test: 0.6913629 best: 0.6913629 (853)
854: learn: 0.6913575 test: 0.6913607 best: 0.6913607 (854)
855: learn: 0.6913555 test: 0.6913588 best: 0.6913588 (855)
856: learn: 0.6913534 test: 0.6913567 best: 0.6913567 (856)
857: learn: 0.6913512 test: 0.6913545 best: 0.6913545 (857)
858: learn: 0.6913492 test: 0.6913525 best: 0.6913525 (858)
859: learn: 0.6913471 test: 0.6913504 best: 0.6913504 (859)
860: learn: 0.6913450 test: 0.6913483 best: 0.6913483 (860)
861: learn: 0.6913429 test: 0.6913462 best: 0.6913462 (861)
862: learn: 0.6913408 test: 0.6913441 best: 0.6913441 (862)
863: learn: 0.6913387 test: 0.6913419 best: 0.6913419 (863)
864: learn: 0.6913365 test: 0.6913397 best: 0.6913397 (864)
865: learn: 0.6913345 test: 0.6913378 best: 0.6913378 (865)
866: learn: 0.6913324 test: 0.6913357 best: 0.6913357 (866)
867: learn: 0.6913303 test: 0.6913336 best: 0.6913336 (867)
868: learn: 0.6913281 test: 0.6913314 best: 0.6913314 (868)
869: learn: 0.6913261 test: 0.6913294 best: 0.6913294 (869)
870: learn: 0.6913240 test: 0.6913273 best: 0.6913273 (870)
871: learn: 0.6913219 test: 0.6913252 best: 0.6913252 (871)
872: learn: 0.6913198 test: 0.6913231 best: 0.6913231 (872)
873: learn: 0.6913177 test: 0.6913210 best: 0.6913210 (873)
874: learn: 0.6913155 test: 0.6913188 best: 0.6913188 (874)
875: learn: 0.6913134 test: 0.6913168 best: 0.6913168 (875)
876: learn: 0.6913113 test: 0.6913146 best: 0.6913146 (876)
877: learn: 0.6913091 test: 0.6913125 best: 0.6913125 (877)
878: learn: 0.6913071 test: 0.6913104 best: 0.6913104 (878)
879: learn: 0.6913050 test: 0.6913083 best: 0.6913083 (879)
880: learn: 0.6913029 test: 0.6913062 best: 0.6913062 (880)
881: learn: 0.6913007 test: 0.6913041 best: 0.6913041 (881)
882: learn: 0.6912987 test: 0.6913020 best: 0.6913020 (882)
883: learn: 0.6912965 test: 0.6912998 best: 0.6912998 (883)
```

```
884: learn: 0.6912943 test: 0.6912977 best: 0.6912977 (884)
885: learn: 0.6912923 test: 0.6912956 best: 0.6912956 (885)
886: learn: 0.6912902 test: 0.6912935 best: 0.6912935 (886)
887: learn: 0.6912882 test: 0.6912916 best: 0.6912916 (887)
888: learn: 0.6912860 test: 0.6912894 best: 0.6912894 (888)
889: learn: 0.6912839 test: 0.6912873 best: 0.6912873 (889)
890: learn: 0.6912817 test: 0.6912851 best: 0.6912851 (890)
891: learn: 0.6912795 test: 0.6912829 best: 0.6912829 (891)
892: learn: 0.6912774 test: 0.6912807 best: 0.6912807 (892)
893: learn: 0.6912752 test: 0.6912786 best: 0.6912786 (893)
894: learn: 0.6912733 test: 0.6912767 best: 0.6912767 (894)
895: learn: 0.6912712 test: 0.6912746 best: 0.6912746 (895)
896: learn: 0.6912691 test: 0.6912725 best: 0.6912725 (896)
897: learn: 0.6912670 test: 0.6912704 best: 0.6912704 (897)
898: learn: 0.6912648 test: 0.6912682 best: 0.6912682 (898)
899: learn: 0.6912627 test: 0.6912661 best: 0.6912661 (899) total: 16s remaining: 1.77s
900: learn: 0.6912606 test: 0.6912641 best: 0.6912641 (900)
901: learn: 0.6912586 test: 0.6912620 best: 0.6912620 (901)
902: learn: 0.6912565 test: 0.6912599 best: 0.6912599 (902)
903: learn: 0.6912544 test: 0.6912578 best: 0.6912578 (903)
904: learn: 0.6912523 test: 0.6912557 best: 0.6912557 (904)
905: learn: 0.6912501 test: 0.6912536 best: 0.6912536 (905)
906: learn: 0.6912481 test: 0.6912515 best: 0.6912515 (906)
907: learn: 0.6912460 test: 0.6912495 best: 0.6912495 (907)
908: learn: 0.6912440 test: 0.6912474 best: 0.6912474 (908)
909: learn: 0.6912419 test: 0.6912453 best: 0.6912453 (909)
910: learn: 0.6912397 test: 0.6912432 best: 0.6912432 (910)
911: learn: 0.6912377 test: 0.6912411 best: 0.6912411 (911)
912: learn: 0.6912355 test: 0.6912390 best: 0.6912390 (912)
913: learn: 0.6912334 test: 0.6912369 best: 0.6912369 (913)
914: learn: 0.6912314 test: 0.6912349 best: 0.6912349 (914)
915: learn: 0.6912294 test: 0.6912329 best: 0.6912329 (915)
916: learn: 0.6912274 test: 0.6912309 best: 0.6912309 (916)
917: learn: 0.6912253 test: 0.6912287 best: 0.6912287 (917)
918: learn: 0.6912233 test: 0.6912268 best: 0.6912268 (918)
919: learn: 0.6912211 test: 0.6912246 best: 0.6912246 (919)
920: learn: 0.6912190 test: 0.6912225 best: 0.6912225 (920)
921: learn: 0.6912169 test: 0.6912204 best: 0.6912204 (921)
922: learn: 0.6912148 test: 0.6912183 best: 0.6912183 (922) total: 16.4s remaining: 1.37s
923: learn: 0.6912128 test: 0.6912163 best: 0.6912163 (923)
924: learn: 0.6912108 test: 0.6912143 best: 0.6912143 (924)
925: learn: 0.6912088 test: 0.6912123 best: 0.6912123 (925)
926: learn: 0.6912066 test: 0.6912101 best: 0.6912101 (926)
927: learn: 0.6912045 test: 0.6912080 best: 0.6912080 (927)
928: learn: 0.6912025 test: 0.6912060 best: 0.6912060 (928)
929: learn: 0.6912004 test: 0.6912039 best: 0.6912039 (929)
930: learn: 0.6911982 test: 0.6912017 best: 0.6912017 (930)
931: learn: 0.6911961 test: 0.6911996 best: 0.6911996 (931)
932: learn: 0.6911941 test: 0.6911976 best: 0.6911976 (932)
933: learn: 0.6911921 test: 0.6911956 best: 0.6911956 (933)
934: learn: 0.6911900 test: 0.6911935 best: 0.6911935 (934)
935: learn: 0.6911879 test: 0.6911914 best: 0.6911914 (935)
936: learn: 0.6911857 test: 0.6911893 best: 0.6911893 (936)
937: learn: 0.6911836 test: 0.6911871 best: 0.6911871 (937)
938: learn: 0.6911815 test: 0.6911850 best: 0.6911850 (938)
939: learn: 0.6911794 test: 0.6911829 best: 0.6911829 (939)
940: learn: 0.6911772 test: 0.6911807 best: 0.6911807 (940)
941: learn: 0.6911752 test: 0.6911787 best: 0.6911787 (941)
942: learn: 0.6911730 test: 0.6911766 best: 0.6911766 (942)
943: learn: 0.6911708 test: 0.6911744 best: 0.6911744 (943)
944: learn: 0.6911687 test: 0.6911723 best: 0.6911723 (944)
945: learn: 0.6911666 test: 0.6911702 best: 0.6911702 (945)
946: learn: 0.6911644 test: 0.6911680 best: 0.6911680 (946)
947: learn: 0.6911623 test: 0.6911659 best: 0.6911659 (947)
948: learn: 0.6911604 test: 0.6911640 best: 0.6911640 (948)
949: learn: 0.6911582 test: 0.6911618 best: 0.6911618 (949)
950: learn: 0.6911560 test: 0.6911596 best: 0.6911596 (950)
951: learn: 0.6911540 test: 0.6911576 best: 0.6911576 (951)
952: learn: 0.6911520 test: 0.6911556 best: 0.6911556 (952)
953: learn: 0.6911499 test: 0.6911535 best: 0.6911535 (953)
954: learn: 0.6911478 test: 0.6911515 best: 0.6911515 (954)
955: learn: 0.6911459 test: 0.6911495 best: 0.6911495 (955)
956: learn: 0.6911437 test: 0.6911474 best: 0.6911474 (956)
957: learn: 0.6911417 test: 0.6911453 best: 0.6911453 (957)
958: learn: 0.6911394 test: 0.6911431 best: 0.6911431 (958)
959: learn: 0.6911373 test: 0.6911410 best: 0.6911410 (959)
960: learn: 0.6911353 test: 0.6911389 best: 0.6911389 (960)
```

```
961: learn: 0.6911331 test: 0.6911368 best: 0.6911368 (961)
962: learn: 0.6911310 test: 0.6911346 best: 0.6911346 (962)
963: learn: 0.6911289 test: 0.6911326 best: 0.6911326 (963)
964: learn: 0.6911268 test: 0.6911305 best: 0.6911305 (964)
965: learn: 0.6911248 test: 0.6911285 best: 0.6911285 (965)
966: learn: 0.6911227 test: 0.6911264 best: 0.6911264 (966)
967: learn: 0.6911207 test: 0.6911244 best: 0.6911244 (967)
968: learn: 0.6911185 test: 0.6911222 best: 0.6911222 (968)
969: learn: 0.6911165 test: 0.6911201 best: 0.6911201 (969)
970: learn: 0.6911144 test: 0.6911181 best: 0.6911181 (970)
971: learn: 0.6911123 test: 0.6911160 best: 0.6911160 (971)
972: learn: 0.6911104 test: 0.6911141 best: 0.6911141 (972)
973: learn: 0.6911082 test: 0.6911119 best: 0.6911119 (973)
974: learn: 0.6911061 test: 0.6911098 best: 0.6911098 (974)
975: learn: 0.6911041 test: 0.6911078 best: 0.6911078 (975)
976: learn: 0.6911021 test: 0.6911058 best: 0.6911058 (976)
977: learn: 0.6911001 test: 0.6911038 best: 0.6911038 (977)
978: learn: 0.6910980 test: 0.6911017 best: 0.6911017 (978)
979: learn: 0.6910959 test: 0.6910996 best: 0.6910996 (979)
980: learn: 0.6910937 test: 0.6910974 best: 0.6910974 (980)
981: learn: 0.6910916 test: 0.6910953 best: 0.6910953 (981)
982: learn: 0.6910894 test: 0.6910932 best: 0.6910932 (982)
983: learn: 0.6910876 test: 0.6910913 best: 0.6910913 (983)
984: learn: 0.6910856 test: 0.6910893 best: 0.6910893 (984)
985: learn: 0.6910836 test: 0.6910873 best: 0.6910873 (985)
986: learn: 0.6910815 test: 0.6910852 best: 0.6910852 (986)
987: learn: 0.6910793 test: 0.6910831 best: 0.6910831 (987)
988: learn: 0.6910773 test: 0.6910810 best: 0.6910810 (988)
989: learn: 0.6910752 test: 0.6910790 best: 0.6910790 (989)
990: learn: 0.6910731 test: 0.6910768 best: 0.6910768 (990)
991: learn: 0.6910710 test: 0.6910748 best: 0.6910748 (991)
992: learn: 0.6910688 test: 0.6910726 best: 0.6910726 (992)
993: learn: 0.6910667 test: 0.6910705 best: 0.6910705 (993)
994: learn: 0.6910646 test: 0.6910684 best: 0.6910684 (994)
995: learn: 0.6910625 test: 0.6910662 best: 0.6910662 (995)
996: learn: 0.6910602 test: 0.6910640 best: 0.6910640 (996)
997: learn: 0.6910580 test: 0.6910617 best: 0.6910617 (997)
998: learn: 0.6910559 test: 0.6910597 best: 0.6910597 (998)
999: learn: 0.6910539 test: 0.6910577 best: 0.6910577 (999) total: 17.7s remaining: 0us
0: learn: 0.6931252 test: 0.6931252 best: 0.6931252 (0)
1: learn: 0.6931035 test: 0.6931035 best: 0.6931035 (1)
2: learn: 0.6930838 test: 0.6930839 best: 0.6930839 (2)
3: learn: 0.6930626 test: 0.6930627 best: 0.6930627 (3)
4: learn: 0.6930424 test: 0.6930425 best: 0.6930425 (4)
5: learn: 0.6930202 test: 0.6930204 best: 0.6930204 (5)
6: learn: 0.6929997 test: 0.6929999 best: 0.6929999 (6)
7: learn: 0.6929781 test: 0.6929784 best: 0.6929784 (7)
8: learn: 0.6929571 test: 0.6929574 best: 0.6929574 (8)
9: learn: 0.6929363 test: 0.6929367 best: 0.6929367 (9)
10: learn: 0.6929143 test: 0.6929148 best: 0.6929148 (10)
11: learn: 0.6928933 test: 0.6928937 best: 0.6928937 (11)
12: learn: 0.6928738 test: 0.6928743 best: 0.6928743 (12)
13: learn: 0.6928534 test: 0.6928540 best: 0.6928540 (13)
14: learn: 0.6928310 test: 0.6928316 best: 0.6928316 (14)
15: learn: 0.6928081 test: 0.6928087 best: 0.6928087 (15)
16: learn: 0.6927876 test: 0.6927882 best: 0.6927882 (16)
17: learn: 0.6927666 test: 0.6927673 best: 0.6927673 (17)
18: learn: 0.6927449 test: 0.6927456 best: 0.6927456 (18)
19: learn: 0.6927246 test: 0.6927253 best: 0.6927253 (19)
20: learn: 0.6927040 test: 0.6927047 best: 0.6927047 (20)
21: learn: 0.6926831 test: 0.6926839 best: 0.6926839 (21)
22: learn: 0.6926614 test: 0.6926623 best: 0.6926623 (22)
23: learn: 0.6926408 test: 0.6926417 best: 0.6926417 (23)
24: learn: 0.6926218 test: 0.6926227 best: 0.6926227 (24)
25: learn: 0.6926017 test: 0.6926026 best: 0.6926026 (25)
26: learn: 0.6925815 test: 0.6925824 best: 0.6925824 (26)
27: learn: 0.6925616 test: 0.6925625 best: 0.6925625 (27)
28: learn: 0.6925396 test: 0.6925405 best: 0.6925405 (28)
29: learn: 0.6925194 test: 0.6925204 best: 0.6925204 (29)
30: learn: 0.6924988 test: 0.6924999 best: 0.6924999 (30)
31: learn: 0.6924786 test: 0.6924797 best: 0.6924797 (31)
32: learn: 0.6924564 test: 0.6924576 best: 0.6924576 (32)
33: learn: 0.6924335 test: 0.6924348 best: 0.6924348 (33)
34: learn: 0.6924135 test: 0.6924148 best: 0.6924148 (34)
35: learn: 0.6923936 test: 0.6923948 best: 0.6923948 (35)
36: learn: 0.6923724 test: 0.6923737 best: 0.6923737 (36)
37: learn: 0.6923526 test: 0.6923540 best: 0.6923540 (37)
```

```
38: learn: 0.6923325 test: 0.6923339 best: 0.6923339 (38)
39: learn: 0.6923112 test: 0.6923126 best: 0.6923126 (39)
40: learn: 0.6922890 test: 0.6922904 best: 0.6922904 (40)
41: learn: 0.6922699 test: 0.6922714 best: 0.6922714 (41)
42: learn: 0.6922468 test: 0.6922483 best: 0.6922483 (42)
43: learn: 0.6922249 test: 0.6922264 best: 0.6922264 (43)
44: learn: 0.6922050 test: 0.6922065 best: 0.6922065 (44)
45: learn: 0.6921848 test: 0.6921863 best: 0.6921863 (45)
46: learn: 0.6921629 test: 0.6921645 best: 0.6921645 (46)
47: learn: 0.6921435 test: 0.6921452 best: 0.6921452 (47)
48: learn: 0.6921236 test: 0.6921253 best: 0.6921253 (48)
49: learn: 0.6921032 test: 0.6921049 best: 0.6921049 (49)
50: learn: 0.6920812 test: 0.6920830 best: 0.6920830 (50)
51: learn: 0.6920619 test: 0.6920638 best: 0.6920638 (51)
52: learn: 0.6920413 test: 0.6920432 best: 0.6920432 (52) total: 953ms remaining: 17s
53: learn: 0.6920188 test: 0.6920207 best: 0.6920207 (53)
54: learn: 0.6919992 test: 0.6920012 best: 0.6920012 (54)
55: learn: 0.6919785 test: 0.6919806 best: 0.6919806 (55)
56: learn: 0.6919578 test: 0.6919599 best: 0.6919599 (56)
57: learn: 0.6919364 test: 0.6919385 best: 0.6919385 (57)
58: learn: 0.6919153 test: 0.6919174 best: 0.6919174 (58)
59: learn: 0.6918944 test: 0.6918965 best: 0.6918965 (59)
60: learn: 0.6918737 test: 0.6918758 best: 0.6918758 (60)
61: learn: 0.6918538 test: 0.6918560 best: 0.6918560 (61)
62: learn: 0.6918302 test: 0.6918324 best: 0.6918324 (62)
63: learn: 0.6918083 test: 0.6918106 best: 0.6918106 (63)
64: learn: 0.6917867 test: 0.6917890 best: 0.6917890 (64)
65: learn: 0.6917653 test: 0.6917676 best: 0.6917676 (65)
66: learn: 0.6917463 test: 0.6917486 best: 0.6917486 (66)
67: learn: 0.6917251 test: 0.6917275 best: 0.6917275 (67)
68: learn: 0.6917036 test: 0.6917060 best: 0.6917060 (68)
69: learn: 0.6916822 test: 0.6916846 best: 0.6916846 (69)
70: learn: 0.6916622 test: 0.6916647 best: 0.6916647 (70)
71: learn: 0.6916415 test: 0.6916440 best: 0.6916440 (71)
72: learn: 0.6916190 test: 0.6916217 best: 0.6916217 (72)
73: learn: 0.6915983 test: 0.6916010 best: 0.6916010 (73)
74: learn: 0.6915765 test: 0.6915792 best: 0.6915792 (74)
75: learn: 0.6915549 test: 0.6915576 best: 0.6915576 (75)
76: learn: 0.6915350 test: 0.6915377 best: 0.6915377 (76) total: 1.43s remaining: 17.1s
77: learn: 0.6915144 test: 0.6915172 best: 0.6915172 (77)
78: learn: 0.6914939 test: 0.6914967 best: 0.6914967 (78)
79: learn: 0.6914727 test: 0.6914755 best: 0.6914755 (79)
80: learn: 0.6914530 test: 0.6914558 best: 0.6914558 (80)
81: learn: 0.6914307 test: 0.6914337 best: 0.6914337 (81)
82: learn: 0.6914119 test: 0.6914150 best: 0.6914150 (82)
83: learn: 0.6913915 test: 0.6913946 best: 0.6913946 (83)
84: learn: 0.6913719 test: 0.6913750 best: 0.6913750 (84)
85: learn: 0.6913504 test: 0.6913535 best: 0.6913535 (85)
86: learn: 0.6913294 test: 0.6913326 best: 0.6913326 (86)
87: learn: 0.6913072 test: 0.6913104 best: 0.6913104 (87)
88: learn: 0.6912856 test: 0.6912888 best: 0.6912888 (88)
89: learn: 0.6912662 test: 0.6912694 best: 0.6912694 (89)
90: learn: 0.6912441 test: 0.6912473 best: 0.6912473 (90)
91: learn: 0.6912246 test: 0.6912279 best: 0.6912279 (91)
92: learn: 0.6912021 test: 0.6912054 best: 0.6912054 (92)
93: learn: 0.6911811 test: 0.6911844 best: 0.6911844 (93)
94: learn: 0.6911622 test: 0.6911655 best: 0.6911655 (94)
95: learn: 0.6911432 test: 0.6911465 best: 0.6911465 (95)
96: learn: 0.6911218 test: 0.6911253 best: 0.6911253 (96)
97: learn: 0.6911024 test: 0.6911059 best: 0.6911059 (97)
98: learn: 0.6910830 test: 0.6910865 best: 0.6910865 (98)
99: learn: 0.6910625 test: 0.6910661 best: 0.6910661 (99)
100: learn: 0.6910421 test: 0.6910457 best: 0.6910457 (100)
101: learn: 0.6910213 test: 0.6910251 best: 0.6910251 (101)
102: learn: 0.6910024 test: 0.6910062 best: 0.6910062 (102)
103: learn: 0.6909797 test: 0.6909836 best: 0.6909836 (103)
104: learn: 0.6909609 test: 0.6909649 best: 0.6909649 (104)
105: learn: 0.6909401 test: 0.6909441 best: 0.6909441 (105)
106: learn: 0.6909178 test: 0.6909219 best: 0.6909219 (106)
107: learn: 0.6908960 test: 0.6909001 best: 0.6909001 (107)
108: learn: 0.6908755 test: 0.6908797 best: 0.6908797 (108)
109: learn: 0.6908546 test: 0.6908589 best: 0.6908589 (109)
110: learn: 0.6908347 test: 0.6908390 best: 0.6908390 (110)
111: learn: 0.6908151 test: 0.6908194 best: 0.6908194 (111)
112: learn: 0.6907950 test: 0.6907992 best: 0.6907992 (112)
113: learn: 0.6907741 test: 0.6907783 best: 0.6907783 (113)
114: learn: 0.6907532 test: 0.6907575 best: 0.6907575 (114)
```

```
115: learn: 0.6907326 test: 0.6907370 best: 0.6907370 (115)
116: learn: 0.6907112 test: 0.6907156 best: 0.6907156 (116)
117: learn: 0.6906913 test: 0.6906957 best: 0.6906957 (117)
118: learn: 0.6906693 test: 0.6906738 best: 0.6906738 (118)
119: learn: 0.6906480 test: 0.6906525 best: 0.6906525 (119)
120: learn: 0.6906287 test: 0.6906332 best: 0.6906332 (120)
121: learn: 0.6906081 test: 0.6906127 best: 0.6906127 (121)
122: learn: 0.6905860 test: 0.6905906 best: 0.6905906 (122)
123: learn: 0.6905652 test: 0.6905698 best: 0.6905698 (123)
124: learn: 0.6905454 test: 0.6905500 best: 0.6905500 (124)
125: learn: 0.6905233 test: 0.6905280 best: 0.6905280 (125)
126: learn: 0.6905010 test: 0.6905057 best: 0.6905057 (126)
127: learn: 0.6904783 test: 0.6904830 best: 0.6904830 (127)
128: learn: 0.6904595 test: 0.6904643 best: 0.6904643 (128)
129: learn: 0.6904379 test: 0.6904427 best: 0.6904427 (129)
130: learn: 0.6904161 test: 0.6904209 best: 0.6904209 (130)
131: learn: 0.6903961 test: 0.6904010 best: 0.6904010 (131)
132: learn: 0.6903754 test: 0.6903804 best: 0.6903804 (132)
133: learn: 0.6903546 test: 0.6903596 best: 0.6903596 (133)
134: learn: 0.6903335 test: 0.6903385 best: 0.6903385 (134)
135: learn: 0.6903111 test: 0.6903162 best: 0.6903162 (135)
136: learn: 0.6902917 test: 0.6902968 best: 0.6902968 (136)
137: learn: 0.6902735 test: 0.6902786 best: 0.6902786 (137)
138: learn: 0.6902538 test: 0.6902589 best: 0.6902589 (138)
139: learn: 0.6902329 test: 0.6902381 best: 0.6902381 (139)
140: learn: 0.6902107 test: 0.6902160 best: 0.6902160 (140)
141: learn: 0.6901906 test: 0.6901959 best: 0.6901959 (141)
142: learn: 0.6901694 test: 0.6901748 best: 0.6901748 (142)
143: learn: 0.6901471 test: 0.6901525 best: 0.6901525 (143)
144: learn: 0.6901282 test: 0.6901336 best: 0.6901336 (144)
145: learn: 0.6901081 test: 0.6901136 best: 0.6901136 (145)
146: learn: 0.6900867 test: 0.6900922 best: 0.6900922 (146)
147: learn: 0.6900656 test: 0.6900711 best: 0.6900711 (147)
148: learn: 0.6900439 test: 0.6900495 best: 0.6900495 (148)
149: learn: 0.6900228 test: 0.6900283 best: 0.6900283 (149)
150: learn: 0.6900024 test: 0.6900080 best: 0.6900080 (150)
151: learn: 0.6899829 test: 0.6899885 best: 0.6899885 (151)
152: learn: 0.6899615 test: 0.6899672 best: 0.6899672 (152)
153: learn: 0.6899418 test: 0.6899475 best: 0.6899475 (153)
154: learn: 0.6899221 test: 0.6899278 best: 0.6899278 (154)
155: learn: 0.6899022 test: 0.6899080 best: 0.6899080 (155)
156: learn: 0.6898825 test: 0.6898883 best: 0.6898883 (156)
157: learn: 0.6898613 test: 0.6898672 best: 0.6898672 (157)
158: learn: 0.6898409 test: 0.6898468 best: 0.6898468 (158)
159: learn: 0.6898193 test: 0.6898252 best: 0.6898252 (159)
160: learn: 0.6897972 test: 0.6898032 best: 0.6898032 (160)
161: learn: 0.6897755 test: 0.6897816 best: 0.6897816 (161)
162: learn: 0.6897559 test: 0.6897621 best: 0.6897621 (162)
163: learn: 0.6897340 test: 0.6897403 best: 0.6897403 (163) total: 2.9s remaining: 14.8s
164: learn: 0.6897133 test: 0.6897196 best: 0.6897196 (164)
165: learn: 0.6896926 test: 0.6896989 best: 0.6896989 (165)
166: learn: 0.6896735 test: 0.6896798 best: 0.6896798 (166)
167: learn: 0.6896521 test: 0.6896585 best: 0.6896585 (167)
168: learn: 0.6896315 test: 0.6896378 best: 0.6896378 (168)
169: learn: 0.6896099 test: 0.6896163 best: 0.6896163 (169)
170: learn: 0.6895896 test: 0.6895959 best: 0.6895959 (170)
171: learn: 0.6895676 test: 0.6895740 best: 0.6895740 (171)
172: learn: 0.6895479 test: 0.6895544 best: 0.6895544 (172)
173: learn: 0.6895260 test: 0.6895324 best: 0.6895324 (173)
174: learn: 0.6895052 test: 0.6895116 best: 0.6895116 (174)
175: learn: 0.6894856 test: 0.6894921 best: 0.6894921 (175)
176: learn: 0.6894638 test: 0.6894703 best: 0.6894703 (176)
177: learn: 0.6894435 test: 0.6894501 best: 0.6894501 (177)
178: learn: 0.6894209 test: 0.6894275 best: 0.6894275 (178)
179: learn: 0.6894017 test: 0.6894083 best: 0.6894083 (179)
180: learn: 0.6893802 test: 0.6893868 best: 0.6893868 (180)
181: learn: 0.6893595 test: 0.6893662 best: 0.6893662 (181)
182: learn: 0.6893398 test: 0.6893465 best: 0.6893465 (182)
183: learn: 0.6893192 test: 0.6893260 best: 0.6893260 (183)
184: learn: 0.6892993 test: 0.6893061 best: 0.6893061 (184)
185: learn: 0.6892783 test: 0.6892852 best: 0.6892852 (185)
186: learn: 0.6892584 test: 0.6892654 best: 0.6892654 (186)
187: learn: 0.6892384 test: 0.6892454 best: 0.6892454 (187)
188: learn: 0.6892183 test: 0.6892253 best: 0.6892253 (188)
189: learn: 0.6891988 test: 0.6892059 best: 0.6892059 (189)
190: learn: 0.6891791 test: 0.6891861 best: 0.6891861 (190)
191: learn: 0.6891587 test: 0.6891658 best: 0.6891658 (191)
```

```
192: learn: 0.6891378 test: 0.6891449 best: 0.6891449 (192)    total: 3.42s    remaining: 14.3s
193: learn: 0.6891173 test: 0.6891245 best: 0.6891245 (193)
194: learn: 0.6890957 test: 0.6891029 best: 0.6891029 (194)
195: learn: 0.6890760 test: 0.6890832 best: 0.6890832 (195)
196: learn: 0.6890560 test: 0.6890633 best: 0.6890633 (196)
197: learn: 0.6890351 test: 0.6890424 best: 0.6890424 (197)
198: learn: 0.6890144 test: 0.6890218 best: 0.6890218 (198)
199: learn: 0.6889921 test: 0.6889995 best: 0.6889995 (199)
200: learn: 0.6889726 test: 0.6889800 best: 0.6889800 (200)
201: learn: 0.6889504 test: 0.6889579 best: 0.6889579 (201)
202: learn: 0.6889280 test: 0.6889354 best: 0.6889354 (202)
203: learn: 0.6889067 test: 0.6889142 best: 0.6889142 (203)
204: learn: 0.6888867 test: 0.6888943 best: 0.6888943 (204)
205: learn: 0.6888674 test: 0.6888750 best: 0.6888750 (205)
206: learn: 0.6888469 test: 0.6888545 best: 0.6888545 (206)
207: learn: 0.6888244 test: 0.6888320 best: 0.6888320 (207)
208: learn: 0.6888035 test: 0.6888112 best: 0.6888112 (208)
209: learn: 0.6887827 test: 0.6887904 best: 0.6887904 (209)
210: learn: 0.6887621 test: 0.6887698 best: 0.6887698 (210)
211: learn: 0.6887404 test: 0.6887481 best: 0.6887481 (211)
212: learn: 0.6887205 test: 0.6887282 best: 0.6887282 (212)
213: learn: 0.6886999 test: 0.6887077 best: 0.6887077 (213)
214: learn: 0.6886818 test: 0.6886896 best: 0.6886896 (214)
215: learn: 0.6886598 test: 0.6886676 best: 0.6886676 (215)
216: learn: 0.6886402 test: 0.6886481 best: 0.6886481 (216)
217: learn: 0.6886182 test: 0.6886262 best: 0.6886262 (217)
218: learn: 0.6885978 test: 0.6886057 best: 0.6886057 (218)
219: learn: 0.6885765 test: 0.6885844 best: 0.6885844 (219)
220: learn: 0.6885555 test: 0.6885635 best: 0.6885635 (220)
221: learn: 0.6885336 test: 0.6885416 best: 0.6885416 (221)
222: learn: 0.6885132 test: 0.6885212 best: 0.6885212 (222)
223: learn: 0.6884923 test: 0.6885004 best: 0.6885004 (223)
224: learn: 0.6884719 test: 0.6884801 best: 0.6884801 (224)
225: learn: 0.6884515 test: 0.6884597 best: 0.6884597 (225)
226: learn: 0.6884316 test: 0.6884398 best: 0.6884398 (226)
227: learn: 0.6884095 test: 0.6884178 best: 0.6884178 (227)
228: learn: 0.6883883 test: 0.6883966 best: 0.6883966 (228)
229: learn: 0.6883691 test: 0.6883774 best: 0.6883774 (229)
230: learn: 0.6883466 test: 0.6883549 best: 0.6883549 (230)
231: learn: 0.6883268 test: 0.6883351 best: 0.6883351 (231)
232: learn: 0.6883062 test: 0.6883145 best: 0.6883145 (232)
233: learn: 0.6882863 test: 0.6882947 best: 0.6882947 (233)
234: learn: 0.6882664 test: 0.6882749 best: 0.6882749 (234)
235: learn: 0.6882443 test: 0.6882528 best: 0.6882528 (235)
236: learn: 0.6882221 test: 0.6882307 best: 0.6882307 (236)
237: learn: 0.6882026 test: 0.6882111 best: 0.6882111 (237)
238: learn: 0.6881806 test: 0.6881891 best: 0.6881891 (238)
239: learn: 0.6881595 test: 0.6881682 best: 0.6881682 (239)
240: learn: 0.6881393 test: 0.6881480 best: 0.6881480 (240)
241: learn: 0.6881169 test: 0.6881256 best: 0.6881256 (241)
242: learn: 0.6880952 test: 0.6881040 best: 0.6881040 (242)
243: learn: 0.6880743 test: 0.6880831 best: 0.6880831 (243)
244: learn: 0.6880526 test: 0.6880614 best: 0.6880614 (244)
245: learn: 0.6880312 test: 0.6880399 best: 0.6880399 (245)
246: learn: 0.6880102 test: 0.6880190 best: 0.6880190 (246)
247: learn: 0.6879896 test: 0.6879984 best: 0.6879984 (247)
248: learn: 0.6879693 test: 0.6879781 best: 0.6879781 (248)
249: learn: 0.6879495 test: 0.6879583 best: 0.6879583 (249)
250: learn: 0.6879285 test: 0.6879374 best: 0.6879374 (250)
251: learn: 0.6879083 test: 0.6879173 best: 0.6879173 (251)
252: learn: 0.6878871 test: 0.6878961 best: 0.6878961 (252)
253: learn: 0.6878651 test: 0.6878741 best: 0.6878741 (253)
254: learn: 0.6878450 test: 0.6878541 best: 0.6878541 (254)
255: learn: 0.6878235 test: 0.6878325 best: 0.6878325 (255)
256: learn: 0.6878022 test: 0.6878113 best: 0.6878113 (256)
257: learn: 0.6877815 test: 0.6877907 best: 0.6877907 (257)
258: learn: 0.6877583 test: 0.6877676 best: 0.6877676 (258)
259: learn: 0.6877380 test: 0.6877472 best: 0.6877472 (259)
260: learn: 0.6877183 test: 0.6877276 best: 0.6877276 (260)
261: learn: 0.6876970 test: 0.6877063 best: 0.6877063 (261)
262: learn: 0.6876757 test: 0.6876850 best: 0.6876850 (262)
263: learn: 0.6876549 test: 0.6876643 best: 0.6876643 (263)
264: learn: 0.6876343 test: 0.6876437 best: 0.6876437 (264)
265: learn: 0.6876153 test: 0.6876247 best: 0.6876247 (265)
266: learn: 0.6875952 test: 0.6876047 best: 0.6876047 (266)
267: learn: 0.6875743 test: 0.6875838 best: 0.6875838 (267)
268: learn: 0.6875542 test: 0.6875638 best: 0.6875638 (268)
```

```
269: learn: 0.6875356 test: 0.6875452 best: 0.6875452 (269)
270: learn: 0.6875135 test: 0.6875231 best: 0.6875231 (270)
271: learn: 0.6874930 test: 0.6875026 best: 0.6875026 (271)
272: learn: 0.6874748 test: 0.6874844 best: 0.6874844 (272)
273: learn: 0.6874522 test: 0.6874618 best: 0.6874618 (273)
274: learn: 0.6874318 test: 0.6874415 best: 0.6874415 (274)
275: learn: 0.6874105 test: 0.6874202 best: 0.6874202 (275)
276: learn: 0.6873897 test: 0.6873995 best: 0.6873995 (276)
277: learn: 0.6873704 test: 0.6873803 best: 0.6873803 (277)
278: learn: 0.6873512 test: 0.6873611 best: 0.6873611 (278)
279: learn: 0.6873300 test: 0.6873400 best: 0.6873400 (279)
280: learn: 0.6873103 test: 0.6873203 best: 0.6873203 (280) total: 4.91s remaining: 12.6s
281: learn: 0.6872881 test: 0.6872983 best: 0.6872983 (281)
282: learn: 0.6872687 test: 0.6872789 best: 0.6872789 (282)
283: learn: 0.6872509 test: 0.6872611 best: 0.6872611 (283)
284: learn: 0.6872310 test: 0.6872413 best: 0.6872413 (284)
285: learn: 0.6872110 test: 0.6872214 best: 0.6872214 (285)
286: learn: 0.6871884 test: 0.6871988 best: 0.6871988 (286)
287: learn: 0.6871679 test: 0.6871783 best: 0.6871783 (287)
288: learn: 0.6871475 test: 0.6871579 best: 0.6871579 (288)
289: learn: 0.6871263 test: 0.6871367 best: 0.6871367 (289)
290: learn: 0.6871044 test: 0.6871149 best: 0.6871149 (290)
291: learn: 0.6870848 test: 0.6870953 best: 0.6870953 (291)
292: learn: 0.6870643 test: 0.6870749 best: 0.6870749 (292)
293: learn: 0.6870428 test: 0.6870534 best: 0.6870534 (293)
294: learn: 0.6870210 test: 0.6870317 best: 0.6870317 (294)
295: learn: 0.6869989 test: 0.6870097 best: 0.6870097 (295)
296: learn: 0.6869799 test: 0.6869907 best: 0.6869907 (296)
297: learn: 0.6869587 test: 0.6869695 best: 0.6869695 (297)
298: learn: 0.6869406 test: 0.6869514 best: 0.6869514 (298)
299: learn: 0.6869191 test: 0.6869300 best: 0.6869300 (299)
300: learn: 0.6868985 test: 0.6869095 best: 0.6869095 (300)
301: learn: 0.6868770 test: 0.6868880 best: 0.6868880 (301)
302: learn: 0.6868568 test: 0.6868677 best: 0.6868677 (302)
303: learn: 0.6868364 test: 0.6868474 best: 0.6868474 (303)
304: learn: 0.6868171 test: 0.6868282 best: 0.6868282 (304)
305: learn: 0.6867976 test: 0.6868087 best: 0.6868087 (305)
306: learn: 0.6867756 test: 0.6867868 best: 0.6867868 (306)
307: learn: 0.6867551 test: 0.6867663 best: 0.6867663 (307)
308: learn: 0.6867346 test: 0.6867458 best: 0.6867458 (308)
309: learn: 0.6867126 test: 0.6867238 best: 0.6867238 (309)
310: learn: 0.6866932 test: 0.6867044 best: 0.6867044 (310)
311: learn: 0.6866711 test: 0.6866824 best: 0.6866824 (311)
312: learn: 0.6866506 test: 0.6866619 best: 0.6866619 (312)
313: learn: 0.6866308 test: 0.6866422 best: 0.6866422 (313)
314: learn: 0.6866104 test: 0.6866218 best: 0.6866218 (314)
315: learn: 0.6865887 test: 0.6866001 best: 0.6866001 (315)
316: learn: 0.6865685 test: 0.6865800 best: 0.6865800 (316)
317: learn: 0.6865493 test: 0.6865609 best: 0.6865609 (317)
318: learn: 0.6865281 test: 0.6865396 best: 0.6865396 (318)
319: learn: 0.6865069 test: 0.6865185 best: 0.6865185 (319)
320: learn: 0.6864864 test: 0.6864981 best: 0.6864981 (320)
321: learn: 0.6864644 test: 0.6864762 best: 0.6864762 (321)
322: learn: 0.6864435 test: 0.6864552 best: 0.6864552 (322)
323: learn: 0.6864247 test: 0.6864365 best: 0.6864365 (323)
324: learn: 0.6864035 test: 0.6864153 best: 0.6864153 (324)
325: learn: 0.6863822 test: 0.6863941 best: 0.6863941 (325)
326: learn: 0.6863609 test: 0.6863728 best: 0.6863728 (326)
327: learn: 0.6863396 test: 0.6863515 best: 0.6863515 (327)
328: learn: 0.6863199 test: 0.6863318 best: 0.6863318 (328)
329: learn: 0.6862993 test: 0.6863112 best: 0.6863112 (329)
330: learn: 0.6862783 test: 0.6862904 best: 0.6862904 (330)
331: learn: 0.6862571 test: 0.6862693 best: 0.6862693 (331)
332: learn: 0.6862378 test: 0.6862500 best: 0.6862500 (332)
333: learn: 0.6862167 test: 0.6862289 best: 0.6862289 (333)
334: learn: 0.6861959 test: 0.6862082 best: 0.6862082 (334)
335: learn: 0.6861744 test: 0.6861868 best: 0.6861868 (335)
336: learn: 0.6861534 test: 0.6861658 best: 0.6861658 (336)
337: learn: 0.6861329 test: 0.6861453 best: 0.6861453 (337)
338: learn: 0.6861116 test: 0.6861241 best: 0.6861241 (338)
339: learn: 0.6860914 test: 0.6861039 best: 0.6861039 (339)
340: learn: 0.6860720 test: 0.6860845 best: 0.6860845 (340)
341: learn: 0.6860503 test: 0.6860629 best: 0.6860629 (341)
342: learn: 0.6860305 test: 0.6860432 best: 0.6860432 (342)
343: learn: 0.6860084 test: 0.6860211 best: 0.6860211 (343)
344: learn: 0.6859896 test: 0.6860023 best: 0.6860023 (344)
345: learn: 0.6859697 test: 0.6859824 best: 0.6859824 (345)
```

```
345: learn: 0.6859894 test: 0.6859921 best: 0.6859921 (345)
346: learn: 0.6859490 test: 0.6859616 best: 0.6859616 (346)
347: learn: 0.6859273 test: 0.6859400 best: 0.6859400 (347)
348: learn: 0.6859061 test: 0.6859188 best: 0.6859188 (348)
349: learn: 0.6858855 test: 0.6858983 best: 0.6858983 (349)
350: learn: 0.6858663 test: 0.6858791 best: 0.6858791 (350)
351: learn: 0.6858458 test: 0.6858587 best: 0.6858587 (351)
352: learn: 0.6858240 test: 0.6858369 best: 0.6858369 (352)
353: learn: 0.6858019 test: 0.6858148 best: 0.6858148 (353)
354: learn: 0.6857797 test: 0.6857927 best: 0.6857927 (354)
355: learn: 0.6857606 test: 0.6857736 best: 0.6857736 (355)
356: learn: 0.6857400 test: 0.6857531 best: 0.6857531 (356)
357: learn: 0.6857200 test: 0.6857331 best: 0.6857331 (357)
358: learn: 0.6856985 test: 0.6857117 best: 0.6857117 (358)
359: learn: 0.6856784 test: 0.6856917 best: 0.6856917 (359)
360: learn: 0.6856569 test: 0.6856702 best: 0.6856702 (360)
361: learn: 0.6856382 test: 0.6856515 best: 0.6856515 (361)
362: learn: 0.6856171 test: 0.6856305 best: 0.6856305 (362)
363: learn: 0.6855968 test: 0.6856102 best: 0.6856102 (363)
364: learn: 0.6855750 test: 0.6855884 best: 0.6855884 (364)
365: learn: 0.6855547 test: 0.6855681 best: 0.6855681 (365)
366: learn: 0.6855330 test: 0.6855465 best: 0.6855465 (366)
367: learn: 0.6855131 test: 0.6855267 best: 0.6855267 (367) total: 6.38s remaining: 10.9s
368: learn: 0.6854942 test: 0.6855079 best: 0.6855079 (368)
369: learn: 0.6854721 test: 0.6854858 best: 0.6854858 (369)
370: learn: 0.6854510 test: 0.6854647 best: 0.6854647 (370)
371: learn: 0.6854308 test: 0.6854446 best: 0.6854446 (371)
372: learn: 0.6854096 test: 0.6854234 best: 0.6854234 (372)
373: learn: 0.6853895 test: 0.6854033 best: 0.6854033 (373)
374: learn: 0.6853690 test: 0.6853828 best: 0.6853828 (374)
375: learn: 0.6853481 test: 0.6853619 best: 0.6853619 (375)
376: learn: 0.6853268 test: 0.6853407 best: 0.6853407 (376)
377: learn: 0.6853066 test: 0.6853206 best: 0.6853206 (377)
378: learn: 0.6852844 test: 0.6852984 best: 0.6852984 (378)
379: learn: 0.6852653 test: 0.6852793 best: 0.6852793 (379)
380: learn: 0.6852434 test: 0.6852574 best: 0.6852574 (380)
381: learn: 0.6852216 test: 0.6852356 best: 0.6852356 (381)
382: learn: 0.6851999 test: 0.6852140 best: 0.6852140 (382)
383: learn: 0.6851783 test: 0.6851924 best: 0.6851924 (383)
384: learn: 0.6851568 test: 0.6851709 best: 0.6851709 (384)
385: learn: 0.6851373 test: 0.6851515 best: 0.6851515 (385)
386: learn: 0.6851155 test: 0.6851297 best: 0.6851297 (386)
387: learn: 0.6850991 test: 0.6851133 best: 0.6851133 (387)
388: learn: 0.6850784 test: 0.6850928 best: 0.6850928 (388)
389: learn: 0.6850573 test: 0.6850717 best: 0.6850717 (389)
390: learn: 0.6850359 test: 0.6850503 best: 0.6850503 (390)
391: learn: 0.6850153 test: 0.6850298 best: 0.6850298 (391)
392: learn: 0.6849948 test: 0.6850092 best: 0.6850092 (392)
393: learn: 0.6849735 test: 0.6849880 best: 0.6849880 (393)
394: learn: 0.6849537 test: 0.6849683 best: 0.6849683 (394)
395: learn: 0.6849325 test: 0.6849470 best: 0.6849470 (395)
396: learn: 0.6849128 test: 0.6849275 best: 0.6849275 (396)
397: learn: 0.6848926 test: 0.6849075 best: 0.6849075 (397)
398: learn: 0.6848715 test: 0.6848863 best: 0.6848863 (398)
399: learn: 0.6848513 test: 0.6848662 best: 0.6848662 (399)
400: learn: 0.6848308 test: 0.6848457 best: 0.6848457 (400)
401: learn: 0.6848097 test: 0.6848248 best: 0.6848248 (401)
402: learn: 0.6847894 test: 0.6848045 best: 0.6848045 (402)
403: learn: 0.6847678 test: 0.6847828 best: 0.6847828 (403)
404: learn: 0.6847468 test: 0.6847620 best: 0.6847620 (404)
405: learn: 0.6847267 test: 0.6847419 best: 0.6847419 (405)
406: learn: 0.6847057 test: 0.6847208 best: 0.6847208 (406)
407: learn: 0.6846860 test: 0.6847012 best: 0.6847012 (407)
408: learn: 0.6846649 test: 0.6846800 best: 0.6846800 (408)
409: learn: 0.6846445 test: 0.6846597 best: 0.6846597 (409)
410: learn: 0.6846244 test: 0.6846396 best: 0.6846396 (410)
411: learn: 0.6846027 test: 0.6846179 best: 0.6846179 (411)
412: learn: 0.6845818 test: 0.6845971 best: 0.6845971 (412)
413: learn: 0.6845615 test: 0.6845768 best: 0.6845768 (413)
414: learn: 0.6845415 test: 0.6845568 best: 0.6845568 (414)
415: learn: 0.6845206 test: 0.6845359 best: 0.6845359 (415)
416: learn: 0.6845008 test: 0.6845161 best: 0.6845161 (416)
417: learn: 0.6844797 test: 0.6844950 best: 0.6844950 (417)
418: learn: 0.6844617 test: 0.6844769 best: 0.6844769 (418)
419: learn: 0.6844418 test: 0.6844571 best: 0.6844571 (419)
420: learn: 0.6844199 test: 0.6844353 best: 0.6844353 (420)
421: learn: 0.6843993 test: 0.6844148 best: 0.6844148 (421)
422: learn: 0.6843782 test: 0.6843936 best: 0.6843936 (422)
```

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422: learn: 0.6843782 test: 0.6843930 best: 0.6843930 (422)
423: learn: 0.6843582 test: 0.6843737 best: 0.6843737 (423)
424: learn: 0.6843382 test: 0.6843538 best: 0.6843538 (424)
425: learn: 0.6843164 test: 0.6843320 best: 0.6843320 (425)
426: learn: 0.6842965 test: 0.6843121 best: 0.6843121 (426)
427: learn: 0.6842770 test: 0.6842928 best: 0.6842928 (427)
428: learn: 0.6842548 test: 0.6842706 best: 0.6842706 (428)
429: learn: 0.6842346 test: 0.6842505 best: 0.6842505 (429)
430: learn: 0.6842139 test: 0.6842299 best: 0.6842299 (430)
431: learn: 0.6841934 test: 0.6842094 best: 0.6842094 (431)
432: learn: 0.6841734 test: 0.6841895 best: 0.6841895 (432)
433: learn: 0.6841528 test: 0.6841690 best: 0.6841690 (433)
434: learn: 0.6841322 test: 0.6841485 best: 0.6841485 (434)
435: learn: 0.6841116 test: 0.6841280 best: 0.6841280 (435)
436: learn: 0.6840907 test: 0.6841072 best: 0.6841072 (436)
437: learn: 0.6840692 test: 0.6840857 best: 0.6840857 (437)
438: learn: 0.6840479 test: 0.6840645 best: 0.6840645 (438)
439: learn: 0.6840280 test: 0.6840447 best: 0.6840447 (439)
440: learn: 0.6840075 test: 0.6840243 best: 0.6840243 (440)
441: learn: 0.6839871 test: 0.6840039 best: 0.6840039 (441)
442: learn: 0.6839672 test: 0.6839839 best: 0.6839839 (442)
443: learn: 0.6839479 test: 0.6839646 best: 0.6839646 (443)
444: learn: 0.6839274 test: 0.6839442 best: 0.6839442 (444)
445: learn: 0.6839060 test: 0.6839228 best: 0.6839228 (445)
446: learn: 0.6838862 test: 0.6839031 best: 0.6839031 (446)
447: learn: 0.6838648 test: 0.6838818 best: 0.6838818 (447)
448: learn: 0.6838440 test: 0.6838610 best: 0.6838610 (448)
449: learn: 0.6838231 test: 0.6838401 best: 0.6838401 (449)
450: learn: 0.6838023 test: 0.6838193 best: 0.6838193 (450)
451: learn: 0.6837814 test: 0.6837985 best: 0.6837985 (451)
452: learn: 0.6837604 test: 0.6837775 best: 0.6837775 (452)
453: learn: 0.6837382 test: 0.6837554 best: 0.6837554 (453)
454: learn: 0.6837169 test: 0.6837341 best: 0.6837341 (454)
455: learn: 0.6836957 test: 0.6837131 best: 0.6837131 (455) total: 7.83s remaining: 9.35s
456: learn: 0.6836770 test: 0.6836943 best: 0.6836943 (456)
457: learn: 0.6836563 test: 0.6836737 best: 0.6836737 (457)
458: learn: 0.6836346 test: 0.6836519 best: 0.6836519 (458)
459: learn: 0.6836135 test: 0.6836309 best: 0.6836309 (459)
460: learn: 0.6835919 test: 0.6836092 best: 0.6836092 (460)
461: learn: 0.6835719 test: 0.6835893 best: 0.6835893 (461)
462: learn: 0.6835499 test: 0.6835675 best: 0.6835675 (462)
463: learn: 0.6835290 test: 0.6835467 best: 0.6835467 (463)
464: learn: 0.6835084 test: 0.6835262 best: 0.6835262 (464)
465: learn: 0.6834890 test: 0.6835069 best: 0.6835069 (465)
466: learn: 0.6834683 test: 0.6834863 best: 0.6834863 (466)
467: learn: 0.6834478 test: 0.6834659 best: 0.6834659 (467)
468: learn: 0.6834271 test: 0.6834453 best: 0.6834453 (468)
469: learn: 0.6834070 test: 0.6834253 best: 0.6834253 (469)
470: learn: 0.6833881 test: 0.6834064 best: 0.6834064 (470)
471: learn: 0.6833663 test: 0.6833848 best: 0.6833848 (471)
472: learn: 0.6833459 test: 0.6833644 best: 0.6833644 (472)
473: learn: 0.6833251 test: 0.6833438 best: 0.6833438 (473)
474: learn: 0.6833052 test: 0.6833239 best: 0.6833239 (474)
475: learn: 0.6832845 test: 0.6833033 best: 0.6833033 (475)
476: learn: 0.6832640 test: 0.6832828 best: 0.6832828 (476)
477: learn: 0.6832419 test: 0.6832607 best: 0.6832607 (477)
478: learn: 0.6832204 test: 0.6832392 best: 0.6832392 (478)
479: learn: 0.6832004 test: 0.6832193 best: 0.6832193 (479)
480: learn: 0.6831795 test: 0.6831983 best: 0.6831983 (480)
481: learn: 0.6831590 test: 0.6831779 best: 0.6831779 (481)
482: learn: 0.6831371 test: 0.6831560 best: 0.6831560 (482)
483: learn: 0.6831163 test: 0.6831353 best: 0.6831353 (483)
484: learn: 0.6830950 test: 0.6831139 best: 0.6831139 (484)
485: learn: 0.6830734 test: 0.6830924 best: 0.6830924 (485)
486: learn: 0.6830526 test: 0.6830716 best: 0.6830716 (486)
487: learn: 0.6830313 test: 0.6830502 best: 0.6830502 (487)
488: learn: 0.6830110 test: 0.6830300 best: 0.6830300 (488)
489: learn: 0.6829901 test: 0.6830092 best: 0.6830092 (489)
490: learn: 0.6829688 test: 0.6829881 best: 0.6829881 (490)
491: learn: 0.6829472 test: 0.6829665 best: 0.6829665 (491)
492: learn: 0.6829256 test: 0.6829449 best: 0.6829449 (492)
493: learn: 0.6829064 test: 0.6829258 best: 0.6829258 (493)
494: learn: 0.6828852 test: 0.6829047 best: 0.6829047 (494)
495: learn: 0.6828666 test: 0.6828861 best: 0.6828861 (495)
496: learn: 0.6828454 test: 0.6828650 best: 0.6828650 (496)
497: learn: 0.6828244 test: 0.6828441 best: 0.6828441 (497) total: 8.56s remaining: 8.63s
498: learn: 0.6828033 test: 0.6828230 best: 0.6828230 (498)
499: learn: 0.6827822 test: 0.6828019 best: 0.6828019 (499)
```

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499: learn: 0.6827022 test: 0.6826819 best: 0.6826819 (499)
500: learn: 0.6827610 test: 0.6827808 best: 0.6827808 (500)
501: learn: 0.6827389 test: 0.6827588 best: 0.6827588 (501)
502: learn: 0.6827184 test: 0.6827383 best: 0.6827383 (502)
503: learn: 0.6826989 test: 0.6827188 best: 0.6827188 (503)
504: learn: 0.6826777 test: 0.6826976 best: 0.6826976 (504)
505: learn: 0.6826572 test: 0.6826771 best: 0.6826771 (505)
506: learn: 0.6826373 test: 0.6826574 best: 0.6826574 (506)
507: learn: 0.6826156 test: 0.6826358 best: 0.6826358 (507)
508: learn: 0.6825953 test: 0.6826155 best: 0.6826155 (508)
509: learn: 0.6825752 test: 0.6825955 best: 0.6825955 (509)
510: learn: 0.6825545 test: 0.6825748 best: 0.6825748 (510)
511: learn: 0.6825335 test: 0.6825538 best: 0.6825538 (511)
512: learn: 0.6825126 test: 0.6825328 best: 0.6825328 (512)
513: learn: 0.6824919 test: 0.6825122 best: 0.6825122 (513)
514: learn: 0.6824704 test: 0.6824909 best: 0.6824909 (514)
515: learn: 0.6824491 test: 0.6824697 best: 0.6824697 (515)
516: learn: 0.6824267 test: 0.6824473 best: 0.6824473 (516)
517: learn: 0.6824071 test: 0.6824278 best: 0.6824278 (517)
518: learn: 0.6823867 test: 0.6824073 best: 0.6824073 (518)
519: learn: 0.6823654 test: 0.6823861 best: 0.6823861 (519)
520: learn: 0.6823438 test: 0.6823644 best: 0.6823644 (520)
521: learn: 0.6823237 test: 0.6823443 best: 0.6823443 (521)
522: learn: 0.6823030 test: 0.6823236 best: 0.6823236 (522)
523: learn: 0.6822829 test: 0.6823034 best: 0.6823034 (523)
524: learn: 0.6822616 test: 0.6822822 best: 0.6822822 (524)
525: learn: 0.6822406 test: 0.6822613 best: 0.6822613 (525)
526: learn: 0.6822209 test: 0.6822416 best: 0.6822416 (526)
527: learn: 0.6821996 test: 0.6822204 best: 0.6822204 (527)
528: learn: 0.6821804 test: 0.6822011 best: 0.6822011 (528)
529: learn: 0.6821595 test: 0.6821803 best: 0.6821803 (529)
530: learn: 0.6821391 test: 0.6821599 best: 0.6821599 (530)
531: learn: 0.6821174 test: 0.6821383 best: 0.6821383 (531)
532: learn: 0.6820973 test: 0.6821181 best: 0.6821181 (532)
533: learn: 0.6820757 test: 0.6820967 best: 0.6820967 (533)
534: learn: 0.6820560 test: 0.6820770 best: 0.6820770 (534)
535: learn: 0.6820358 test: 0.6820570 best: 0.6820570 (535)
536: learn: 0.6820163 test: 0.6820375 best: 0.6820375 (536)
537: learn: 0.6819953 test: 0.6820166 best: 0.6820166 (537)
538: learn: 0.6819747 test: 0.6819961 best: 0.6819961 (538)
539: learn: 0.6819531 test: 0.6819745 best: 0.6819745 (539)
540: learn: 0.6819312 test: 0.6819525 best: 0.6819525 (540)
541: learn: 0.6819099 test: 0.6819314 best: 0.6819314 (541)
542: learn: 0.6818894 test: 0.6819108 best: 0.6819108 (542)
543: learn: 0.6818690 test: 0.6818904 best: 0.6818904 (543)
544: learn: 0.6818486 test: 0.6818700 best: 0.6818700 (544)
545: learn: 0.6818272 test: 0.6818485 best: 0.6818485 (545)
546: learn: 0.6818063 test: 0.6818277 best: 0.6818277 (546)
547: learn: 0.6817864 test: 0.6818078 best: 0.6818078 (547)
548: learn: 0.6817649 test: 0.6817864 best: 0.6817864 (548)
549: learn: 0.6817449 test: 0.6817664 best: 0.6817664 (549)
550: learn: 0.6817254 test: 0.6817470 best: 0.6817470 (550)
551: learn: 0.6817039 test: 0.6817254 best: 0.6817254 (551)
552: learn: 0.6816825 test: 0.6817042 best: 0.6817042 (552)
553: learn: 0.6816609 test: 0.6816826 best: 0.6816826 (553)
554: learn: 0.6816403 test: 0.6816620 best: 0.6816620 (554)
555: learn: 0.6816183 test: 0.6816401 best: 0.6816401 (555)
556: learn: 0.6815979 test: 0.6816197 best: 0.6816197 (556)
557: learn: 0.6815772 test: 0.6815991 best: 0.6815991 (557)
558: learn: 0.6815564 test: 0.6815784 best: 0.6815784 (558)
559: learn: 0.6815367 test: 0.6815587 best: 0.6815587 (559)
560: learn: 0.6815169 test: 0.6815390 best: 0.6815390 (560)
561: learn: 0.6814966 test: 0.6815189 best: 0.6815189 (561)
562: learn: 0.6814765 test: 0.6814989 best: 0.6814989 (562)
563: learn: 0.6814563 test: 0.6814786 best: 0.6814786 (563)
564: learn: 0.6814380 test: 0.6814604 best: 0.6814604 (564)
565: learn: 0.6814161 test: 0.6814385 best: 0.6814385 (565)
566: learn: 0.6813954 test: 0.6814179 best: 0.6814179 (566)
567: learn: 0.6813738 test: 0.6813964 best: 0.6813964 (567)
568: learn: 0.6813534 test: 0.6813760 best: 0.6813760 (568)
569: learn: 0.6813334 test: 0.6813560 best: 0.6813560 (569)
570: learn: 0.6813122 test: 0.6813347 best: 0.6813347 (570)
571: learn: 0.6812904 test: 0.6813129 best: 0.6813129 (571)
572: learn: 0.6812697 test: 0.6812923 best: 0.6812923 (572)
573: learn: 0.6812485 test: 0.6812711 best: 0.6812711 (573)
574: learn: 0.6812280 test: 0.6812506 best: 0.6812506 (574)
575: learn: 0.6812070 test: 0.6812296 best: 0.6812296 (575)
576: learn: 0.6811859 test: 0.6812086 best: 0.6812086 (576)
```

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576: learn: 0.6811859 test: 0.6812086 best: 0.6812086 (576)
577: learn: 0.6811650 test: 0.6811876 best: 0.6811876 (577)
578: learn: 0.6811435 test: 0.6811661 best: 0.6811661 (578)
579: learn: 0.6811216 test: 0.6811442 best: 0.6811442 (579)
580: learn: 0.6810999 test: 0.6811225 best: 0.6811225 (580)
581: learn: 0.6810798 test: 0.6811024 best: 0.6811024 (581)
582: learn: 0.6810576 test: 0.6810802 best: 0.6810802 (582)
583: learn: 0.6810377 test: 0.6810604 best: 0.6810604 (583)
584: learn: 0.6810166 test: 0.6810393 best: 0.6810393 (584) total: 10s remaining: 7.11s
585: learn: 0.6809967 test: 0.6810195 best: 0.6810195 (585)
586: learn: 0.6809762 test: 0.6809990 best: 0.6809990 (586)
587: learn: 0.6809560 test: 0.6809789 best: 0.6809789 (587)
588: learn: 0.6809338 test: 0.6809568 best: 0.6809568 (588)
589: learn: 0.6809143 test: 0.6809373 best: 0.6809373 (589)
590: learn: 0.6808932 test: 0.6809162 best: 0.6809162 (590)
591: learn: 0.6808726 test: 0.6808955 best: 0.6808955 (591)
592: learn: 0.6808517 test: 0.6808747 best: 0.6808747 (592)
593: learn: 0.6808306 test: 0.6808537 best: 0.6808537 (593)
594: learn: 0.6808097 test: 0.6808328 best: 0.6808328 (594)
595: learn: 0.6807890 test: 0.6808120 best: 0.6808120 (595)
596: learn: 0.6807672 test: 0.6807902 best: 0.6807902 (596)
597: learn: 0.6807468 test: 0.6807698 best: 0.6807698 (597)
598: learn: 0.6807265 test: 0.6807495 best: 0.6807495 (598)
599: learn: 0.6807060 test: 0.6807291 best: 0.6807291 (599)
600: learn: 0.6806854 test: 0.6807087 best: 0.6807087 (600)
601: learn: 0.6806644 test: 0.6806876 best: 0.6806876 (601)
602: learn: 0.6806441 test: 0.6806673 best: 0.6806673 (602)
603: learn: 0.6806241 test: 0.6806474 best: 0.6806474 (603)
604: learn: 0.6806046 test: 0.6806279 best: 0.6806279 (604)
605: learn: 0.6805835 test: 0.6806070 best: 0.6806070 (605)
606: learn: 0.6805634 test: 0.6805869 best: 0.6805869 (606)
607: learn: 0.6805419 test: 0.6805655 best: 0.6805655 (607)
608: learn: 0.6805218 test: 0.6805454 best: 0.6805454 (608)
609: learn: 0.6805019 test: 0.6805255 best: 0.6805255 (609)
610: learn: 0.6804811 test: 0.6805049 best: 0.6805049 (610)
611: learn: 0.6804605 test: 0.6804843 best: 0.6804843 (611)
612: learn: 0.6804396 test: 0.6804635 best: 0.6804635 (612)
613: learn: 0.6804176 test: 0.6804415 best: 0.6804415 (613)
614: learn: 0.6803966 test: 0.6804205 best: 0.6804205 (614)
615: learn: 0.6803762 test: 0.6804001 best: 0.6804001 (615)
616: learn: 0.6803573 test: 0.6803811 best: 0.6803811 (616)
617: learn: 0.6803362 test: 0.6803602 best: 0.6803602 (617)
618: learn: 0.6803172 test: 0.6803412 best: 0.6803412 (618)
619: learn: 0.6802967 test: 0.6803207 best: 0.6803207 (619)
620: learn: 0.6802752 test: 0.6802994 best: 0.6802994 (620)
621: learn: 0.6802543 test: 0.6802785 best: 0.6802785 (621)
622: learn: 0.6802340 test: 0.6802582 best: 0.6802582 (622)
623: learn: 0.6802132 test: 0.6802376 best: 0.6802376 (623)
624: learn: 0.6801925 test: 0.6802169 best: 0.6802169 (624)
625: learn: 0.6801712 test: 0.6801957 best: 0.6801957 (625)
626: learn: 0.6801519 test: 0.6801764 best: 0.6801764 (626)
627: learn: 0.6801313 test: 0.6801559 best: 0.6801559 (627)
628: learn: 0.6801126 test: 0.6801373 best: 0.6801373 (628)
629: learn: 0.6800927 test: 0.6801174 best: 0.6801174 (629)
630: learn: 0.6800721 test: 0.6800967 best: 0.6800967 (630)
631: learn: 0.6800517 test: 0.6800763 best: 0.6800763 (631)
632: learn: 0.6800323 test: 0.6800571 best: 0.6800571 (632)
633: learn: 0.6800121 test: 0.6800369 best: 0.6800369 (633)
634: learn: 0.6799919 test: 0.6800167 best: 0.6800167 (634)
635: learn: 0.6799708 test: 0.6799956 best: 0.6799956 (635)
636: learn: 0.6799503 test: 0.6799751 best: 0.6799751 (636)
637: learn: 0.6799290 test: 0.6799540 best: 0.6799540 (637)
638: learn: 0.6799071 test: 0.6799321 best: 0.6799321 (638)
639: learn: 0.6798871 test: 0.6799122 best: 0.6799122 (639)
640: learn: 0.6798665 test: 0.6798916 best: 0.6798916 (640)
641: learn: 0.6798462 test: 0.6798714 best: 0.6798714 (641)
642: learn: 0.6798246 test: 0.6798497 best: 0.6798497 (642)
643: learn: 0.6798053 test: 0.6798305 best: 0.6798305 (643)
644: learn: 0.6797852 test: 0.6798105 best: 0.6798105 (644)
645: learn: 0.6797642 test: 0.6797895 best: 0.6797895 (645)
646: learn: 0.6797444 test: 0.6797696 best: 0.6797696 (646)
647: learn: 0.6797235 test: 0.6797487 best: 0.6797487 (647)
648: learn: 0.6797018 test: 0.6797271 best: 0.6797271 (648)
649: learn: 0.6796817 test: 0.6797071 best: 0.6797071 (649)
650: learn: 0.6796613 test: 0.6796868 best: 0.6796868 (650)
651: learn: 0.6796420 test: 0.6796676 best: 0.6796676 (651)
652: learn: 0.6796225 test: 0.6796481 best: 0.6796481 (652)
653: learn: 0.6796034 test: 0.6796289 best: 0.6796289 (653)
```

```
653: learn: 0.6796034 test: 0.6796289 best: 0.6796289 (653)
654: learn: 0.6795819 test: 0.6796074 best: 0.6796074 (654)
655: learn: 0.6795605 test: 0.6795862 best: 0.6795862 (655)
656: learn: 0.6795408 test: 0.6795665 best: 0.6795665 (656)
657: learn: 0.6795203 test: 0.6795461 best: 0.6795461 (657)
658: learn: 0.6795002 test: 0.6795259 best: 0.6795259 (658)
659: learn: 0.6794784 test: 0.6795042 best: 0.6795042 (659)
660: learn: 0.6794578 test: 0.6794837 best: 0.6794837 (660)
661: learn: 0.6794367 test: 0.6794627 best: 0.6794627 (661)
662: learn: 0.6794153 test: 0.6794413 best: 0.6794413 (662)
663: learn: 0.6793956 test: 0.6794217 best: 0.6794217 (663)
664: learn: 0.6793748 test: 0.6794009 best: 0.6794009 (664)
665: learn: 0.6793545 test: 0.6793805 best: 0.6793805 (665)
666: learn: 0.6793327 test: 0.6793587 best: 0.6793587 (666)
667: learn: 0.6793134 test: 0.6793395 best: 0.6793395 (667)
668: learn: 0.6792924 test: 0.6793185 best: 0.6793185 (668)
669: learn: 0.6792731 test: 0.6792992 best: 0.6792992 (669)
670: learn: 0.6792533 test: 0.6792795 best: 0.6792795 (670)
671: learn: 0.6792333 test: 0.6792595 best: 0.6792595 (671)  total: 11.6s remaining: 5.64s
672: learn: 0.6792129 test: 0.6792391 best: 0.6792391 (672)
673: learn: 0.6791930 test: 0.6792193 best: 0.6792193 (673)
674: learn: 0.6791727 test: 0.6791991 best: 0.6791991 (674)
675: learn: 0.6791539 test: 0.6791803 best: 0.6791803 (675)
676: learn: 0.6791343 test: 0.6791607 best: 0.6791607 (676)
677: learn: 0.6791130 test: 0.6791393 best: 0.6791393 (677)
678: learn: 0.6790944 test: 0.6791207 best: 0.6791207 (678)
679: learn: 0.6790732 test: 0.6790996 best: 0.6790996 (679)
680: learn: 0.6790534 test: 0.6790798 best: 0.6790798 (680)
681: learn: 0.6790330 test: 0.6790595 best: 0.6790595 (681)
682: learn: 0.6790118 test: 0.6790384 best: 0.6790384 (682)
683: learn: 0.6789901 test: 0.6790165 best: 0.6790165 (683)
684: learn: 0.6789708 test: 0.6789973 best: 0.6789973 (684)
685: learn: 0.6789496 test: 0.6789760 best: 0.6789760 (685)
686: learn: 0.6789277 test: 0.6789542 best: 0.6789542 (686)
687: learn: 0.6789065 test: 0.6789330 best: 0.6789330 (687)
688: learn: 0.6788855 test: 0.6789121 best: 0.6789121 (688)
689: learn: 0.6788648 test: 0.6788915 best: 0.6788915 (689)
690: learn: 0.6788426 test: 0.6788694 best: 0.6788694 (690)
691: learn: 0.6788217 test: 0.6788485 best: 0.6788485 (691)
692: learn: 0.6788023 test: 0.6788291 best: 0.6788291 (692)
693: learn: 0.6787805 test: 0.6788074 best: 0.6788074 (693)
694: learn: 0.6787589 test: 0.6787859 best: 0.6787859 (694)
695: learn: 0.6787377 test: 0.6787648 best: 0.6787648 (695)
696: learn: 0.6787171 test: 0.6787441 best: 0.6787441 (696)
697: learn: 0.6786970 test: 0.6787241 best: 0.6787241 (697)
698: learn: 0.6786776 test: 0.6787046 best: 0.6787046 (698)
699: learn: 0.6786579 test: 0.6786849 best: 0.6786849 (699)
700: learn: 0.6786373 test: 0.6786645 best: 0.6786645 (700)
701: learn: 0.6786179 test: 0.6786451 best: 0.6786451 (701)
702: learn: 0.6785965 test: 0.6786237 best: 0.6786237 (702)
703: learn: 0.6785761 test: 0.6786033 best: 0.6786033 (703)
704: learn: 0.6785563 test: 0.6785835 best: 0.6785835 (704)
705: learn: 0.6785359 test: 0.6785632 best: 0.6785632 (705)
706: learn: 0.6785156 test: 0.6785430 best: 0.6785430 (706)
707: learn: 0.6784955 test: 0.6785229 best: 0.6785229 (707)
708: learn: 0.6784745 test: 0.6785020 best: 0.6785020 (708)
709: learn: 0.6784546 test: 0.6784821 best: 0.6784821 (709)
710: learn: 0.6784359 test: 0.6784634 best: 0.6784634 (710)
711: learn: 0.6784150 test: 0.6784426 best: 0.6784426 (711)
712: learn: 0.6783932 test: 0.6784207 best: 0.6784207 (712)
713: learn: 0.6783727 test: 0.6784002 best: 0.6784002 (713)
714: learn: 0.6783531 test: 0.6783807 best: 0.6783807 (714)
715: learn: 0.6783321 test: 0.6783597 best: 0.6783597 (715)
716: learn: 0.6783117 test: 0.6783393 best: 0.6783393 (716)
717: learn: 0.6782910 test: 0.6783186 best: 0.6783186 (717)
718: learn: 0.6782707 test: 0.6782983 best: 0.6782983 (718)
719: learn: 0.6782506 test: 0.6782782 best: 0.6782782 (719)
720: learn: 0.6782296 test: 0.6782572 best: 0.6782572 (720)
721: learn: 0.6782096 test: 0.6782373 best: 0.6782373 (721)
722: learn: 0.6781897 test: 0.6782174 best: 0.6782174 (722)
723: learn: 0.6781688 test: 0.6781966 best: 0.6781966 (723)
724: learn: 0.6781492 test: 0.6781770 best: 0.6781770 (724)
725: learn: 0.6781290 test: 0.6781569 best: 0.6781569 (725)
726: learn: 0.6781084 test: 0.6781363 best: 0.6781363 (726)
727: learn: 0.6780896 test: 0.6781176 best: 0.6781176 (727)
728: learn: 0.6780692 test: 0.6780972 best: 0.6780972 (728)
729: learn: 0.6780490 test: 0.6780770 best: 0.6780770 (729)
730: learn: 0.6780284 test: 0.6780564 best: 0.6780564 (730)
```

```
730: learn: 0.6780284 test: 0.6780564 best: 0.6780564 (730)
731: learn: 0.6780081 test: 0.6780363 best: 0.6780363 (731)
732: learn: 0.6779876 test: 0.6780158 best: 0.6780158 (732)
733: learn: 0.6779673 test: 0.6779955 best: 0.6779955 (733)
734: learn: 0.6779477 test: 0.6779760 best: 0.6779760 (734)
735: learn: 0.6779261 test: 0.6779545 best: 0.6779545 (735)
736: learn: 0.6779060 test: 0.6779344 best: 0.6779344 (736)
737: learn: 0.6778859 test: 0.6779143 best: 0.6779143 (737)
738: learn: 0.6778652 test: 0.6778936 best: 0.6778936 (738)
739: learn: 0.6778452 test: 0.6778737 best: 0.6778737 (739)
740: learn: 0.6778239 test: 0.6778524 best: 0.6778524 (740)
741: learn: 0.6778030 test: 0.6778314 best: 0.6778314 (741)
742: learn: 0.6777834 test: 0.6778119 best: 0.6778119 (742)
743: learn: 0.6777615 test: 0.6777899 best: 0.6777899 (743)
744: learn: 0.6777412 test: 0.6777698 best: 0.6777698 (744)
745: learn: 0.6777198 test: 0.6777483 best: 0.6777483 (745)
746: learn: 0.6776998 test: 0.6777284 best: 0.6777284 (746)
747: learn: 0.6776806 test: 0.6777092 best: 0.6777092 (747)
748: learn: 0.6776601 test: 0.6776887 best: 0.6776887 (748)
749: learn: 0.6776392 test: 0.6776679 best: 0.6776679 (749)
750: learn: 0.6776183 test: 0.6776469 best: 0.6776469 (750)
751: learn: 0.6775978 test: 0.6776264 best: 0.6776264 (751)   total: 13s remaining: 4.27s
752: learn: 0.6775786 test: 0.6776072 best: 0.6776072 (752)
753: learn: 0.6775579 test: 0.6775865 best: 0.6775865 (753)
754: learn: 0.6775376 test: 0.6775663 best: 0.6775663 (754)
755: learn: 0.6775160 test: 0.6775447 best: 0.6775447 (755)
756: learn: 0.6774959 test: 0.6775246 best: 0.6775246 (756)
757: learn: 0.6774746 test: 0.6775032 best: 0.6775032 (757)
758: learn: 0.6774553 test: 0.6774841 best: 0.6774841 (758)
759: learn: 0.6774340 test: 0.6774628 best: 0.6774628 (759)
760: learn: 0.6774136 test: 0.6774425 best: 0.6774425 (760)
761: learn: 0.6773935 test: 0.6774224 best: 0.6774224 (761)
762: learn: 0.6773719 test: 0.6774008 best: 0.6774008 (762)
763: learn: 0.6773532 test: 0.6773822 best: 0.6773822 (763)
764: learn: 0.6773336 test: 0.6773626 best: 0.6773626 (764)
765: learn: 0.6773148 test: 0.6773438 best: 0.6773438 (765)
766: learn: 0.6772951 test: 0.6773242 best: 0.6773242 (766)
767: learn: 0.6772752 test: 0.6773043 best: 0.6773043 (767)
768: learn: 0.6772532 test: 0.6772823 best: 0.6772823 (768)
769: learn: 0.6772327 test: 0.6772619 best: 0.6772619 (769)
770: learn: 0.6772139 test: 0.6772432 best: 0.6772432 (770)
771: learn: 0.6771927 test: 0.6772222 best: 0.6772222 (771)
772: learn: 0.6771714 test: 0.6772008 best: 0.6772008 (772)
773: learn: 0.6771516 test: 0.6771810 best: 0.6771810 (773)
774: learn: 0.6771307 test: 0.6771601 best: 0.6771601 (774)
775: learn: 0.6771102 test: 0.6771396 best: 0.6771396 (775)
776: learn: 0.6770894 test: 0.6771188 best: 0.6771188 (776)
777: learn: 0.6770688 test: 0.6770984 best: 0.6770984 (777)
778: learn: 0.6770483 test: 0.6770779 best: 0.6770779 (778)
779: learn: 0.6770287 test: 0.6770584 best: 0.6770584 (779)
780: learn: 0.6770076 test: 0.6770373 best: 0.6770373 (780)
781: learn: 0.6769870 test: 0.6770167 best: 0.6770167 (781)
782: learn: 0.6769670 test: 0.6769968 best: 0.6769968 (782)
783: learn: 0.6769468 test: 0.6769767 best: 0.6769767 (783)
784: learn: 0.6769272 test: 0.6769571 best: 0.6769571 (784)
785: learn: 0.6769064 test: 0.6769364 best: 0.6769364 (785)
786: learn: 0.6768868 test: 0.6769168 best: 0.6769168 (786)
787: learn: 0.6768659 test: 0.6768960 best: 0.6768960 (787)
788: learn: 0.6768448 test: 0.6768749 best: 0.6768749 (788)
789: learn: 0.6768258 test: 0.6768558 best: 0.6768558 (789)
790: learn: 0.6768040 test: 0.6768340 best: 0.6768340 (790)
791: learn: 0.6767831 test: 0.6768132 best: 0.6768132 (791)
792: learn: 0.6767635 test: 0.6767936 best: 0.6767936 (792)
793: learn: 0.6767428 test: 0.6767730 best: 0.6767730 (793)
794: learn: 0.6767220 test: 0.6767521 best: 0.6767521 (794)
795: learn: 0.6767020 test: 0.6767321 best: 0.6767321 (795)
796: learn: 0.6766805 test: 0.6767107 best: 0.6767107 (796)
797: learn: 0.6766606 test: 0.6766908 best: 0.6766908 (797)
798: learn: 0.6766392 test: 0.6766693 best: 0.6766693 (798)
799: learn: 0.6766183 test: 0.6766483 best: 0.6766483 (799)
800: learn: 0.6765990 test: 0.6766291 best: 0.6766291 (800)
801: learn: 0.6765778 test: 0.6766079 best: 0.6766079 (801)
802: learn: 0.6765568 test: 0.6765869 best: 0.6765869 (802)
803: learn: 0.6765361 test: 0.6765661 best: 0.6765661 (803)
804: learn: 0.6765168 test: 0.6765469 best: 0.6765469 (804)
805: learn: 0.6764961 test: 0.6765263 best: 0.6765263 (805)
806: learn: 0.6764754 test: 0.6765056 best: 0.6765056 (806)
807: learn: 0.6764543 test: 0.6764844 best: 0.6764844 (807)
```

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807: learn: 0.6764542 test: 0.6764844 best: 0.6764844 (807)
808: learn: 0.6764340 test: 0.6764643 best: 0.6764643 (808)
809: learn: 0.6764129 test: 0.6764432 best: 0.6764432 (809)
810: learn: 0.6763920 test: 0.6764224 best: 0.6764224 (810)
811: learn: 0.6763720 test: 0.6764025 best: 0.6764025 (811)
812: learn: 0.6763514 test: 0.6763818 best: 0.6763818 (812)
813: learn: 0.6763295 test: 0.6763601 best: 0.6763601 (813)
814: learn: 0.6763083 test: 0.6763389 best: 0.6763389 (814)
815: learn: 0.6762878 test: 0.6763184 best: 0.6763184 (815)
816: learn: 0.6762678 test: 0.6762984 best: 0.6762984 (816)
817: learn: 0.6762472 test: 0.6762779 best: 0.6762779 (817)
818: learn: 0.6762266 test: 0.6762573 best: 0.6762573 (818)
819: learn: 0.6762053 test: 0.6762360 best: 0.6762360 (819)
820: learn: 0.6761853 test: 0.6762161 best: 0.6762161 (820)
821: learn: 0.6761641 test: 0.6761950 best: 0.6761950 (821)
822: learn: 0.6761438 test: 0.6761745 best: 0.6761745 (822)
823: learn: 0.6761250 test: 0.6761558 best: 0.6761558 (823)
824: learn: 0.6761049 test: 0.6761357 best: 0.6761357 (824)
825: learn: 0.6760845 test: 0.6761152 best: 0.6761152 (825)
826: learn: 0.6760642 test: 0.6760950 best: 0.6760950 (826)
827: learn: 0.6760436 test: 0.6760745 best: 0.6760745 (827)
828: learn: 0.6760235 test: 0.6760544 best: 0.6760544 (828)
829: learn: 0.6760029 test: 0.6760339 best: 0.6760339 (829)
830: learn: 0.6759817 test: 0.6760127 best: 0.6760127 (830)
831: learn: 0.6759619 test: 0.6759929 best: 0.6759929 (831)
832: learn: 0.6759416 test: 0.6759726 best: 0.6759726 (832)
833: learn: 0.6759218 test: 0.6759528 best: 0.6759528 (833)
834: learn: 0.6759015 test: 0.6759326 best: 0.6759326 (834)
835: learn: 0.6758808 test: 0.6759119 best: 0.6759119 (835)
836: learn: 0.6758607 test: 0.6758919 best: 0.6758919 (836)
837: learn: 0.6758397 test: 0.6758710 best: 0.6758710 (837)
838: learn: 0.6758193 test: 0.6758505 best: 0.6758505 (838)
839: learn: 0.6757984 test: 0.6758297 best: 0.6758297 (839) total: 14.4s remaining: 2.75s
840: learn: 0.6757786 test: 0.6758100 best: 0.6758100 (840)
841: learn: 0.6757582 test: 0.6757896 best: 0.6757896 (841)
842: learn: 0.6757383 test: 0.6757697 best: 0.6757697 (842)
843: learn: 0.6757172 test: 0.6757486 best: 0.6757486 (843)
844: learn: 0.6756970 test: 0.6757285 best: 0.6757285 (844)
845: learn: 0.6756762 test: 0.6757078 best: 0.6757078 (845)
846: learn: 0.6756558 test: 0.6756874 best: 0.6756874 (846)
847: learn: 0.6756360 test: 0.6756675 best: 0.6756675 (847)
848: learn: 0.6756150 test: 0.6756464 best: 0.6756464 (848)
849: learn: 0.6755929 test: 0.6756244 best: 0.6756244 (849)
850: learn: 0.6755713 test: 0.6756028 best: 0.6756028 (850)
851: learn: 0.6755513 test: 0.6755829 best: 0.6755829 (851)
852: learn: 0.6755301 test: 0.6755619 best: 0.6755619 (852)
853: learn: 0.6755093 test: 0.6755410 best: 0.6755410 (853)
854: learn: 0.6754880 test: 0.6755198 best: 0.6755198 (854)
855: learn: 0.6754680 test: 0.6754998 best: 0.6754998 (855)
856: learn: 0.6754476 test: 0.6754795 best: 0.6754795 (856)
857: learn: 0.6754259 test: 0.6754577 best: 0.6754577 (857)
858: learn: 0.6754059 test: 0.6754379 best: 0.6754379 (858)
859: learn: 0.6753853 test: 0.6754172 best: 0.6754172 (859)
860: learn: 0.6753647 test: 0.6753967 best: 0.6753967 (860)
861: learn: 0.6753443 test: 0.6753762 best: 0.6753762 (861)
862: learn: 0.6753237 test: 0.6753557 best: 0.6753557 (862)
863: learn: 0.6753028 test: 0.6753349 best: 0.6753349 (863)
864: learn: 0.6752808 test: 0.6753129 best: 0.6753129 (864)
865: learn: 0.6752613 test: 0.6752934 best: 0.6752934 (865)
866: learn: 0.6752405 test: 0.6752727 best: 0.6752727 (866)
867: learn: 0.6752199 test: 0.6752522 best: 0.6752522 (867)
868: learn: 0.6751991 test: 0.6752314 best: 0.6752314 (868)
869: learn: 0.6751801 test: 0.6752124 best: 0.6752124 (869)
870: learn: 0.6751606 test: 0.6751929 best: 0.6751929 (870)
871: learn: 0.6751395 test: 0.6751719 best: 0.6751719 (871)
872: learn: 0.6751203 test: 0.6751527 best: 0.6751527 (872)
873: learn: 0.6750992 test: 0.6751316 best: 0.6751316 (873)
874: learn: 0.6750776 test: 0.6751099 best: 0.6751099 (874)
875: learn: 0.6750568 test: 0.6750892 best: 0.6750892 (875)
876: learn: 0.6750362 test: 0.6750686 best: 0.6750686 (876)
877: learn: 0.6750154 test: 0.6750479 best: 0.6750479 (877)
878: learn: 0.6749955 test: 0.6750280 best: 0.6750280 (878)
879: learn: 0.6749747 test: 0.6750073 best: 0.6750073 (879)
880: learn: 0.6749543 test: 0.6749869 best: 0.6749869 (880)
881: learn: 0.6749337 test: 0.6749663 best: 0.6749663 (881)
882: learn: 0.6749129 test: 0.6749456 best: 0.6749456 (882)
883: learn: 0.6748916 test: 0.6749243 best: 0.6749243 (883)
```

```
884: learn: 0.6748715 test: 0.6749043 best: 0.6749043 (884)
885: learn: 0.6748519 test: 0.6748848 best: 0.6748848 (885)
886: learn: 0.6748310 test: 0.6748639 best: 0.6748639 (886)
887: learn: 0.6748119 test: 0.6748448 best: 0.6748448 (887)
888: learn: 0.6747909 test: 0.6748239 best: 0.6748239 (888)
889: learn: 0.6747710 test: 0.6748039 best: 0.6748039 (889)
890: learn: 0.6747496 test: 0.6747825 best: 0.6747825 (890)
891: learn: 0.6747290 test: 0.6747620 best: 0.6747620 (891)
892: learn: 0.6747081 test: 0.6747412 best: 0.6747412 (892)
893: learn: 0.6746873 test: 0.6747203 best: 0.6747203 (893)
894: learn: 0.6746672 test: 0.6747003 best: 0.6747003 (894)
895: learn: 0.6746467 test: 0.6746797 best: 0.6746797 (895)
896: learn: 0.6746270 test: 0.6746601 best: 0.6746601 (896)
897: learn: 0.6746059 test: 0.6746391 best: 0.6746391 (897)
898: learn: 0.6745857 test: 0.6746189 best: 0.6746189 (898)
899: learn: 0.6745654 test: 0.6745986 best: 0.6745986 (899)
900: learn: 0.6745450 test: 0.6745782 best: 0.6745782 (900)
901: learn: 0.6745251 test: 0.6745583 best: 0.6745583 (901)
902: learn: 0.6745050 test: 0.6745383 best: 0.6745383 (902)
903: learn: 0.6744842 test: 0.6745176 best: 0.6745176 (903)
904: learn: 0.6744641 test: 0.6744975 best: 0.6744975 (904)
905: learn: 0.6744440 test: 0.6744775 best: 0.6744775 (905)
906: learn: 0.6744237 test: 0.6744573 best: 0.6744573 (906)
907: learn: 0.6744039 test: 0.6744375 best: 0.6744375 (907)
908: learn: 0.6743835 test: 0.6744171 best: 0.6744171 (908)
909: learn: 0.6743623 test: 0.6743958 best: 0.6743958 (909)
910: learn: 0.6743409 test: 0.6743745 best: 0.6743745 (910)
911: learn: 0.6743212 test: 0.6743549 best: 0.6743549 (911)
912: learn: 0.6743004 test: 0.6743341 best: 0.6743341 (912)
913: learn: 0.6742805 test: 0.6743142 best: 0.6743142 (913)
914: learn: 0.6742608 test: 0.6742946 best: 0.6742946 (914)
915: learn: 0.6742406 test: 0.6742743 best: 0.6742743 (915)
916: learn: 0.6742208 test: 0.6742545 best: 0.6742545 (916)
917: learn: 0.6742004 test: 0.6742343 best: 0.6742343 (917)
918: learn: 0.6741823 test: 0.6742162 best: 0.6742162 (918)
919: learn: 0.6741614 test: 0.6741953 best: 0.6741953 (919)
920: learn: 0.6741413 test: 0.6741753 best: 0.6741753 (920)
921: learn: 0.6741207 test: 0.6741548 best: 0.6741548 (921)
922: learn: 0.6741000 test: 0.6741342 best: 0.6741342 (922)
923: learn: 0.6740806 test: 0.6741148 best: 0.6741148 (923)
924: learn: 0.6740612 test: 0.6740954 best: 0.6740954 (924)
925: learn: 0.6740407 test: 0.6740749 best: 0.6740749 (925)
926: learn: 0.6740197 test: 0.6740538 best: 0.6740538 (926)
927: learn: 0.6739993 test: 0.6740336 best: 0.6740336 (927) total: 15.9s remaining: 1.23s
928: learn: 0.6739790 test: 0.6740132 best: 0.6740132 (928)
929: learn: 0.6739586 test: 0.6739929 best: 0.6739929 (929)
930: learn: 0.6739376 test: 0.6739720 best: 0.6739720 (930)
931: learn: 0.6739167 test: 0.6739510 best: 0.6739510 (931)
932: learn: 0.6738966 test: 0.6739309 best: 0.6739309 (932)
933: learn: 0.6738773 test: 0.6739117 best: 0.6739117 (933)
934: learn: 0.6738563 test: 0.6738906 best: 0.6738906 (934)
935: learn: 0.6738362 test: 0.6738705 best: 0.6738705 (935)
936: learn: 0.6738154 test: 0.6738498 best: 0.6738498 (936)
937: learn: 0.6737949 test: 0.6738294 best: 0.6738294 (937)
938: learn: 0.6737764 test: 0.6738109 best: 0.6738109 (938)
939: learn: 0.6737566 test: 0.6737912 best: 0.6737912 (939)
940: learn: 0.6737354 test: 0.6737700 best: 0.6737700 (940)
941: learn: 0.6737157 test: 0.6737503 best: 0.6737503 (941)
942: learn: 0.6736954 test: 0.6737300 best: 0.6737300 (942)
943: learn: 0.6736742 test: 0.6737089 best: 0.6737089 (943)
944: learn: 0.6736535 test: 0.6736883 best: 0.6736883 (944)
945: learn: 0.6736327 test: 0.6736675 best: 0.6736675 (945)
946: learn: 0.6736106 test: 0.6736455 best: 0.6736455 (946)
947: learn: 0.6735906 test: 0.6736255 best: 0.6736255 (947)
948: learn: 0.6735706 test: 0.6736056 best: 0.6736056 (948)
949: learn: 0.6735501 test: 0.6735852 best: 0.6735852 (949)
950: learn: 0.6735292 test: 0.6735643 best: 0.6735643 (950)
951: learn: 0.6735087 test: 0.6735437 best: 0.6735437 (951)
952: learn: 0.6734890 test: 0.6735240 best: 0.6735240 (952)
953: learn: 0.6734689 test: 0.6735042 best: 0.6735042 (953)
954: learn: 0.6734490 test: 0.6734842 best: 0.6734842 (954)
955: learn: 0.6734298 test: 0.6734650 best: 0.6734650 (955)
956: learn: 0.6734100 test: 0.6734454 best: 0.6734454 (956)
957: learn: 0.6733893 test: 0.6734248 best: 0.6734248 (957)
958: learn: 0.6733680 test: 0.6734035 best: 0.6734035 (958)
959: learn: 0.6733479 test: 0.6733835 best: 0.6733835 (959)
960: learn: 0.6733279 test: 0.6733634 best: 0.6733634 (960)
```

```
961: learn: 0.6733071 test: 0.6733427 best: 0.6733427 (961)
962: learn: 0.6732861 test: 0.6733216 best: 0.6733216 (962)
963: learn: 0.6732668 test: 0.6733024 best: 0.6733024 (963)
964: learn: 0.6732465 test: 0.6732822 best: 0.6732822 (964)
965: learn: 0.6732264 test: 0.6732620 best: 0.6732620 (965)
966: learn: 0.6732052 test: 0.6732409 best: 0.6732409 (966)
967: learn: 0.6731868 test: 0.6732225 best: 0.6732225 (967)
968: learn: 0.6731654 test: 0.6732011 best: 0.6732011 (968)
969: learn: 0.6731450 test: 0.6731807 best: 0.6731807 (969)
970: learn: 0.6731260 test: 0.6731617 best: 0.6731617 (970)
971: learn: 0.6731061 test: 0.6731419 best: 0.6731419 (971)
972: learn: 0.6730879 test: 0.6731237 best: 0.6731237 (972)
973: learn: 0.6730672 test: 0.6731030 best: 0.6731030 (973)
974: learn: 0.6730468 test: 0.6730826 best: 0.6730826 (974)
975: learn: 0.6730271 test: 0.6730630 best: 0.6730630 (975)
976: learn: 0.6730079 test: 0.6730438 best: 0.6730438 (976)
977: learn: 0.6729880 test: 0.6730239 best: 0.6730239 (977)
978: learn: 0.6729684 test: 0.6730043 best: 0.6730043 (978)
979: learn: 0.6729481 test: 0.6729841 best: 0.6729841 (979)
980: learn: 0.6729267 test: 0.6729629 best: 0.6729629 (980)
981: learn: 0.6729068 test: 0.6729430 best: 0.6729430 (981)
982: learn: 0.6728865 test: 0.6729228 best: 0.6729228 (982)
983: learn: 0.6728676 test: 0.6729040 best: 0.6729040 (983)
984: learn: 0.6728484 test: 0.6728849 best: 0.6728849 (984)
985: learn: 0.6728285 test: 0.6728649 best: 0.6728649 (985)
986: learn: 0.6728076 test: 0.6728441 best: 0.6728441 (986)
987: learn: 0.6727868 test: 0.6728232 best: 0.6728232 (987)
988: learn: 0.6727670 test: 0.6728034 best: 0.6728034 (988)
989: learn: 0.6727468 test: 0.6727831 best: 0.6727831 (989)
990: learn: 0.6727256 test: 0.6727621 best: 0.6727621 (990)
991: learn: 0.6727058 test: 0.6727423 best: 0.6727423 (991)
992: learn: 0.6726855 test: 0.6727219 best: 0.6727219 (992)
993: learn: 0.6726649 test: 0.6727012 best: 0.6727012 (993)
994: learn: 0.6726445 test: 0.6726809 best: 0.6726809 (994)
995: learn: 0.6726242 test: 0.6726607 best: 0.6726607 (995)
996: learn: 0.6726021 test: 0.6726386 best: 0.6726386 (996)
997: learn: 0.6725805 test: 0.6726170 best: 0.6726170 (997)
998: learn: 0.6725595 test: 0.6725960 best: 0.6725960 (998)
999: learn: 0.6725395 test: 0.6725760 best: 0.6725760 (999) total: 17.1s remaining: 0us
0: learn: 0.6929271 test: 0.6929271 best: 0.6929271 (0)
1: learn: 0.6927102 test: 0.6927107 best: 0.6927107 (1)
2: learn: 0.6925132 test: 0.6925145 best: 0.6925145 (2)
3: learn: 0.6923015 test: 0.6923032 best: 0.6923032 (3)
4: learn: 0.6920998 test: 0.6921015 best: 0.6921015 (4)
5: learn: 0.6918782 test: 0.6918802 best: 0.6918802 (5)
6: learn: 0.6916734 test: 0.6916759 best: 0.6916759 (6)
7: learn: 0.6914581 test: 0.6914610 best: 0.6914610 (7)
8: learn: 0.6912492 test: 0.6912522 best: 0.6912522 (8)
9: learn: 0.6910417 test: 0.6910450 best: 0.6910450 (9)
10: learn: 0.6908225 test: 0.6908267 best: 0.6908267 (10)
11: learn: 0.6906125 test: 0.6906172 best: 0.6906172 (11)
12: learn: 0.6904186 test: 0.6904235 best: 0.6904235 (12)
13: learn: 0.6902158 test: 0.6902210 best: 0.6902210 (13)
14: learn: 0.6899927 test: 0.6899987 best: 0.6899987 (14)
15: learn: 0.6897649 test: 0.6897713 best: 0.6897713 (15)
16: learn: 0.6895606 test: 0.6895673 best: 0.6895673 (16)
17: learn: 0.6893521 test: 0.6893591 best: 0.6893591 (17)
18: learn: 0.6891357 test: 0.6891428 best: 0.6891428 (18)
19: learn: 0.6889343 test: 0.6889417 best: 0.6889417 (19)
20: learn: 0.6887294 test: 0.6887371 best: 0.6887371 (20)
21: learn: 0.6885220 test: 0.6885299 best: 0.6885299 (21)
22: learn: 0.6883063 test: 0.6883150 best: 0.6883150 (22)
23: learn: 0.6881013 test: 0.6881105 best: 0.6881105 (23)
24: learn: 0.6879132 test: 0.6879222 best: 0.6879222 (24)
25: learn: 0.6877132 test: 0.6877225 best: 0.6877225 (25)
26: learn: 0.6875134 test: 0.6875228 best: 0.6875228 (26)
27: learn: 0.6873155 test: 0.6873254 best: 0.6873254 (27)
28: learn: 0.6870974 test: 0.6871073 best: 0.6871073 (28)
29: learn: 0.6868974 test: 0.6869078 best: 0.6869078 (29)
30: learn: 0.6866934 test: 0.6867042 best: 0.6867042 (30)
31: learn: 0.6864929 test: 0.6865043 best: 0.6865043 (31)
32: learn: 0.6862737 test: 0.6862854 best: 0.6862854 (32) total: 614ms remaining: 18s
33: learn: 0.6860468 test: 0.6860593 best: 0.6860593 (33)
34: learn: 0.6858518 test: 0.6858644 best: 0.6858644 (34)
35: learn: 0.6856542 test: 0.6856670 best: 0.6856670 (35)
36: learn: 0.6854447 test: 0.6854579 best: 0.6854579 (36)
37: learn: 0.6852493 test: 0.6852627 best: 0.6852627 (37)
```

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38: learn: 0.6850503 test: 0.6850639 best: 0.6850639 (38)
39: learn: 0.6848399 test: 0.6848541 best: 0.6848541 (39)
40: learn: 0.6846203 test: 0.6846347 best: 0.6846347 (40)
41: learn: 0.6844321 test: 0.6844466 best: 0.6844466 (41)
42: learn: 0.6842041 test: 0.6842189 best: 0.6842189 (42)
43: learn: 0.6839886 test: 0.6840035 best: 0.6840035 (43)
44: learn: 0.6837904 test: 0.6838056 best: 0.6838056 (44)
45: learn: 0.6835908 test: 0.6836064 best: 0.6836064 (45)
46: learn: 0.6833755 test: 0.6833915 best: 0.6833915 (46)
47: learn: 0.6831841 test: 0.6832006 best: 0.6832006 (47)
48: learn: 0.6829881 test: 0.6830048 best: 0.6830048 (48)
49: learn: 0.6827867 test: 0.6828041 best: 0.6828041 (49)
50: learn: 0.6825701 test: 0.6825879 best: 0.6825879 (50)
51: learn: 0.6823803 test: 0.6823985 best: 0.6823985 (51)
52: learn: 0.6821771 test: 0.6821959 best: 0.6821959 (52)
53: learn: 0.6819549 test: 0.6819741 best: 0.6819741 (53)
54: learn: 0.6817621 test: 0.6817820 best: 0.6817820 (54)
55: learn: 0.6815640 test: 0.6815844 best: 0.6815844 (55)
56: learn: 0.6813603 test: 0.6813807 best: 0.6813807 (56)
57: learn: 0.6811499 test: 0.6811706 best: 0.6811706 (57)
58: learn: 0.6809421 test: 0.6809624 best: 0.6809624 (58)
59: learn: 0.6807374 test: 0.6807578 best: 0.6807578 (59)
60: learn: 0.6805338 test: 0.6805545 best: 0.6805545 (60)
61: learn: 0.6803388 test: 0.6803598 best: 0.6803598 (61)
62: learn: 0.6801050 test: 0.6801264 best: 0.6801264 (62)
63: learn: 0.6798899 test: 0.6799117 best: 0.6799117 (63)
64: learn: 0.6796773 test: 0.6796995 best: 0.6796995 (64)
65: learn: 0.6794672 test: 0.6794896 best: 0.6794896 (65)
66: learn: 0.6792817 test: 0.6793044 best: 0.6793044 (66)
67: learn: 0.6790740 test: 0.6790972 best: 0.6790972 (67)
68: learn: 0.6788629 test: 0.6788865 best: 0.6788865 (68)
69: learn: 0.6786528 test: 0.6786767 best: 0.6786767 (69)
70: learn: 0.6784552 test: 0.6784798 best: 0.6784798 (70)
71: learn: 0.6782525 test: 0.6782776 best: 0.6782776 (71)
72: learn: 0.6780325 test: 0.6780586 best: 0.6780586 (72)
73: learn: 0.6778301 test: 0.6778563 best: 0.6778563 (73)
74: learn: 0.6776166 test: 0.6776430 best: 0.6776430 (74) total: 1.35s remaining: 16.7s
75: learn: 0.6774054 test: 0.6774322 best: 0.6774322 (75)
76: learn: 0.6772104 test: 0.6772375 best: 0.6772375 (76)
77: learn: 0.6770097 test: 0.6770368 best: 0.6770368 (77)
78: learn: 0.6768091 test: 0.6768367 best: 0.6768367 (78)
79: learn: 0.6766051 test: 0.6766326 best: 0.6766326 (79)
80: learn: 0.6764115 test: 0.6764398 best: 0.6764398 (80)
81: learn: 0.6761946 test: 0.6762238 best: 0.6762238 (81)
82: learn: 0.6760108 test: 0.6760411 best: 0.6760411 (82)
83: learn: 0.6758116 test: 0.6758421 best: 0.6758421 (83)
84: learn: 0.6756208 test: 0.6756514 best: 0.6756514 (84)
85: learn: 0.6754113 test: 0.6754418 best: 0.6754418 (85)
86: learn: 0.6752125 test: 0.6752437 best: 0.6752437 (86)
87: learn: 0.6749939 test: 0.6750255 best: 0.6750255 (87)
88: learn: 0.6747838 test: 0.6748152 best: 0.6748152 (88)
89: learn: 0.6745948 test: 0.6746261 best: 0.6746261 (89)
90: learn: 0.6743795 test: 0.6744110 best: 0.6744110 (90)
91: learn: 0.6741900 test: 0.6742221 best: 0.6742221 (91)
92: learn: 0.6739708 test: 0.6740035 best: 0.6740035 (92)
93: learn: 0.6737664 test: 0.6737993 best: 0.6737993 (93)
94: learn: 0.6735827 test: 0.6736157 best: 0.6736157 (94)
95: learn: 0.6733983 test: 0.6734316 best: 0.6734316 (95)
96: learn: 0.6731910 test: 0.6732251 best: 0.6732251 (96)
97: learn: 0.6730026 test: 0.6730369 best: 0.6730369 (97)
98: learn: 0.6728139 test: 0.6728488 best: 0.6728488 (98)
99: learn: 0.6726158 test: 0.6726514 best: 0.6726514 (99)
100: learn: 0.6724173 test: 0.6724534 best: 0.6724534 (100)
101: learn: 0.6722159 test: 0.6722532 best: 0.6722532 (101)
102: learn: 0.6720373 test: 0.6720748 best: 0.6720748 (102)
103: learn: 0.6718169 test: 0.6718549 best: 0.6718549 (103)
104: learn: 0.6716347 test: 0.6716735 best: 0.6716735 (104)
105: learn: 0.6714329 test: 0.6714720 best: 0.6714720 (105)
106: learn: 0.6712169 test: 0.6712569 best: 0.6712569 (106)
107: learn: 0.6710056 test: 0.6710461 best: 0.6710461 (107)
108: learn: 0.6708070 test: 0.6708480 best: 0.6708480 (108)
109: learn: 0.6706054 test: 0.6706470 best: 0.6706470 (109)
110: learn: 0.6704122 test: 0.6704544 best: 0.6704544 (110)
111: learn: 0.6702225 test: 0.6702649 best: 0.6702649 (111)
112: learn: 0.6700284 test: 0.6700699 best: 0.6700699 (112)
113: learn: 0.6698260 test: 0.6698678 best: 0.6698678 (113)
114: learn: 0.6696243 test: 0.6696665 best: 0.6696665 (114)
```

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115: learn: 0.6694257 test: 0.6694682 best: 0.6694682 (115)
116: learn: 0.6692188 test: 0.6692619 best: 0.6692619 (116)
117: learn: 0.6690262 test: 0.6690697 best: 0.6690697 (117)
118: learn: 0.6688115 test: 0.6688554 best: 0.6688554 (118)
119: learn: 0.6686058 test: 0.6686500 best: 0.6686500 (119)
120: learn: 0.6684190 test: 0.6684637 best: 0.6684637 (120)
121: learn: 0.6682210 test: 0.6682661 best: 0.6682661 (121)
122: learn: 0.6680076 test: 0.6680530 best: 0.6680530 (122)
123: learn: 0.6678069 test: 0.6678526 best: 0.6678526 (123)
124: learn: 0.6676158 test: 0.6676618 best: 0.6676618 (124)
125: learn: 0.6674010 test: 0.6674472 best: 0.6674472 (125)
126: learn: 0.6671856 test: 0.6672324 best: 0.6672324 (126)
127: learn: 0.6669669 test: 0.6670140 best: 0.6670140 (127)
128: learn: 0.6667843 test: 0.6668321 best: 0.6668321 (128)
129: learn: 0.6665759 test: 0.6666243 best: 0.6666243 (129)
130: learn: 0.6663660 test: 0.6664145 best: 0.6664145 (130)
131: learn: 0.6661728 test: 0.6662213 best: 0.6662213 (131)
132: learn: 0.6659739 test: 0.6660233 best: 0.6660233 (132)
133: learn: 0.6657741 test: 0.6658238 best: 0.6658238 (133)
134: learn: 0.6655711 test: 0.6656212 best: 0.6656212 (134)
135: learn: 0.6653564 test: 0.6654062 best: 0.6654062 (135)
136: learn: 0.6651654 test: 0.6652157 best: 0.6652157 (136)
137: learn: 0.6649909 test: 0.6650416 best: 0.6650416 (137)
138: learn: 0.6648013 test: 0.6648523 best: 0.6648523 (138)
139: learn: 0.6646005 test: 0.6646517 best: 0.6646517 (139)
140: learn: 0.6643881 test: 0.6644396 best: 0.6644396 (140)
141: learn: 0.6641947 test: 0.6642474 best: 0.6642474 (141)
142: learn: 0.6639916 test: 0.6640450 best: 0.6640450 (142)
143: learn: 0.6637772 test: 0.6638309 best: 0.6638309 (143)
144: learn: 0.6635963 test: 0.6636502 best: 0.6636502 (144)
145: learn: 0.6634047 test: 0.6634590 best: 0.6634590 (145)
146: learn: 0.6631998 test: 0.6632545 best: 0.6632545 (146)
147: learn: 0.6629962 test: 0.6630511 best: 0.6630511 (147)
148: learn: 0.6627893 test: 0.6628443 best: 0.6628443 (148)
149: learn: 0.6625867 test: 0.6626419 best: 0.6626419 (149)
150: learn: 0.6623922 test: 0.6624477 best: 0.6624477 (150)
151: learn: 0.6622056 test: 0.6622614 best: 0.6622614 (151)
152: learn: 0.6620014 test: 0.6620577 best: 0.6620577 (152)
153: learn: 0.6618120 test: 0.6618688 best: 0.6618688 (153)
154: learn: 0.6616236 test: 0.6616807 best: 0.6616807 (154)
155: learn: 0.6614369 test: 0.6614945 best: 0.6614945 (155)
156: learn: 0.6612486 test: 0.6613063 best: 0.6613063 (156)
157: learn: 0.6610465 test: 0.6611047 best: 0.6611047 (157)
158: learn: 0.6608517 test: 0.6609100 best: 0.6609100 (158)
159: learn: 0.6606460 test: 0.6607045 best: 0.6607045 (159)
160: learn: 0.6604334 test: 0.6604923 best: 0.6604923 (160) total: 2.83s remaining: 14.7s
161: learn: 0.6602269 test: 0.6602866 best: 0.6602866 (161)
162: learn: 0.6600405 test: 0.6601004 best: 0.6601004 (162)
163: learn: 0.6598341 test: 0.6598954 best: 0.6598954 (163)
164: learn: 0.6596371 test: 0.6596987 best: 0.6596987 (164)
165: learn: 0.6594436 test: 0.6595057 best: 0.6595057 (165)
166: learn: 0.6592616 test: 0.6593240 best: 0.6593240 (166)
167: learn: 0.6590598 test: 0.6591226 best: 0.6591226 (167)
168: learn: 0.6588618 test: 0.6589248 best: 0.6589248 (168)
169: learn: 0.6586564 test: 0.6587197 best: 0.6587197 (169)
170: learn: 0.6584633 test: 0.6585263 best: 0.6585263 (170)
171: learn: 0.6582543 test: 0.6583176 best: 0.6583176 (171)
172: learn: 0.6580676 test: 0.6581312 best: 0.6581312 (172)
173: learn: 0.6578593 test: 0.6579226 best: 0.6579226 (173)
174: learn: 0.6576590 test: 0.6577227 best: 0.6577227 (174)
175: learn: 0.6574721 test: 0.6575361 best: 0.6575361 (175)
176: learn: 0.6572650 test: 0.6573294 best: 0.6573294 (176)
177: learn: 0.6570698 test: 0.6571345 best: 0.6571345 (177)
178: learn: 0.6568523 test: 0.6569172 best: 0.6569172 (178)
179: learn: 0.6566703 test: 0.6567355 best: 0.6567355 (179)
180: learn: 0.6564668 test: 0.6565329 best: 0.6565329 (180)
181: learn: 0.6562710 test: 0.6563378 best: 0.6563378 (181)
182: learn: 0.6560840 test: 0.6561510 best: 0.6561510 (182)
183: learn: 0.6558894 test: 0.6559570 best: 0.6559570 (183) total: 3.26s remaining: 14.4s
184: learn: 0.6557007 test: 0.6557690 best: 0.6557690 (184)
185: learn: 0.6555018 test: 0.6555704 best: 0.6555704 (185)
186: learn: 0.6553145 test: 0.6553836 best: 0.6553836 (186)
187: learn: 0.6551252 test: 0.6551946 best: 0.6551946 (187)
188: learn: 0.6549327 test: 0.6550025 best: 0.6550025 (188)
189: learn: 0.6547486 test: 0.6548189 best: 0.6548189 (189)
190: learn: 0.6545625 test: 0.6546322 best: 0.6546322 (190)
191: learn: 0.6543700 test: 0.6544401 best: 0.6544401 (191)
```

```
192: learn: 0.6541722 test: 0.6542431 best: 0.6542431 (192)
193: learn: 0.6539828 test: 0.6540541 best: 0.6540541 (193)
194: learn: 0.6537782 test: 0.6538501 best: 0.6538501 (194)
195: learn: 0.6535924 test: 0.6536647 best: 0.6536647 (195)
196: learn: 0.6534040 test: 0.6534766 best: 0.6534766 (196)
197: learn: 0.6532071 test: 0.6532801 best: 0.6532801 (197)
198: learn: 0.6530121 test: 0.6530853 best: 0.6530853 (198)
199: learn: 0.6528017 test: 0.6528751 best: 0.6528751 (199)
200: learn: 0.6526177 test: 0.6526916 best: 0.6526916 (200)
201: learn: 0.6524091 test: 0.6524832 best: 0.6524832 (201)
202: learn: 0.6522019 test: 0.6522770 best: 0.6522770 (202)
203: learn: 0.6520044 test: 0.6520800 best: 0.6520800 (203)
204: learn: 0.6518165 test: 0.6518923 best: 0.6518923 (204)
205: learn: 0.6516353 test: 0.6517112 best: 0.6517112 (205)
206: learn: 0.6514422 test: 0.6515187 best: 0.6515187 (206)
207: learn: 0.6512303 test: 0.6513070 best: 0.6513070 (207)
208: learn: 0.6510341 test: 0.6511110 best: 0.6511110 (208)
209: learn: 0.6508390 test: 0.6509160 best: 0.6509160 (209)
210: learn: 0.6506446 test: 0.6507219 best: 0.6507219 (210)
211: learn: 0.6504412 test: 0.6505186 best: 0.6505186 (211)
212: learn: 0.6502538 test: 0.6503315 best: 0.6503315 (212)
213: learn: 0.6500613 test: 0.6501397 best: 0.6501397 (213)
214: learn: 0.6498912 test: 0.6499698 best: 0.6499698 (214)
215: learn: 0.6496849 test: 0.6497637 best: 0.6497637 (215)
216: learn: 0.6495015 test: 0.6495805 best: 0.6495805 (216)
217: learn: 0.6492953 test: 0.6493749 best: 0.6493749 (217)
218: learn: 0.6491077 test: 0.6491877 best: 0.6491877 (218)
219: learn: 0.6489078 test: 0.6489881 best: 0.6489881 (219)
220: learn: 0.6487111 test: 0.6487916 best: 0.6487916 (220)
221: learn: 0.6485060 test: 0.6485865 best: 0.6485865 (221)
222: learn: 0.6483152 test: 0.6483960 best: 0.6483960 (222)
223: learn: 0.6481199 test: 0.6482009 best: 0.6482009 (223)
224: learn: 0.6479291 test: 0.6480109 best: 0.6480109 (224)
225: learn: 0.6477407 test: 0.6478226 best: 0.6478226 (225)
226: learn: 0.6475543 test: 0.6476369 best: 0.6476369 (226)
227: learn: 0.6473482 test: 0.6474312 best: 0.6474312 (227)
228: learn: 0.6471497 test: 0.6472327 best: 0.6472327 (228)
229: learn: 0.6469681 test: 0.6470514 best: 0.6470514 (229)
230: learn: 0.6467576 test: 0.6468412 best: 0.6468412 (230)
231: learn: 0.6465723 test: 0.6466559 best: 0.6466559 (231)
232: learn: 0.6463799 test: 0.6464641 best: 0.6464641 (232)
233: learn: 0.6461945 test: 0.6462793 best: 0.6462793 (233)
234: learn: 0.6460095 test: 0.6460943 best: 0.6460943 (234)
235: learn: 0.6458029 test: 0.6458883 best: 0.6458883 (235)
236: learn: 0.6455964 test: 0.6456820 best: 0.6456820 (236)
237: learn: 0.6454144 test: 0.6455001 best: 0.6455001 (237)
238: learn: 0.6452090 test: 0.6452952 best: 0.6452952 (238)
239: learn: 0.6450133 test: 0.6450998 best: 0.6450998 (239)
240: learn: 0.6448251 test: 0.6449119 best: 0.6449119 (240)
241: learn: 0.6446165 test: 0.6447036 best: 0.6447036 (241)
242: learn: 0.6444144 test: 0.6445022 best: 0.6445022 (242)
243: learn: 0.6442199 test: 0.6443079 best: 0.6443079 (243)
244: learn: 0.6440183 test: 0.6441061 best: 0.6441061 (244)
245: learn: 0.6438189 test: 0.6439067 best: 0.6439067 (245)
246: learn: 0.6436237 test: 0.6437121 best: 0.6437121 (246)
247: learn: 0.6434325 test: 0.6435211 best: 0.6435211 (247)
248: learn: 0.6432439 test: 0.6433328 best: 0.6433328 (248)
249: learn: 0.6430603 test: 0.6431493 best: 0.6431493 (249)
250: learn: 0.6428660 test: 0.6429554 best: 0.6429554 (250)
251: learn: 0.6426798 test: 0.6427697 best: 0.6427697 (251)
252: learn: 0.6424828 test: 0.6425728 best: 0.6425728 (252)
253: learn: 0.6422793 test: 0.6423697 best: 0.6423697 (253)
254: learn: 0.6420932 test: 0.6421840 best: 0.6421840 (254)
255: learn: 0.6418934 test: 0.6419843 best: 0.6419843 (255)
256: learn: 0.6416965 test: 0.6417877 best: 0.6417877 (256)
257: learn: 0.6415116 test: 0.6416032 best: 0.6416032 (257)
258: learn: 0.6412963 test: 0.6413886 best: 0.6413886 (258)
259: learn: 0.6411087 test: 0.6412012 best: 0.6412012 (259)
260: learn: 0.6409335 test: 0.6410268 best: 0.6410268 (260)
261: learn: 0.6407368 test: 0.6408303 best: 0.6408303 (261)
262: learn: 0.6405396 test: 0.6406336 best: 0.6406336 (262)
263: learn: 0.6403472 test: 0.6404416 best: 0.6404416 (263)
264: learn: 0.6401593 test: 0.6402538 best: 0.6402538 (264)
265: learn: 0.6399841 test: 0.6400788 best: 0.6400788 (265)
266: learn: 0.6397984 test: 0.6398938 best: 0.6398938 (266)
267: learn: 0.6396052 test: 0.6397011 best: 0.6397011 (267)
268: learn: 0.6394203 test: 0.6395165 best: 0.6395165 (268)
```

```
269: learn: 0.6392448 test: 0.6393410 best: 0.6393410 (269) total: 4.71s remaining: 12.7s
270: learn: 0.6390406 test: 0.6391369 best: 0.6391369 (270)
271: learn: 0.6388512 test: 0.6389478 best: 0.6389478 (271)
272: learn: 0.6386843 test: 0.6387807 best: 0.6387807 (272)
273: learn: 0.6384809 test: 0.6385780 best: 0.6385780 (273)
274: learn: 0.6382924 test: 0.6383903 best: 0.6383903 (274)
275: learn: 0.6380893 test: 0.6381872 best: 0.6381872 (275)
276: learn: 0.6378991 test: 0.6379977 best: 0.6379977 (276)
277: learn: 0.6377245 test: 0.6378238 best: 0.6378238 (277)
278: learn: 0.6375485 test: 0.6376478 best: 0.6376478 (278)
279: learn: 0.6373538 test: 0.6374536 best: 0.6374536 (279)
280: learn: 0.6371726 test: 0.6372728 best: 0.6372728 (280)
281: learn: 0.6369748 test: 0.6370753 best: 0.6370753 (281)
282: learn: 0.6367967 test: 0.6368977 best: 0.6368977 (282)
283: learn: 0.6366330 test: 0.6367342 best: 0.6367342 (283)
284: learn: 0.6364536 test: 0.6365559 best: 0.6365559 (284)
285: learn: 0.6362703 test: 0.6363734 best: 0.6363734 (285)
286: learn: 0.6360623 test: 0.6361656 best: 0.6361656 (286)
287: learn: 0.6358740 test: 0.6359776 best: 0.6359776 (287)
288: learn: 0.6356870 test: 0.6357909 best: 0.6357909 (288)
289: learn: 0.6354869 test: 0.6355908 best: 0.6355908 (289)
290: learn: 0.6352861 test: 0.6353909 best: 0.6353909 (290)
291: learn: 0.6351077 test: 0.6352130 best: 0.6352130 (291)
292: learn: 0.6349198 test: 0.6350257 best: 0.6350257 (292)
293: learn: 0.6347227 test: 0.6348292 best: 0.6348292 (293)
294: learn: 0.6345230 test: 0.6346300 best: 0.6346300 (294)
295: learn: 0.6343205 test: 0.6344278 best: 0.6344278 (295)
296: learn: 0.6341513 test: 0.6342589 best: 0.6342589 (296)
297: learn: 0.6339573 test: 0.6340651 best: 0.6340651 (297)
298: learn: 0.6337919 test: 0.6339001 best: 0.6339001 (298)
299: learn: 0.6335953 test: 0.6337040 best: 0.6337040 (299)
300: learn: 0.6334070 test: 0.6335162 best: 0.6335162 (300)
301: learn: 0.6332102 test: 0.6333193 best: 0.6333193 (301)
302: learn: 0.6330255 test: 0.6331347 best: 0.6331347 (302)
303: learn: 0.6328394 test: 0.6329490 best: 0.6329490 (303)
304: learn: 0.6326602 test: 0.6327709 best: 0.6327709 (304)
305: learn: 0.6324822 test: 0.6325930 best: 0.6325930 (305)
306: learn: 0.6322820 test: 0.6323930 best: 0.6323930 (306)
307: learn: 0.6320960 test: 0.6322076 best: 0.6322076 (307)
308: learn: 0.6319084 test: 0.6320206 best: 0.6320206 (308)
309: learn: 0.6317081 test: 0.6318205 best: 0.6318205 (309)
310: learn: 0.6315278 test: 0.6316402 best: 0.6316402 (310)
311: learn: 0.6313264 test: 0.6314392 best: 0.6314392 (311)
312: learn: 0.6311398 test: 0.6312528 best: 0.6312528 (312)
313: learn: 0.6309595 test: 0.6310731 best: 0.6310731 (313)
314: learn: 0.6307742 test: 0.6308881 best: 0.6308881 (314)
315: learn: 0.6305764 test: 0.6306906 best: 0.6306906 (315)
316: learn: 0.6303928 test: 0.6305076 best: 0.6305076 (316)
317: learn: 0.6302186 test: 0.6303339 best: 0.6303339 (317)
318: learn: 0.6300253 test: 0.6301409 best: 0.6301409 (318)
319: learn: 0.6298329 test: 0.6299489 best: 0.6299489 (319)
320: learn: 0.6296462 test: 0.6297629 best: 0.6297629 (320)
321: learn: 0.6294462 test: 0.6295633 best: 0.6295633 (321)
322: learn: 0.6292559 test: 0.6293732 best: 0.6293732 (322)
323: learn: 0.6290861 test: 0.6292036 best: 0.6292036 (323)
324: learn: 0.6288938 test: 0.6290115 best: 0.6290115 (324)
325: learn: 0.6287004 test: 0.6288186 best: 0.6288186 (325)
326: learn: 0.6285070 test: 0.6286255 best: 0.6286255 (326)
327: learn: 0.6283138 test: 0.6284325 best: 0.6284325 (327)
328: learn: 0.6281353 test: 0.6282543 best: 0.6282543 (328)
329: learn: 0.6279484 test: 0.6280678 best: 0.6280678 (329)
330: learn: 0.6277580 test: 0.6278786 best: 0.6278786 (330)
331: learn: 0.6275673 test: 0.6276886 best: 0.6276886 (331)
332: learn: 0.6273914 test: 0.6275130 best: 0.6275130 (332)
333: learn: 0.6272000 test: 0.6273221 best: 0.6273221 (333)
334: learn: 0.6270124 test: 0.6271347 best: 0.6271347 (334)
335: learn: 0.6268195 test: 0.6269421 best: 0.6269421 (335)
336: learn: 0.6266294 test: 0.6267524 best: 0.6267524 (336)
337: learn: 0.6264436 test: 0.6265670 best: 0.6265670 (337)
338: learn: 0.6262513 test: 0.6263751 best: 0.6263751 (338)
339: learn: 0.6260693 test: 0.6261933 best: 0.6261933 (339)
340: learn: 0.6258948 test: 0.6260185 best: 0.6260185 (340)
341: learn: 0.6256987 test: 0.6258231 best: 0.6258231 (341)
342: learn: 0.6255202 test: 0.6256452 best: 0.6256452 (342)
343: learn: 0.6253204 test: 0.6254457 best: 0.6254457 (343)
344: learn: 0.6251515 test: 0.6252770 best: 0.6252770 (344)
345: learn: 0.6249719 test: 0.6250973 best: 0.6250973 (345)
```

```
346:	learn: 0.6247854	test: 0.6249107	best: 0.6249107 (346)
347:	learn: 0.6245901	test: 0.6247156	best: 0.6247156 (347)
348:	learn: 0.6244014	test: 0.6245273	best: 0.6245273 (348)
349:	learn: 0.6242161	test: 0.6243425	best: 0.6243425 (349)
350:	learn: 0.6240441	test: 0.6241708	best: 0.6241708 (350)
351:	learn: 0.6238602	test: 0.6239876	best: 0.6239876 (351)
352:	learn: 0.6236635	test: 0.6237911	best: 0.6237911 (352)
353:	learn: 0.6234699	test: 0.6235983	best: 0.6235983 (353)
354:	learn: 0.6232703	test: 0.6233989	best: 0.6233989 (354)
355:	learn: 0.6230987	test: 0.6232281	best: 0.6232281 (355)
356:	learn: 0.6229138	test: 0.6230437	best: 0.6230437 (356)	total: 6.2s	remaining: 11.2s
357:	learn: 0.6227349	test: 0.6228652	best: 0.6228652 (357)
358:	learn: 0.6225422	test: 0.6226729	best: 0.6226729 (358)
359:	learn: 0.6223619	test: 0.6224928	best: 0.6224928 (359)
360:	learn: 0.6221684	test: 0.6223000	best: 0.6223000 (360)
361:	learn: 0.6220009	test: 0.6221325	best: 0.6221325 (361)
362:	learn: 0.6218120	test: 0.6219438	best: 0.6219438 (362)
363:	learn: 0.6216298	test: 0.6217621	best: 0.6217621 (363)
364:	learn: 0.6214338	test: 0.6215664	best: 0.6215664 (364)
365:	learn: 0.6212546	test: 0.6213878	best: 0.6213878 (365)
366:	learn: 0.6210601	test: 0.6211934	best: 0.6211934 (366)
367:	learn: 0.6208817	test: 0.6210158	best: 0.6210158 (367)
368:	learn: 0.6207127	test: 0.6208473	best: 0.6208473 (368)
369:	learn: 0.6205174	test: 0.6206523	best: 0.6206523 (369)
370:	learn: 0.6203280	test: 0.6204630	best: 0.6204630 (370)
371:	learn: 0.6201413	test: 0.6202767	best: 0.6202767 (371)
372:	learn: 0.6199512	test: 0.6200868	best: 0.6200868 (372)
373:	learn: 0.6197716	test: 0.6199072	best: 0.6199072 (373)
374:	learn: 0.6195889	test: 0.6197248	best: 0.6197248 (374)
375:	learn: 0.6194041	test: 0.6195398	best: 0.6195398 (375)
376:	learn: 0.6192125	test: 0.6193487	best: 0.6193487 (376)
377:	learn: 0.6190324	test: 0.6191689	best: 0.6191689 (377)
378:	learn: 0.6188339	test: 0.6189708	best: 0.6189708 (378)
379:	learn: 0.6186632	test: 0.6188002	best: 0.6188002 (379)
380:	learn: 0.6184686	test: 0.6186061	best: 0.6186061 (380)
381:	learn: 0.6182737	test: 0.6184115	best: 0.6184115 (381)
382:	learn: 0.6180802	test: 0.6182183	best: 0.6182183 (382)
383:	learn: 0.6178876	test: 0.6180260	best: 0.6180260 (383)
384:	learn: 0.6176954	test: 0.6178340	best: 0.6178340 (384)
385:	learn: 0.6175227	test: 0.6176618	best: 0.6176618 (385)
386:	learn: 0.6173280	test: 0.6174676	best: 0.6174676 (386)
387:	learn: 0.6171831	test: 0.6173227	best: 0.6173227 (387)
388:	learn: 0.6169991	test: 0.6171400	best: 0.6171400 (388)
389:	learn: 0.6168121	test: 0.6169538	best: 0.6169538 (389)
390:	learn: 0.6166220	test: 0.6167633	best: 0.6167633 (390)
391:	learn: 0.6164387	test: 0.6165807	best: 0.6165807 (391)
392:	learn: 0.6162565	test: 0.6163982	best: 0.6163982 (392)
393:	learn: 0.6160674	test: 0.6162099	best: 0.6162099 (393)
394:	learn: 0.6158920	test: 0.6160352	best: 0.6160352 (394)
395:	learn: 0.6157025	test: 0.6158452	best: 0.6158452 (395)
396:	learn: 0.6155305	test: 0.6156735	best: 0.6156735 (396)
397:	learn: 0.6153502	test: 0.6154943	best: 0.6154943 (397)
398:	learn: 0.6151624	test: 0.6153065	best: 0.6153065 (398)
399:	learn: 0.6149815	test: 0.6151263	best: 0.6151263 (399)
400:	learn: 0.6148005	test: 0.6149455	best: 0.6149455 (400)
401:	learn: 0.6146134	test: 0.6147595	best: 0.6147595 (401)
402:	learn: 0.6144331	test: 0.6145798	best: 0.6145798 (402)
403:	learn: 0.6142418	test: 0.6143878	best: 0.6143878 (403)
404:	learn: 0.6140562	test: 0.6142033	best: 0.6142033 (404)
405:	learn: 0.6138787	test: 0.6140255	best: 0.6140255 (405)
406:	learn: 0.6136920	test: 0.6138388	best: 0.6138388 (406)
407:	learn: 0.6135187	test: 0.6136656	best: 0.6136656 (407)
408:	learn: 0.6133323	test: 0.6134787	best: 0.6134787 (408)
409:	learn: 0.6131518	test: 0.6132992	best: 0.6132992 (409)
410:	learn: 0.6129758	test: 0.6131236	best: 0.6131236 (410)
411:	learn: 0.6127833	test: 0.6129311	best: 0.6129311 (411)
412:	learn: 0.6125990	test: 0.6127475	best: 0.6127475 (412)
413:	learn: 0.6124218	test: 0.6125700	best: 0.6125700 (413)
414:	learn: 0.6122447	test: 0.6123939	best: 0.6123939 (414)
415:	learn: 0.6120603	test: 0.6122089	best: 0.6122089 (415)
416:	learn: 0.6118895	test: 0.6120381	best: 0.6120381 (416)
417:	learn: 0.6117030	test: 0.6118516	best: 0.6118516 (417)
418:	learn: 0.6115448	test: 0.6116932	best: 0.6116932 (418)
419:	learn: 0.6113698	test: 0.6115184	best: 0.6115184 (419)
420:	learn: 0.6111763	test: 0.6113256	best: 0.6113256 (420)
421:	learn: 0.6109958	test: 0.6111451	best: 0.6111451 (421)
422:	learn: 0.6108090	test: 0.6109583	best: 0.6109583 (422)
```

```
423: learn: 0.6106340 test: 0.6107840 best: 0.6107840 (423)
424: learn: 0.6104581 test: 0.6106086 best: 0.6106086 (424)
425: learn: 0.6102653 test: 0.6104161 best: 0.6104161 (425)
426: learn: 0.6100903 test: 0.6102418 best: 0.6102418 (426)
427: learn: 0.6099194 test: 0.6100718 best: 0.6100718 (427)
428: learn: 0.6097237 test: 0.6098768 best: 0.6098768 (428)
429: learn: 0.6095460 test: 0.6096997 best: 0.6096997 (429)
430: learn: 0.6093637 test: 0.6095185 best: 0.6095185 (430)
431: learn: 0.6091837 test: 0.6093385 best: 0.6093385 (431)
432: learn: 0.6090079 test: 0.6091636 best: 0.6091636 (432)
433: learn: 0.6088273 test: 0.6089841 best: 0.6089841 (433)
434: learn: 0.6086459 test: 0.6088037 best: 0.6088037 (434)
435: learn: 0.6084654 test: 0.6086247 best: 0.6086247 (435)
436: learn: 0.6082824 test: 0.6084417 best: 0.6084417 (436)
437: learn: 0.6080936 test: 0.6082534 best: 0.6082534 (437)
438: learn: 0.6079074 test: 0.6080686 best: 0.6080686 (438)
439: learn: 0.6077333 test: 0.6078948 best: 0.6078948 (439)
440: learn: 0.6075544 test: 0.6077160 best: 0.6077160 (440)
441: learn: 0.6073759 test: 0.6075375 best: 0.6075375 (441)
442: learn: 0.6072013 test: 0.6073629 best: 0.6073629 (442) total: 7.64s remaining: 9.6s
443: learn: 0.6070327 test: 0.6071949 best: 0.6071949 (443)
444: learn: 0.6068533 test: 0.6070162 best: 0.6070162 (444)
445: learn: 0.6066614 test: 0.6068251 best: 0.6068251 (445)
446: learn: 0.6064890 test: 0.6066528 best: 0.6066528 (446)
447: learn: 0.6063024 test: 0.6064669 best: 0.6064669 (447)
448: learn: 0.6061198 test: 0.6062850 best: 0.6062850 (448)
449: learn: 0.6059397 test: 0.6061055 best: 0.6061055 (449)
450: learn: 0.6057636 test: 0.6059289 best: 0.6059289 (450)
451: learn: 0.6055807 test: 0.6057467 best: 0.6057467 (451)
452: learn: 0.6053970 test: 0.6055629 best: 0.6055629 (452)
453: learn: 0.6052033 test: 0.6053695 best: 0.6053695 (453)
454: learn: 0.6050133 test: 0.6051805 best: 0.6051805 (454)
455: learn: 0.6048296 test: 0.6049972 best: 0.6049972 (455)
456: learn: 0.6046665 test: 0.6048343 best: 0.6048343 (456)
457: learn: 0.6044868 test: 0.6046545 best: 0.6046545 (457)
458: learn: 0.6042970 test: 0.6044647 best: 0.6044647 (458)
459: learn: 0.6041134 test: 0.6042819 best: 0.6042819 (459)
460: learn: 0.6039245 test: 0.6040928 best: 0.6040928 (460)
461: learn: 0.6037504 test: 0.6039194 best: 0.6039194 (461)
462: learn: 0.6035609 test: 0.6037306 best: 0.6037306 (462)
463: learn: 0.6033792 test: 0.6035499 best: 0.6035499 (463)
464: learn: 0.6031961 test: 0.6033678 best: 0.6033678 (464)
465: learn: 0.6030263 test: 0.6031989 best: 0.6031989 (465)
466: learn: 0.6028480 test: 0.6030213 best: 0.6030213 (466)
467: learn: 0.6026704 test: 0.6028444 best: 0.6028444 (467)
468: learn: 0.6024877 test: 0.6026629 best: 0.6026629 (468)
469: learn: 0.6023130 test: 0.6024893 best: 0.6024893 (469)
470: learn: 0.6021494 test: 0.6023263 best: 0.6023263 (470)
471: learn: 0.6019605 test: 0.6021381 best: 0.6021381 (471)
472: learn: 0.6017818 test: 0.6019592 best: 0.6019592 (472)
473: learn: 0.6016061 test: 0.6017843 best: 0.6017843 (473)
474: learn: 0.6014339 test: 0.6016124 best: 0.6016124 (474)
475: learn: 0.6012546 test: 0.6014336 best: 0.6014336 (475)
476: learn: 0.6010769 test: 0.6012564 best: 0.6012564 (476)
477: learn: 0.6008893 test: 0.6010684 best: 0.6010684 (477)
478: learn: 0.6007027 test: 0.6008813 best: 0.6008813 (478)
479: learn: 0.6005251 test: 0.6007046 best: 0.6007046 (479)
480: learn: 0.6003434 test: 0.6005235 best: 0.6005235 (480)
481: learn: 0.6001660 test: 0.6003470 best: 0.6003470 (481)
482: learn: 0.5999765 test: 0.6001573 best: 0.6001573 (482)
483: learn: 0.5997958 test: 0.5999772 best: 0.5999772 (483)
484: learn: 0.5996123 test: 0.5997936 best: 0.5997936 (484)
485: learn: 0.5994258 test: 0.5996070 best: 0.5996070 (485)
486: learn: 0.5992389 test: 0.5994211 best: 0.5994211 (486)
487: learn: 0.5990542 test: 0.5992358 best: 0.5992358 (487)
488: learn: 0.5988795 test: 0.5990620 best: 0.5990620 (488)
489: learn: 0.5986995 test: 0.5988826 best: 0.5988826 (489)
490: learn: 0.5985162 test: 0.5987000 best: 0.5987000 (490)
491: learn: 0.5983309 test: 0.5985154 best: 0.5985154 (491)
492: learn: 0.5981462 test: 0.5983314 best: 0.5983314 (492)
493: learn: 0.5979767 test: 0.5981631 best: 0.5981631 (493)
494: learn: 0.5977934 test: 0.5979809 best: 0.5979809 (494)
495: learn: 0.5976270 test: 0.5978157 best: 0.5978157 (495)
496: learn: 0.5974448 test: 0.5976333 best: 0.5976333 (496)
497: learn: 0.5972644 test: 0.5974534 best: 0.5974534 (497)
498: learn: 0.5970821 test: 0.5972719 best: 0.5972719 (498)
499: learn: 0.5969006 test: 0.5970906 best: 0.5970906 (499)
```

```
500: learn: 0.5967231 test: 0.5969139 best: 0.5969139 (500)
501: learn: 0.5965453 test: 0.5967352 best: 0.5967352 (501)
502: learn: 0.5963688 test: 0.5965587 best: 0.5965587 (502)
503: learn: 0.5962017 test: 0.5963916 best: 0.5963916 (503)
504: learn: 0.5960181 test: 0.5962084 best: 0.5962084 (504)
505: learn: 0.5958422 test: 0.5960333 best: 0.5960333 (505)
506: learn: 0.5956701 test: 0.5958622 best: 0.5958622 (506)
507: learn: 0.5954881 test: 0.5956809 best: 0.5956809 (507)
508: learn: 0.5953144 test: 0.5955072 best: 0.5955072 (508)
509: learn: 0.5951419 test: 0.5953355 best: 0.5953355 (509)
510: learn: 0.5949642 test: 0.5951583 best: 0.5951583 (510)
511: learn: 0.5947865 test: 0.5949811 best: 0.5949811 (511)
512: learn: 0.5946066 test: 0.5948008 best: 0.5948008 (512)
513: learn: 0.5944299 test: 0.5946243 best: 0.5946243 (513)
514: learn: 0.5942455 test: 0.5944416 best: 0.5944416 (514)
515: learn: 0.5940632 test: 0.5942597 best: 0.5942597 (515)
516: learn: 0.5938717 test: 0.5940686 best: 0.5940686 (516)
517: learn: 0.5937043 test: 0.5939021 best: 0.5939021 (517)
518: learn: 0.5935305 test: 0.5937277 best: 0.5937277 (518)
519: learn: 0.5933488 test: 0.5935463 best: 0.5935463 (519)
520: learn: 0.5931639 test: 0.5933611 best: 0.5933611 (520)
521: learn: 0.5929907 test: 0.5931879 best: 0.5931879 (521)
522: learn: 0.5928131 test: 0.5930097 best: 0.5930097 (522)
523: learn: 0.5926418 test: 0.5928385 best: 0.5928385 (523)
524: learn: 0.5924598 test: 0.5926569 best: 0.5926569 (524)
525: learn: 0.5922811 test: 0.5924790 best: 0.5924790 (525)
526: learn: 0.5921129 test: 0.5923107 best: 0.5923107 (526)
527: learn: 0.5919311 test: 0.5921291 best: 0.5921291 (527)
528: learn: 0.5917672 test: 0.5919659 best: 0.5919659 (528)
529: learn: 0.5915893 test: 0.5917881 best: 0.5917881 (529)
530: learn: 0.5914158 test: 0.5916149 best: 0.5916149 (530) total: 9.11s remaining: 8.05s
531: learn: 0.5912308 test: 0.5914307 best: 0.5914307 (531)
532: learn: 0.5910590 test: 0.5912582 best: 0.5912582 (532)
533: learn: 0.5908786 test: 0.5910788 best: 0.5910788 (533)
534: learn: 0.5907108 test: 0.5909118 best: 0.5909118 (534)
535: learn: 0.5905397 test: 0.5907415 best: 0.5907415 (535)
536: learn: 0.5903733 test: 0.5905755 best: 0.5905755 (536)
537: learn: 0.5901944 test: 0.5903976 best: 0.5903976 (537)
538: learn: 0.5900195 test: 0.5902235 best: 0.5902235 (538)
539: learn: 0.5898360 test: 0.5900400 best: 0.5900400 (539)
540: learn: 0.5896493 test: 0.5898530 best: 0.5898530 (540)
541: learn: 0.5894685 test: 0.5896731 best: 0.5896731 (541)
542: learn: 0.5892941 test: 0.5894989 best: 0.5894989 (542)
543: learn: 0.5891212 test: 0.5893259 best: 0.5893259 (543)
544: learn: 0.5889485 test: 0.5891529 best: 0.5891529 (544)
545: learn: 0.5887655 test: 0.5889692 best: 0.5889692 (545)
546: learn: 0.5885904 test: 0.5887944 best: 0.5887944 (546)
547: learn: 0.5884218 test: 0.5886263 best: 0.5886263 (547)
548: learn: 0.5882380 test: 0.5884435 best: 0.5884435 (548)
549: learn: 0.5880689 test: 0.5882744 best: 0.5882744 (549)
550: learn: 0.5879018 test: 0.5881081 best: 0.5881081 (550)
551: learn: 0.5877156 test: 0.5879224 best: 0.5879224 (551)
552: learn: 0.5875347 test: 0.5877423 best: 0.5877423 (552)
553: learn: 0.5873602 test: 0.5875681 best: 0.5875681 (553)
554: learn: 0.5871907 test: 0.5873985 best: 0.5873985 (554)
555: learn: 0.5870020 test: 0.5872101 best: 0.5872101 (555)
556: learn: 0.5868298 test: 0.5870382 best: 0.5870382 (556)
557: learn: 0.5866608 test: 0.5868690 best: 0.5868690 (557)
558: learn: 0.5864856 test: 0.5866947 best: 0.5866947 (558)
559: learn: 0.5863175 test: 0.5865271 best: 0.5865271 (559)
560: learn: 0.5861515 test: 0.5863612 best: 0.5863612 (560)
561: learn: 0.5859803 test: 0.5861913 best: 0.5861913 (561)
562: learn: 0.5858148 test: 0.5860268 best: 0.5860268 (562)
563: learn: 0.5856408 test: 0.5858527 best: 0.5858527 (563)
564: learn: 0.5854869 test: 0.5856994 best: 0.5856994 (564) total: 9.71s remaining: 7.48s
565: learn: 0.5853052 test: 0.5855180 best: 0.5855180 (565)
566: learn: 0.5851306 test: 0.5853443 best: 0.5853443 (566)
567: learn: 0.5849487 test: 0.5851626 best: 0.5851626 (567)
568: learn: 0.5847772 test: 0.5849910 best: 0.5849910 (568)
569: learn: 0.5846048 test: 0.5848188 best: 0.5848188 (569)
570: learn: 0.5844236 test: 0.5846374 best: 0.5846374 (570)
571: learn: 0.5842402 test: 0.5844541 best: 0.5844541 (571)
572: learn: 0.5840703 test: 0.5842851 best: 0.5842851 (572)
573: learn: 0.5838921 test: 0.5841068 best: 0.5841068 (573)
574: learn: 0.5837200 test: 0.5839351 best: 0.5839351 (574)
575: learn: 0.5835435 test: 0.5837590 best: 0.5837590 (575)
576: learn: 0.5833690 test: 0.5835845 best: 0.5835845 (576)
```

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577: learn: 0.5831928 test: 0.5834082 best: 0.5834082 (577)
578: learn: 0.5830127 test: 0.5832277 best: 0.5832277 (578)
579: learn: 0.5828278 test: 0.5830432 best: 0.5830432 (579)
580: learn: 0.5826452 test: 0.5828607 best: 0.5828607 (580)
581: learn: 0.5824750 test: 0.5826902 best: 0.5826902 (581)
582: learn: 0.5822874 test: 0.5825028 best: 0.5825028 (582)
583: learn: 0.5821232 test: 0.5823389 best: 0.5823389 (583)
584: learn: 0.5819468 test: 0.5821629 best: 0.5821629 (584)
585: learn: 0.5817747 test: 0.5819917 best: 0.5819917 (585)
586: learn: 0.5816009 test: 0.5818184 best: 0.5818184 (586)
587: learn: 0.5814310 test: 0.5816487 best: 0.5816487 (587)
588: learn: 0.5812480 test: 0.5814662 best: 0.5814662 (588)
589: learn: 0.5810848 test: 0.5813042 best: 0.5813042 (589)
590: learn: 0.5809091 test: 0.5811281 best: 0.5811281 (590)
591: learn: 0.5807363 test: 0.5809547 best: 0.5809547 (591)
592: learn: 0.5805620 test: 0.5807804 best: 0.5807804 (592)
593: learn: 0.5803848 test: 0.5806038 best: 0.5806038 (593)
594: learn: 0.5802105 test: 0.5804299 best: 0.5804299 (594)
595: learn: 0.5800373 test: 0.5802559 best: 0.5802559 (595)
596: learn: 0.5798538 test: 0.5800728 best: 0.5800728 (596)
597: learn: 0.5796863 test: 0.5799051 best: 0.5799051 (597)
598: learn: 0.5795192 test: 0.5797386 best: 0.5797386 (598)
599: learn: 0.5793484 test: 0.5795689 best: 0.5795689 (599)
600: learn: 0.5791770 test: 0.5793983 best: 0.5793983 (600)
601: learn: 0.5790029 test: 0.5792236 best: 0.5792236 (601)
602: learn: 0.5788338 test: 0.5790548 best: 0.5790548 (602)
603: learn: 0.5786677 test: 0.5788892 best: 0.5788892 (603)
604: learn: 0.5785060 test: 0.5787282 best: 0.5787282 (604)
605: learn: 0.5783307 test: 0.5785535 best: 0.5785535 (605)
606: learn: 0.5781630 test: 0.5783862 best: 0.5783862 (606)
607: learn: 0.5779840 test: 0.5782080 best: 0.5782080 (607)
608: learn: 0.5778104 test: 0.5780360 best: 0.5780360 (608)
609: learn: 0.5776427 test: 0.5778689 best: 0.5778689 (609)
610: learn: 0.5774683 test: 0.5776952 best: 0.5776952 (610)
611: learn: 0.5772967 test: 0.5775239 best: 0.5775239 (611)
612: learn: 0.5771212 test: 0.5773492 best: 0.5773492 (612)
613: learn: 0.5769380 test: 0.5771659 best: 0.5771659 (613)
614: learn: 0.5767635 test: 0.5769914 best: 0.5769914 (614)
615: learn: 0.5765947 test: 0.5768225 best: 0.5768225 (615)
616: learn: 0.5764379 test: 0.5766659 best: 0.5766659 (616)
617: learn: 0.5762636 test: 0.5764924 best: 0.5764924 (617)
618: learn: 0.5761064 test: 0.5763357 best: 0.5763357 (618)
619: learn: 0.5759364 test: 0.5761657 best: 0.5761657 (619)
620: learn: 0.5757584 test: 0.5759886 best: 0.5759886 (620)
621: learn: 0.5755855 test: 0.5758160 best: 0.5758160 (621)
622: learn: 0.5754160 test: 0.5756474 best: 0.5756474 (622)
623: learn: 0.5752439 test: 0.5754766 best: 0.5754766 (623)
624: learn: 0.5750734 test: 0.5753059 best: 0.5753059 (624)
625: learn: 0.5748998 test: 0.5751328 best: 0.5751328 (625)
626: learn: 0.5747411 test: 0.5749736 best: 0.5749736 (626)
627: learn: 0.5745696 test: 0.5748029 best: 0.5748029 (627)
628: learn: 0.5744188 test: 0.5746530 best: 0.5746530 (628)
629: learn: 0.5742536 test: 0.5744877 best: 0.5744877 (629)
630: learn: 0.5740871 test: 0.5743213 best: 0.5743213 (630)
631: learn: 0.5739214 test: 0.5741561 best: 0.5741561 (631)
632: learn: 0.5737625 test: 0.5739985 best: 0.5739985 (632)
633: learn: 0.5735957 test: 0.5738322 best: 0.5738322 (633)
634: learn: 0.5734253 test: 0.5736621 best: 0.5736621 (634)
635: learn: 0.5732520 test: 0.5734893 best: 0.5734893 (635)
636: learn: 0.5730802 test: 0.5733176 best: 0.5733176 (636)
637: learn: 0.5729046 test: 0.5731431 best: 0.5731431 (637)
638: learn: 0.5727277 test: 0.5729660 best: 0.5729660 (638)
639: learn: 0.5725606 test: 0.5727998 best: 0.5727998 (639)
640: learn: 0.5723911 test: 0.5726304 best: 0.5726304 (640)
641: learn: 0.5722252 test: 0.5724642 best: 0.5724642 (641)
642: learn: 0.5720467 test: 0.5722855 best: 0.5722855 (642)
643: learn: 0.5718888 test: 0.5721285 best: 0.5721285 (643)
644: learn: 0.5717252 test: 0.5719655 best: 0.5719655 (644)
645: learn: 0.5715542 test: 0.5717948 best: 0.5717948 (645)
646: learn: 0.5713923 test: 0.5716318 best: 0.5716318 (646)
647: learn: 0.5712199 test: 0.5714601 best: 0.5714601 (647)
648: learn: 0.5710421 test: 0.5712831 best: 0.5712831 (648)
649: learn: 0.5708779 test: 0.5711196 best: 0.5711196 (649)
650: learn: 0.5707102 test: 0.5709527 best: 0.5709527 (650)
651: learn: 0.5705536 test: 0.5707960 best: 0.5707960 (651) total: 11.3s remaining: 6.02s
652: learn: 0.5703940 test: 0.5706366 best: 0.5706366 (652)
653: learn: 0.5702374 test: 0.5704797 best: 0.5704797 (653)
```

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653: learn: 0.5702344 test: 0.5701797 best: 0.5701797 (653)
654: learn: 0.5700606 test: 0.5703027 best: 0.5703027 (654)
655: learn: 0.5698845 test: 0.5701282 best: 0.5701282 (655)
656: learn: 0.5697238 test: 0.5699681 best: 0.5699681 (656)
657: learn: 0.5695565 test: 0.5698007 best: 0.5698007 (657)
658: learn: 0.5693933 test: 0.5696372 best: 0.5696372 (658)
659: learn: 0.5692153 test: 0.5694598 best: 0.5694598 (659)
660: learn: 0.5690472 test: 0.5692926 best: 0.5692926 (660)
661: learn: 0.5688752 test: 0.5691213 best: 0.5691213 (661)
662: learn: 0.5686999 test: 0.5689464 best: 0.5689464 (662)
663: learn: 0.5685357 test: 0.5687831 best: 0.5687831 (663)
664: learn: 0.5683647 test: 0.5686121 best: 0.5686121 (664)
665: learn: 0.5682002 test: 0.5684468 best: 0.5684468 (665)
666: learn: 0.5680242 test: 0.5682714 best: 0.5682714 (666)
667: learn: 0.5678680 test: 0.5681153 best: 0.5681153 (667)
668: learn: 0.5676965 test: 0.5679443 best: 0.5679443 (668)
669: learn: 0.5675420 test: 0.5677904 best: 0.5677904 (669)
670: learn: 0.5673807 test: 0.5676302 best: 0.5676302 (670)
671: learn: 0.5672186 test: 0.5674671 best: 0.5674671 (671)
672: learn: 0.5670520 test: 0.5673005 best: 0.5673005 (672)
673: learn: 0.5668919 test: 0.5671407 best: 0.5671407 (673)
674: learn: 0.5667268 test: 0.5669766 best: 0.5669766 (674)
675: learn: 0.5665735 test: 0.5668231 best: 0.5668231 (675)
676: learn: 0.5664175 test: 0.5666673 best: 0.5666673 (676)
677: learn: 0.5662443 test: 0.5664932 best: 0.5664932 (677)
678: learn: 0.5660937 test: 0.5663431 best: 0.5663431 (678)
679: learn: 0.5659211 test: 0.5661711 best: 0.5661711 (679)
680: learn: 0.5657573 test: 0.5660079 best: 0.5660079 (680)
681: learn: 0.5655918 test: 0.5658428 best: 0.5658428 (681)
682: learn: 0.5654188 test: 0.5656704 best: 0.5656704 (682)
683: learn: 0.5652416 test: 0.5654923 best: 0.5654923 (683)
684: learn: 0.5650859 test: 0.5653370 best: 0.5653370 (684)
685: learn: 0.5649130 test: 0.5651635 best: 0.5651635 (685)
686: learn: 0.5647353 test: 0.5649864 best: 0.5649864 (686)
687: learn: 0.5645548 test: 0.5648062 best: 0.5648062 (687)
688: learn: 0.5643840 test: 0.5646366 best: 0.5646366 (688)
689: learn: 0.5642233 test: 0.5644766 best: 0.5644766 (689)
690: learn: 0.5640431 test: 0.5642971 best: 0.5642971 (690)
691: learn: 0.5638720 test: 0.5641257 best: 0.5641257 (691)
692: learn: 0.5637124 test: 0.5639662 best: 0.5639662 (692)
693: learn: 0.5635444 test: 0.5637990 best: 0.5637990 (693)
694: learn: 0.5633686 test: 0.5636245 best: 0.5636245 (694)
695: learn: 0.5631988 test: 0.5634558 best: 0.5634558 (695)
696: learn: 0.5630301 test: 0.5632869 best: 0.5632869 (696)
697: learn: 0.5628687 test: 0.5631248 best: 0.5631248 (697)
698: learn: 0.5627136 test: 0.5629703 best: 0.5629703 (698)
699: learn: 0.5625524 test: 0.5628095 best: 0.5628095 (699)
700: learn: 0.5623872 test: 0.5626448 best: 0.5626448 (700)
701: learn: 0.5622307 test: 0.5624890 best: 0.5624890 (701)
702: learn: 0.5620603 test: 0.5623195 best: 0.5623195 (702)
703: learn: 0.5618953 test: 0.5621544 best: 0.5621544 (703)
704: learn: 0.5617400 test: 0.5619992 best: 0.5619992 (704)
705: learn: 0.5615749 test: 0.5618347 best: 0.5618347 (705)
706: learn: 0.5614117 test: 0.5616723 best: 0.5616723 (706)
707: learn: 0.5612487 test: 0.5615101 best: 0.5615101 (707)
708: learn: 0.5610780 test: 0.5613398 best: 0.5613398 (708)
709: learn: 0.5609177 test: 0.5611797 best: 0.5611797 (709)
710: learn: 0.5607699 test: 0.5610323 best: 0.5610323 (710)
711: learn: 0.5606020 test: 0.5608646 best: 0.5608646 (711)
712: learn: 0.5604251 test: 0.5606874 best: 0.5606874 (712)
713: learn: 0.5602551 test: 0.5605172 best: 0.5605172 (713)
714: learn: 0.5600947 test: 0.5603569 best: 0.5603569 (714)
715: learn: 0.5599229 test: 0.5601862 best: 0.5601862 (715)
716: learn: 0.5597585 test: 0.5600219 best: 0.5600219 (716)
717: learn: 0.5595867 test: 0.5598506 best: 0.5598506 (717)
718: learn: 0.5594127 test: 0.5596769 best: 0.5596769 (718)
719: learn: 0.5592514 test: 0.5595160 best: 0.5595160 (719)
720: learn: 0.5590771 test: 0.5593416 best: 0.5593416 (720)
721: learn: 0.5589145 test: 0.5591793 best: 0.5591793 (721)
722: learn: 0.5587617 test: 0.5590270 best: 0.5590270 (722)
723: learn: 0.5586059 test: 0.5588721 best: 0.5588721 (723)
724: learn: 0.5584309 test: 0.5586974 best: 0.5586974 (724)
725: learn: 0.5582642 test: 0.5585317 best: 0.5585317 (725)
726: learn: 0.5581074 test: 0.5583756 best: 0.5583756 (726)
727: learn: 0.5579480 test: 0.5582166 best: 0.5582166 (727)
728: learn: 0.5577824 test: 0.5580505 best: 0.5580505 (728)
729: learn: 0.5576317 test: 0.5579002 best: 0.5579002 (729)
730: learn: 0.5574533 test: 0.5577219 best: 0.5577219 (730)
```

```
730: learn: 0.5574655 test: 0.5577219 best: 0.5577219 (730)
731: learn: 0.5573064 test: 0.5575759 best: 0.5575759 (731)
732: learn: 0.5571464 test: 0.5574171 best: 0.5574171 (732)
733: learn: 0.5569868 test: 0.5572583 best: 0.5572583 (733)
734: learn: 0.5568246 test: 0.5570959 best: 0.5570959 (734)
735: learn: 0.5566607 test: 0.5569313 best: 0.5569313 (735)
736: learn: 0.5565018 test: 0.5567730 best: 0.5567730 (736)
737: learn: 0.5563409 test: 0.5566125 best: 0.5566125 (737)
738: learn: 0.5561726 test: 0.5564441 best: 0.5564441 (738) total: 12.8s remaining: 4.51s
739: learn: 0.5560093 test: 0.5562813 best: 0.5562813 (739)
740: learn: 0.5558424 test: 0.5561157 best: 0.5561157 (740)
741: learn: 0.5556745 test: 0.5559486 best: 0.5559486 (741)
742: learn: 0.5555175 test: 0.5557926 best: 0.5557926 (742)
743: learn: 0.5553470 test: 0.5556221 best: 0.5556221 (743)
744: learn: 0.5551900 test: 0.5554660 best: 0.5554660 (744)
745: learn: 0.5550344 test: 0.5553105 best: 0.5553105 (745)
746: learn: 0.5548723 test: 0.5551490 best: 0.5551490 (746)
747: learn: 0.5547154 test: 0.5549922 best: 0.5549922 (747)
748: learn: 0.5545580 test: 0.5548355 best: 0.5548355 (748)
749: learn: 0.5543942 test: 0.5546728 best: 0.5546728 (749)
750: learn: 0.5542378 test: 0.5545164 best: 0.5545164 (750)
751: learn: 0.5540768 test: 0.5543553 best: 0.5543553 (751)
752: learn: 0.5539037 test: 0.5541820 best: 0.5541820 (752)
753: learn: 0.5537441 test: 0.5540226 best: 0.5540226 (753)
754: learn: 0.5535828 test: 0.5538616 best: 0.5538616 (754)
755: learn: 0.5534300 test: 0.5537093 best: 0.5537093 (755)
756: learn: 0.5532692 test: 0.5535483 best: 0.5535483 (756)
757: learn: 0.5531053 test: 0.5533848 best: 0.5533848 (757)
758: learn: 0.5529454 test: 0.5532244 best: 0.5532244 (758)
759: learn: 0.5527771 test: 0.5530560 best: 0.5530560 (759)
760: learn: 0.5526129 test: 0.5528932 best: 0.5528932 (760)
761: learn: 0.5524466 test: 0.5527267 best: 0.5527267 (761)
762: learn: 0.5522746 test: 0.5525555 best: 0.5525555 (762)
763: learn: 0.5521203 test: 0.5524014 best: 0.5524014 (763)
764: learn: 0.5519752 test: 0.5522566 best: 0.5522566 (764)
765: learn: 0.5518105 test: 0.5520924 best: 0.5520924 (765)
766: learn: 0.5516523 test: 0.5519343 best: 0.5519343 (766)
767: learn: 0.5514876 test: 0.5517700 best: 0.5517700 (767)
768: learn: 0.5513211 test: 0.5516039 best: 0.5516039 (768)
769: learn: 0.5511469 test: 0.5514305 best: 0.5514305 (769)
770: learn: 0.5509943 test: 0.5512787 best: 0.5512787 (770)
771: learn: 0.5508201 test: 0.5511042 best: 0.5511042 (771)
772: learn: 0.5506532 test: 0.5509375 best: 0.5509375 (772)
773: learn: 0.5504898 test: 0.5507738 best: 0.5507738 (773)
774: learn: 0.5503300 test: 0.5506144 best: 0.5506144 (774)
775: learn: 0.5501673 test: 0.5504510 best: 0.5504510 (775)
776: learn: 0.5500014 test: 0.5502855 best: 0.5502855 (776) total: 13.4s remaining: 3.85s
777: learn: 0.5498316 test: 0.5501166 best: 0.5501166 (777)
778: learn: 0.5496724 test: 0.5499573 best: 0.5499573 (778)
779: learn: 0.5495150 test: 0.5498007 best: 0.5498007 (779)
780: learn: 0.5493582 test: 0.5496446 best: 0.5496446 (780)
781: learn: 0.5491971 test: 0.5494835 best: 0.5494835 (781)
782: learn: 0.5490378 test: 0.5493244 best: 0.5493244 (782)
783: learn: 0.5488719 test: 0.5491587 best: 0.5491587 (783)
784: learn: 0.5487172 test: 0.5490042 best: 0.5490042 (784)
785: learn: 0.5485600 test: 0.5488472 best: 0.5488472 (785)
786: learn: 0.5484038 test: 0.5486915 best: 0.5486915 (786)
787: learn: 0.5482334 test: 0.5485207 best: 0.5485207 (787)
788: learn: 0.5480680 test: 0.5483550 best: 0.5483550 (788)
789: learn: 0.5479101 test: 0.5481974 best: 0.5481974 (789)
790: learn: 0.5477462 test: 0.5480345 best: 0.5480345 (790)
791: learn: 0.5475761 test: 0.5478645 best: 0.5478645 (791)
792: learn: 0.5474170 test: 0.5477056 best: 0.5477056 (792)
793: learn: 0.5472533 test: 0.5475412 best: 0.5475412 (793)
794: learn: 0.5471003 test: 0.5473884 best: 0.5473884 (794)
795: learn: 0.5469366 test: 0.5472244 best: 0.5472244 (795)
796: learn: 0.5467811 test: 0.5470692 best: 0.5470692 (796)
797: learn: 0.5466269 test: 0.5469153 best: 0.5469153 (797)
798: learn: 0.5464675 test: 0.5467552 best: 0.5467552 (798)
799: learn: 0.5463010 test: 0.5465888 best: 0.5465888 (799)
800: learn: 0.5461369 test: 0.5464260 best: 0.5464260 (800)
801: learn: 0.5459698 test: 0.5462595 best: 0.5462595 (801)
802: learn: 0.5458055 test: 0.5460949 best: 0.5460949 (802)
803: learn: 0.5456370 test: 0.5459264 best: 0.5459264 (803)
804: learn: 0.5454866 test: 0.5457768 best: 0.5457768 (804)
805: learn: 0.5453253 test: 0.5456159 best: 0.5456159 (805)
806: learn: 0.5451637 test: 0.5454543 best: 0.5454543 (806)
807: learn: 0.5450034 test: 0.5452945 best: 0.5452945 (807)
```

```
807: learn: 0.5450054 test: 0.5452945 best: 0.5452945 (807)
808: learn: 0.5448449 test: 0.5451374 best: 0.5451374 (808)
809: learn: 0.5446808 test: 0.5449732 best: 0.5449732 (809)
810: learn: 0.5445187 test: 0.5448116 best: 0.5448116 (810)
811: learn: 0.5443617 test: 0.5446551 best: 0.5446551 (811)
812: learn: 0.5442021 test: 0.5444954 best: 0.5444954 (812)
813: learn: 0.5440306 test: 0.5443248 best: 0.5443248 (813)
814: learn: 0.5438663 test: 0.5441605 best: 0.5441605 (814)
815: learn: 0.5436997 test: 0.5439936 best: 0.5439936 (815)
816: learn: 0.5435435 test: 0.5438382 best: 0.5438382 (816)
817: learn: 0.5433881 test: 0.5436832 best: 0.5436832 (817)
818: learn: 0.5432280 test: 0.5435230 best: 0.5435230 (818)
819: learn: 0.5430637 test: 0.5433595 best: 0.5433595 (819)
820: learn: 0.5429076 test: 0.5432035 best: 0.5432035 (820)
821: learn: 0.5427429 test: 0.5430392 best: 0.5430392 (821)
822: learn: 0.5425837 test: 0.5428799 best: 0.5428799 (822)
823: learn: 0.5424386 test: 0.5427348 best: 0.5427348 (823)
824: learn: 0.5422826 test: 0.5425789 best: 0.5425789 (824)
825: learn: 0.5421242 test: 0.5424203 best: 0.5424203 (825)
826: learn: 0.5419676 test: 0.5422641 best: 0.5422641 (826)
827: learn: 0.5418042 test: 0.5421005 best: 0.5421005 (827)
828: learn: 0.5416510 test: 0.5419474 best: 0.5419474 (828)
829: learn: 0.5414915 test: 0.5417888 best: 0.5417888 (829)
830: learn: 0.5413267 test: 0.5416240 best: 0.5416240 (830)
831: learn: 0.5411688 test: 0.5414666 best: 0.5414666 (831)
832: learn: 0.5410113 test: 0.5413092 best: 0.5413092 (832)
833: learn: 0.5408584 test: 0.5411569 best: 0.5411569 (833)
834: learn: 0.5407013 test: 0.5410006 best: 0.5410006 (834)
835: learn: 0.5405486 test: 0.5408476 best: 0.5408476 (835)
836: learn: 0.5403918 test: 0.5406923 best: 0.5406923 (836)
837: learn: 0.5402282 test: 0.5405294 best: 0.5405294 (837)
838: learn: 0.5400698 test: 0.5403707 best: 0.5403707 (838)
839: learn: 0.5399083 test: 0.5402099 best: 0.5402099 (839)
840: learn: 0.5397550 test: 0.5400570 best: 0.5400570 (840)
841: learn: 0.5396009 test: 0.5399032 best: 0.5399032 (841)
842: learn: 0.5394470 test: 0.5397495 best: 0.5397495 (842)
843: learn: 0.5392842 test: 0.5395863 best: 0.5395863 (843)
844: learn: 0.5391279 test: 0.5394310 best: 0.5394310 (844)
845: learn: 0.5389678 test: 0.5392716 best: 0.5392716 (845)
846: learn: 0.5388104 test: 0.5391138 best: 0.5391138 (846)
847: learn: 0.5386577 test: 0.5389608 best: 0.5389608 (847)
848: learn: 0.5384957 test: 0.5387986 best: 0.5387986 (848)
849: learn: 0.5383294 test: 0.5386328 best: 0.5386328 (849)
850: learn: 0.5381625 test: 0.5384660 best: 0.5384660 (850)
851: learn: 0.5380057 test: 0.5383101 best: 0.5383101 (851)
852: learn: 0.5378427 test: 0.5381480 best: 0.5381480 (852)
853: learn: 0.5376845 test: 0.5379901 best: 0.5379901 (853)
854: learn: 0.5375245 test: 0.5378305 best: 0.5378305 (854)
855: learn: 0.5373667 test: 0.5376730 best: 0.5376730 (855)
856: learn: 0.5372147 test: 0.5375223 best: 0.5375223 (856)
857: learn: 0.5370472 test: 0.5373544 best: 0.5373544 (857)
858: learn: 0.5368941 test: 0.5372022 best: 0.5372022 (858)
859: learn: 0.5367342 test: 0.5370424 best: 0.5370424 (859)
860: learn: 0.5365762 test: 0.5368844 best: 0.5368844 (860)
861: learn: 0.5364217 test: 0.5367304 best: 0.5367304 (861)
862: learn: 0.5362610 test: 0.5365699 best: 0.5365699 (862)
863: learn: 0.5361003 test: 0.5364096 best: 0.5364096 (863) total: 14.9s remaining: 2.34s
864: learn: 0.5359304 test: 0.5362399 best: 0.5362399 (864)
865: learn: 0.5357801 test: 0.5360904 best: 0.5360904 (865)
866: learn: 0.5356251 test: 0.5359358 best: 0.5359358 (866)
867: learn: 0.5354659 test: 0.5357774 best: 0.5357774 (867)
868: learn: 0.5353070 test: 0.5356188 best: 0.5356188 (868)
869: learn: 0.5351623 test: 0.5354739 best: 0.5354739 (869)
870: learn: 0.5350113 test: 0.5353230 best: 0.5353230 (870)
871: learn: 0.5348543 test: 0.5351668 best: 0.5351668 (871)
872: learn: 0.5347024 test: 0.5350153 best: 0.5350153 (872)
873: learn: 0.5345388 test: 0.5348512 best: 0.5348512 (873)
874: learn: 0.5343785 test: 0.5346904 best: 0.5346904 (874)
875: learn: 0.5342193 test: 0.5345317 best: 0.5345317 (875)
876: learn: 0.5340615 test: 0.5343747 best: 0.5343747 (876)
877: learn: 0.5339090 test: 0.5342225 best: 0.5342225 (877)
878: learn: 0.5337575 test: 0.5340714 best: 0.5340714 (878)
879: learn: 0.5335996 test: 0.5339141 best: 0.5339141 (879)
880: learn: 0.5334443 test: 0.5337585 best: 0.5337585 (880)
881: learn: 0.5332865 test: 0.5336014 best: 0.5336014 (881)
882: learn: 0.5331315 test: 0.5334465 best: 0.5334465 (882)
883: learn: 0.5329684 test: 0.5332841 best: 0.5332841 (883)
884: learn: 0.5328146 test: 0.5331307 best: 0.5331307 (884)
```

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884: learn: 0.5328140 test: 0.5331507 best: 0.5331507 (884)
885: learn: 0.5326650 test: 0.5329817 best: 0.5329817 (885)
886: learn: 0.5325105 test: 0.5328276 best: 0.5328276 (886)
887: learn: 0.5323656 test: 0.5326830 best: 0.5326830 (887)
888: learn: 0.5322037 test: 0.5325215 best: 0.5325215 (888)
889: learn: 0.5320513 test: 0.5323694 best: 0.5323694 (889)
890: learn: 0.5318893 test: 0.5322076 best: 0.5322076 (890)
891: learn: 0.5317332 test: 0.5320521 best: 0.5320521 (891)
892: learn: 0.5315766 test: 0.5318958 best: 0.5318958 (892)
893: learn: 0.5314221 test: 0.5317415 best: 0.5317415 (893)
894: learn: 0.5312698 test: 0.5315894 best: 0.5315894 (894)
895: learn: 0.5311215 test: 0.5314416 best: 0.5314416 (895)
896: learn: 0.5309717 test: 0.5312918 best: 0.5312918 (896)
897: learn: 0.5308097 test: 0.5311310 best: 0.5311310 (897)
898: learn: 0.5306560 test: 0.5309774 best: 0.5309774 (898)
899: learn: 0.5305012 test: 0.5308226 best: 0.5308226 (899)
900: learn: 0.5303459 test: 0.5306673 best: 0.5306673 (900)
901: learn: 0.5301955 test: 0.5305176 best: 0.5305176 (901)
902: learn: 0.5300432 test: 0.5303661 best: 0.5303661 (902)
903: learn: 0.5298836 test: 0.5302069 best: 0.5302069 (903)
904: learn: 0.5297311 test: 0.5300547 best: 0.5300547 (904)
905: learn: 0.5295796 test: 0.5299035 best: 0.5299035 (905)
906: learn: 0.5294255 test: 0.5297507 best: 0.5297507 (906)
907: learn: 0.5292754 test: 0.5296005 best: 0.5296005 (907)
908: learn: 0.5291210 test: 0.5294463 best: 0.5294463 (908)
909: learn: 0.5289616 test: 0.5292866 best: 0.5292866 (909)
910: learn: 0.5287997 test: 0.5291248 best: 0.5291248 (910)
911: learn: 0.5286513 test: 0.5289770 best: 0.5289770 (911)
912: learn: 0.5284939 test: 0.5288199 best: 0.5288199 (912)
913: learn: 0.5283447 test: 0.5286714 best: 0.5286714 (913)
914: learn: 0.5281963 test: 0.5285234 best: 0.5285234 (914)
915: learn: 0.5280437 test: 0.5283707 best: 0.5283707 (915)
916: learn: 0.5278945 test: 0.5282217 best: 0.5282217 (916)
917: learn: 0.5277423 test: 0.5280701 best: 0.5280701 (917)
918: learn: 0.5276027 test: 0.5279305 best: 0.5279305 (918)
919: learn: 0.5274465 test: 0.5277740 best: 0.5277740 (919)
920: learn: 0.5272936 test: 0.5276215 best: 0.5276215 (920)
921: learn: 0.5271394 test: 0.5274678 best: 0.5274678 (921)
922: learn: 0.5269829 test: 0.5273124 best: 0.5273124 (922)
923: learn: 0.5268366 test: 0.5271663 best: 0.5271663 (923)
924: learn: 0.5266905 test: 0.5270202 best: 0.5270202 (924)
925: learn: 0.5265364 test: 0.5268663 best: 0.5268663 (925)
926: learn: 0.5263809 test: 0.5267105 best: 0.5267105 (926)
927: learn: 0.5262261 test: 0.5265564 best: 0.5265564 (927)
928: learn: 0.5260751 test: 0.5264058 best: 0.5264058 (928)
929: learn: 0.5259198 test: 0.5262506 best: 0.5262506 (929)
930: learn: 0.5257609 test: 0.5260920 best: 0.5260920 (930)
931: learn: 0.5255991 test: 0.5259295 best: 0.5259295 (931) total: 16.1s remaining: 1.17s
932: learn: 0.5254477 test: 0.5257777 best: 0.5257777 (932)
933: learn: 0.5253061 test: 0.5256368 best: 0.5256368 (933)
934: learn: 0.5251450 test: 0.5254759 best: 0.5254759 (934)
935: learn: 0.5249942 test: 0.5253249 best: 0.5253249 (935)
936: learn: 0.5248355 test: 0.5251674 best: 0.5251674 (936)
937: learn: 0.5246816 test: 0.5250140 best: 0.5250140 (937)
938: learn: 0.5245434 test: 0.5248765 best: 0.5248765 (938)
939: learn: 0.5243944 test: 0.5247282 best: 0.5247282 (939)
940: learn: 0.5242327 test: 0.5245670 best: 0.5245670 (940)
941: learn: 0.5240851 test: 0.5244196 best: 0.5244196 (941)
942: learn: 0.5239292 test: 0.5242638 best: 0.5242638 (942)
943: learn: 0.5237700 test: 0.5241047 best: 0.5241047 (943)
944: learn: 0.5236192 test: 0.5239542 best: 0.5239542 (944)
945: learn: 0.5234660 test: 0.5238016 best: 0.5238016 (945)
946: learn: 0.5233003 test: 0.5236365 best: 0.5236365 (946)
947: learn: 0.5231508 test: 0.5234873 best: 0.5234873 (947)
948: learn: 0.5230001 test: 0.5233364 best: 0.5233364 (948)
949: learn: 0.5228480 test: 0.5231854 best: 0.5231854 (949)
950: learn: 0.5226915 test: 0.5230289 best: 0.5230289 (950)
951: learn: 0.5225385 test: 0.5228755 best: 0.5228755 (951)
952: learn: 0.5223844 test: 0.5227218 best: 0.5227218 (952)
953: learn: 0.5222351 test: 0.5225738 best: 0.5225738 (953)
954: learn: 0.5220875 test: 0.5224266 best: 0.5224266 (954)
955: learn: 0.5219449 test: 0.5222842 best: 0.5222842 (955)
956: learn: 0.5217980 test: 0.5221386 best: 0.5221386 (956)
957: learn: 0.5216411 test: 0.5219824 best: 0.5219824 (957)
958: learn: 0.5214817 test: 0.5218230 best: 0.5218230 (958)
959: learn: 0.5213327 test: 0.5216746 best: 0.5216746 (959)
960: learn: 0.5211819 test: 0.5215234 best: 0.5215234 (960)
961: learn: 0.5210278 test: 0.5213697 best: 0.5213697 (961)
```

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961: learn: 0.5210278 test: 0.5213697 best: 0.5213697 (961)
962: learn: 0.5208713 test: 0.5212127 best: 0.5212127 (962)
963: learn: 0.5207247 test: 0.5210667 best: 0.5210667 (963)
964: learn: 0.5205704 test: 0.5209132 best: 0.5209132 (964)
965: learn: 0.5204205 test: 0.5207627 best: 0.5207627 (965)
966: learn: 0.5202613 test: 0.5206045 best: 0.5206045 (966)
967: learn: 0.5201170 test: 0.5204605 best: 0.5204605 (967)
968: learn: 0.5199580 test: 0.5203014 best: 0.5203014 (968)
969: learn: 0.5198068 test: 0.5201499 best: 0.5201499 (969)
970: learn: 0.5196642 test: 0.5200082 best: 0.5200082 (970)
971: learn: 0.5195147 test: 0.5198590 best: 0.5198590 (971)
972: learn: 0.5193811 test: 0.5197253 best: 0.5197253 (972)
973: learn: 0.5192274 test: 0.5195720 best: 0.5195720 (973)
974: learn: 0.5190748 test: 0.5194192 best: 0.5194192 (974)
975: learn: 0.5189299 test: 0.5192749 best: 0.5192749 (975)
976: learn: 0.5187952 test: 0.5191403 best: 0.5191403 (976)
977: learn: 0.5186513 test: 0.5189964 best: 0.5189964 (977)
978: learn: 0.5185077 test: 0.5188527 best: 0.5188527 (978)
979: learn: 0.5183630 test: 0.5187086 best: 0.5187086 (979)
980: learn: 0.5181998 test: 0.5185459 best: 0.5185459 (980)
981: learn: 0.5180446 test: 0.5183916 best: 0.5183916 (981)
982: learn: 0.5179051 test: 0.5182528 best: 0.5182528 (982)
983: learn: 0.5177627 test: 0.5181112 best: 0.5181112 (983)
984: learn: 0.5176187 test: 0.5179675 best: 0.5179675 (984)
985: learn: 0.5174735 test: 0.5178219 best: 0.5178219 (985)
986: learn: 0.5173238 test: 0.5176724 best: 0.5176724 (986)
987: learn: 0.5171735 test: 0.5175229 best: 0.5175229 (987)
988: learn: 0.5170290 test: 0.5173789 best: 0.5173789 (988)
989: learn: 0.5168835 test: 0.5172335 best: 0.5172335 (989)
990: learn: 0.5167294 test: 0.5170798 best: 0.5170798 (990)
991: learn: 0.5165869 test: 0.5169368 best: 0.5169368 (991)
992: learn: 0.5164355 test: 0.5167849 best: 0.5167849 (992)
993: learn: 0.5162847 test: 0.5166339 best: 0.5166339 (993)
994: learn: 0.5161313 test: 0.5164801 best: 0.5164801 (994)
995: learn: 0.5159764 test: 0.5163262 best: 0.5163262 (995)
996: learn: 0.5158212 test: 0.5161714 best: 0.5161714 (996)
997: learn: 0.5156599 test: 0.5160111 best: 0.5160111 (997)
998: learn: 0.5155101 test: 0.5158615 best: 0.5158615 (998)
999: learn: 0.5153686 test: 0.5157197 best: 0.5157197 (999) total: 17.2s remaining: 0us
0: learn: 0.6909492 test: 0.6909490 best: 0.6909490 (0)
1: learn: 0.6887891 test: 0.6887938 best: 0.6887938 (1)
2: learn: 0.6868389 test: 0.6868514 best: 0.6868514 (2)
3: learn: 0.6847432 test: 0.6847597 best: 0.6847597 (3)
4: learn: 0.6827522 test: 0.6827694 best: 0.6827694 (4)
5: learn: 0.6805595 test: 0.6805803 best: 0.6805803 (5)
6: learn: 0.6785507 test: 0.6785760 best: 0.6785760 (6)
7: learn: 0.6764441 test: 0.6764742 best: 0.6764742 (7)
8: learn: 0.6744071 test: 0.6744373 best: 0.6744373 (8)
9: learn: 0.6723901 test: 0.6724234 best: 0.6724234 (9)
10: learn: 0.6702644 test: 0.6703064 best: 0.6703064 (10)
11: learn: 0.6682350 test: 0.6682824 best: 0.6682824 (11)
12: learn: 0.6663687 test: 0.6664181 best: 0.6664181 (12)
13: learn: 0.6644209 test: 0.6644733 best: 0.6644733 (13)
14: learn: 0.6622824 test: 0.6623422 best: 0.6623422 (14)
15: learn: 0.6601054 test: 0.6601696 best: 0.6601696 (15)
16: learn: 0.6581621 test: 0.6582292 best: 0.6582292 (16)
17: learn: 0.6561837 test: 0.6562529 best: 0.6562529 (17)
18: learn: 0.6541364 test: 0.6542066 best: 0.6542066 (18)
19: learn: 0.6522381 test: 0.6523114 best: 0.6523114 (19)
20: learn: 0.6503119 test: 0.6503880 best: 0.6503880 (20)
21: learn: 0.6483675 test: 0.6484457 best: 0.6484457 (21)
22: learn: 0.6463497 test: 0.6464360 best: 0.6464360 (22)
23: learn: 0.6445344 test: 0.6446268 best: 0.6446268 (23)
24: learn: 0.6427898 test: 0.6428808 best: 0.6428808 (24)
25: learn: 0.6409378 test: 0.6410313 best: 0.6410313 (25)
26: learn: 0.6390934 test: 0.6391884 best: 0.6391884 (26)
27: learn: 0.6372714 test: 0.6373709 best: 0.6373709 (27)
28: learn: 0.6352381 test: 0.6353388 best: 0.6353388 (28)
29: learn: 0.6334083 test: 0.6335133 best: 0.6335133 (29)
30: learn: 0.6315429 test: 0.6316546 best: 0.6316546 (30)
31: learn: 0.6297196 test: 0.6298368 best: 0.6298368 (31)
32: learn: 0.6277788 test: 0.6278953 best: 0.6278953 (32)
33: learn: 0.6257227 test: 0.6258461 best: 0.6258461 (33)
34: learn: 0.6239722 test: 0.6240987 best: 0.6240987 (34)
35: learn: 0.6222420 test: 0.6223699 best: 0.6223699 (35)
36: learn: 0.6203607 test: 0.6204935 best: 0.6204935 (36)
37: learn: 0.6186178 test: 0.6187519 best: 0.6187519 (37)
38: learn: 0.6168466 test: 0.6169837 best: 0.6169837 (38)
```

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38: learn: 0.6168466 test: 0.6169837 best: 0.6169837 (38)
39: learn: 0.6149745 test: 0.6151163 best: 0.6151163 (39)
40: learn: 0.6129914 test: 0.6131374 best: 0.6131374 (40)
41: learn: 0.6113355 test: 0.6114831 best: 0.6114831 (41)
42: learn: 0.6093218 test: 0.6094710 best: 0.6094710 (42)
43: learn: 0.6074143 test: 0.6075686 best: 0.6075686 (43)
44: learn: 0.6056634 test: 0.6058209 best: 0.6058209 (44)
45: learn: 0.6039261 test: 0.6040878 best: 0.6040878 (45)
46: learn: 0.6020524 test: 0.6022177 best: 0.6022177 (46)
47: learn: 0.6003983 test: 0.6005688 best: 0.6005688 (47)
48: learn: 0.5986249 test: 0.5988077 best: 0.5988077 (48)
49: learn: 0.5968916 test: 0.5970803 best: 0.5970803 (49)
50: learn: 0.5950199 test: 0.5952158 best: 0.5952158 (50)
51: learn: 0.5934008 test: 0.5936000 best: 0.5936000 (51)
52: learn: 0.5916684 test: 0.5918739 best: 0.5918739 (52)
53: learn: 0.5897736 test: 0.5899816 best: 0.5899816 (53)
54: learn: 0.5880867 test: 0.5883029 best: 0.5883029 (54)
55: learn: 0.5863734 test: 0.5865965 best: 0.5865965 (55)
56: learn: 0.5846582 test: 0.5848811 best: 0.5848811 (56)
57: learn: 0.5828890 test: 0.5831145 best: 0.5831145 (57)
58: learn: 0.5811228 test: 0.5813519 best: 0.5813519 (58)
59: learn: 0.5794027 test: 0.5796353 best: 0.5796353 (59)
60: learn: 0.5777272 test: 0.5779627 best: 0.5779627 (60) total: 1.04s remaining: 16s
61: learn: 0.5761134 test: 0.5763521 best: 0.5763521 (61)
62: learn: 0.5741988 test: 0.5744413 best: 0.5744413 (62)
63: learn: 0.5724201 test: 0.5726670 best: 0.5726670 (63)
64: learn: 0.5706943 test: 0.5709442 best: 0.5709442 (64)
65: learn: 0.5689653 test: 0.5692183 best: 0.5692183 (65)
66: learn: 0.5674561 test: 0.5677113 best: 0.5677113 (66)
67: learn: 0.5657894 test: 0.5660491 best: 0.5660491 (67)
68: learn: 0.5640666 test: 0.5643285 best: 0.5643285 (68)
69: learn: 0.5623642 test: 0.5626291 best: 0.5626291 (69)
70: learn: 0.5608352 test: 0.5611036 best: 0.5611036 (70)
71: learn: 0.5592090 test: 0.5594808 best: 0.5594808 (71)
72: learn: 0.5574925 test: 0.5577669 best: 0.5577669 (72)
73: learn: 0.5558760 test: 0.5561520 best: 0.5561520 (73)
74: learn: 0.5542060 test: 0.5544808 best: 0.5544808 (74)
75: learn: 0.5525310 test: 0.5528100 best: 0.5528100 (75)
76: learn: 0.5509915 test: 0.5512732 best: 0.5512732 (76)
77: learn: 0.5494096 test: 0.5496921 best: 0.5496921 (77)
78: learn: 0.5478364 test: 0.5481224 best: 0.5481224 (78)
79: learn: 0.5462280 test: 0.5465153 best: 0.5465153 (79)
80: learn: 0.5447100 test: 0.5450034 best: 0.5450034 (80)
81: learn: 0.5430109 test: 0.5433112 best: 0.5433112 (81)
82: learn: 0.5416161 test: 0.5419233 best: 0.5419233 (82)
83: learn: 0.5400745 test: 0.5403850 best: 0.5403850 (83)
84: learn: 0.5386069 test: 0.5389188 best: 0.5389188 (84)
85: learn: 0.5370119 test: 0.5373224 best: 0.5373224 (85)
86: learn: 0.5354862 test: 0.5358016 best: 0.5358016 (86)
87: learn: 0.5338079 test: 0.5341263 best: 0.5341263 (87)
88: learn: 0.5322380 test: 0.5325579 best: 0.5325579 (88)
89: learn: 0.5308079 test: 0.5311277 best: 0.5311277 (89)
90: learn: 0.5291523 test: 0.5294728 best: 0.5294728 (90)
91: learn: 0.5277027 test: 0.5280253 best: 0.5280253 (91)
92: learn: 0.5261616 test: 0.5264867 best: 0.5264867 (92)
93: learn: 0.5246287 test: 0.5249551 best: 0.5249551 (93)
94: learn: 0.5232710 test: 0.5235988 best: 0.5235988 (94)
95: learn: 0.5219070 test: 0.5222370 best: 0.5222370 (95) total: 1.73s remaining: 16.3s
96: learn: 0.5203640 test: 0.5207002 best: 0.5207002 (96)
97: learn: 0.5189807 test: 0.5193183 best: 0.5193183 (97)
98: learn: 0.5175922 test: 0.5179355 best: 0.5179355 (98)
99: learn: 0.5161273 test: 0.5164756 best: 0.5164756 (99)
100: learn: 0.5146742 test: 0.5150263 best: 0.5150263 (100)
101: learn: 0.5131781 test: 0.5135426 best: 0.5135426 (101)
102: learn: 0.5117806 test: 0.5121554 best: 0.5121554 (102)
103: learn: 0.5101633 test: 0.5105418 best: 0.5105418 (103)
104: learn: 0.5088565 test: 0.5092413 best: 0.5092413 (104)
105: learn: 0.5073990 test: 0.5077865 best: 0.5077865 (105)
106: learn: 0.5058363 test: 0.5062275 best: 0.5062275 (106)
107: learn: 0.5043135 test: 0.5047097 best: 0.5047097 (107)
108: learn: 0.5029007 test: 0.5032989 best: 0.5032989 (108)
109: learn: 0.5014583 test: 0.5018624 best: 0.5018624 (109)
110: learn: 0.5000792 test: 0.5004887 best: 0.5004887 (110)
111: learn: 0.4987394 test: 0.4991502 best: 0.4991502 (111)
112: learn: 0.4973358 test: 0.4977471 best: 0.4977471 (112)
113: learn: 0.4959058 test: 0.4963266 best: 0.4963266 (113)
114: learn: 0.4944871 test: 0.4949112 best: 0.4949112 (114)
115: learn: 0.4931022 test: 0.4935290 best: 0.4935290 (115)
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115: learn: 0.4931032 test: 0.4935290 best: 0.4935290 (115)
116: learn: 0.4916705 test: 0.4921002 best: 0.4921002 (116)
117: learn: 0.4903380 test: 0.4907699 best: 0.4907699 (117)
118: learn: 0.4888144 test: 0.4892504 best: 0.4892504 (118)
119: learn: 0.4873889 test: 0.4878283 best: 0.4878283 (119)
120: learn: 0.4860960 test: 0.4865380 best: 0.4865380 (120)
121: learn: 0.4847380 test: 0.4851849 best: 0.4851849 (121)
122: learn: 0.4832696 test: 0.4837189 best: 0.4837189 (122)
123: learn: 0.4818990 test: 0.4823504 best: 0.4823504 (123)
124: learn: 0.4806045 test: 0.4810582 best: 0.4810582 (124)
125: learn: 0.4791486 test: 0.4796059 best: 0.4796059 (125)
126: learn: 0.4776830 test: 0.4781449 best: 0.4781449 (126)
127: learn: 0.4762196 test: 0.4766822 best: 0.4766822 (127)
128: learn: 0.4750050 test: 0.4754738 best: 0.4754738 (128)
129: learn: 0.4736000 test: 0.4740743 best: 0.4740743 (129)
130: learn: 0.4721893 test: 0.4726660 best: 0.4726660 (130)
131: learn: 0.4709282 test: 0.4714065 best: 0.4714065 (131)
132: learn: 0.4696119 test: 0.4700973 best: 0.4700973 (132)
133: learn: 0.4682925 test: 0.4687799 best: 0.4687799 (133)
134: learn: 0.4669566 test: 0.4674485 best: 0.4674485 (134)
135: learn: 0.4655726 test: 0.4660684 best: 0.4660684 (135)
136: learn: 0.4644054 test: 0.4649017 best: 0.4649017 (136)
137: learn: 0.4632824 test: 0.4637828 best: 0.4637828 (137)
138: learn: 0.4620571 test: 0.4625599 best: 0.4625599 (138)
139: learn: 0.4607619 test: 0.4612663 best: 0.4612663 (139)
140: learn: 0.4593687 test: 0.4598778 best: 0.4598778 (140)
141: learn: 0.4581205 test: 0.4586391 best: 0.4586391 (141)
142: learn: 0.4568099 test: 0.4573339 best: 0.4573339 (142)
143: learn: 0.4554240 test: 0.4559502 best: 0.4559502 (143)
144: learn: 0.4541863 test: 0.4547140 best: 0.4547140 (144)
145: learn: 0.4530352 test: 0.4535690 best: 0.4535690 (145)
146: learn: 0.4517352 test: 0.4522726 best: 0.4522726 (146)
147: learn: 0.4504407 test: 0.4509807 best: 0.4509807 (147)
148: learn: 0.4491331 test: 0.4496733 best: 0.4496733 (148)
149: learn: 0.4478603 test: 0.4484018 best: 0.4484018 (149)
150: learn: 0.4466485 test: 0.4471923 best: 0.4471923 (150)
151: learn: 0.4454721 test: 0.4460217 best: 0.4460217 (151)
152: learn: 0.4441905 test: 0.4447440 best: 0.4447440 (152)
153: learn: 0.4430331 test: 0.4435861 best: 0.4435861 (153) total: 2.75s remaining: 15.1s
154: learn: 0.4418747 test: 0.4424297 best: 0.4424297 (154)
155: learn: 0.4407348 test: 0.4412939 best: 0.4412939 (155)
156: learn: 0.4395656 test: 0.4401286 best: 0.4401286 (156)
157: learn: 0.4383290 test: 0.4388950 best: 0.4388950 (157)
158: learn: 0.4371481 test: 0.4377185 best: 0.4377185 (158)
159: learn: 0.4358967 test: 0.4364687 best: 0.4364687 (159)
160: learn: 0.4346058 test: 0.4351837 best: 0.4351837 (160)
161: learn: 0.4333649 test: 0.4339519 best: 0.4339519 (161)
162: learn: 0.4322231 test: 0.4328133 best: 0.4328133 (162)
163: learn: 0.4309927 test: 0.4315904 best: 0.4315904 (163)
164: learn: 0.4297911 test: 0.4303942 best: 0.4303942 (164)
165: learn: 0.4286108 test: 0.4292155 best: 0.4292155 (165)
166: learn: 0.4275269 test: 0.4281356 best: 0.4281356 (166)
167: learn: 0.4263224 test: 0.4269360 best: 0.4269360 (167)
168: learn: 0.4251484 test: 0.4257644 best: 0.4257644 (168)
169: learn: 0.4239319 test: 0.4245498 best: 0.4245498 (169)
170: learn: 0.4227473 test: 0.4233712 best: 0.4233712 (170)
171: learn: 0.4215186 test: 0.4221436 best: 0.4221436 (171)
172: learn: 0.4204416 test: 0.4210700 best: 0.4210700 (172)
173: learn: 0.4192215 test: 0.4198490 best: 0.4198490 (173)
174: learn: 0.4180365 test: 0.4186654 best: 0.4186654 (174)
175: learn: 0.4169761 test: 0.4176075 best: 0.4176075 (175)
176: learn: 0.4158516 test: 0.4164923 best: 0.4164923 (176)
177: learn: 0.4146966 test: 0.4153423 best: 0.4153423 (177)
178: learn: 0.4134482 test: 0.4140984 best: 0.4140984 (178)
179: learn: 0.4123762 test: 0.4130281 best: 0.4130281 (179)
180: learn: 0.4112161 test: 0.4118747 best: 0.4118747 (180)
181: learn: 0.4101294 test: 0.4107939 best: 0.4107939 (181)
182: learn: 0.4090893 test: 0.4097562 best: 0.4097562 (182)
183: learn: 0.4079928 test: 0.4086632 best: 0.4086632 (183)
184: learn: 0.4069358 test: 0.4076111 best: 0.4076111 (184)
185: learn: 0.4058051 test: 0.4064843 best: 0.4064843 (185)
186: learn: 0.4047371 test: 0.4054179 best: 0.4054179 (186)
187: learn: 0.4037251 test: 0.4044099 best: 0.4044099 (187)
188: learn: 0.4026817 test: 0.4033694 best: 0.4033694 (188)
189: learn: 0.4016463 test: 0.4023391 best: 0.4023391 (189)
190: learn: 0.4005886 test: 0.4012751 best: 0.4012751 (190)
191: learn: 0.3995403 test: 0.4002280 best: 0.4002280 (191)
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192: learn: 0.3984618 test: 0.3991549 best: 0.3991549 (192)
193: learn: 0.3974156 test: 0.3981114 best: 0.3981114 (193)
194: learn: 0.3963050 test: 0.3970061 best: 0.3970061 (194)
195: learn: 0.3953190 test: 0.3960236 best: 0.3960236 (195)
196: learn: 0.3943553 test: 0.3950612 best: 0.3950612 (196)
197: learn: 0.3932964 test: 0.3940048 best: 0.3940048 (197)
198: learn: 0.3922651 test: 0.3929742 best: 0.3929742 (198)
199: learn: 0.3911270 test: 0.3918380 best: 0.3918380 (199)
200: learn: 0.3901504 test: 0.3908665 best: 0.3908665 (200)
201: learn: 0.3890610 test: 0.3897841 best: 0.3897841 (201)
202: learn: 0.3879434 test: 0.3886703 best: 0.3886703 (202)
203: learn: 0.3869250 test: 0.3876558 best: 0.3876558 (203)
204: learn: 0.3858873 test: 0.3866233 best: 0.3866233 (204)
205: learn: 0.3849096 test: 0.3856499 best: 0.3856499 (205)
206: learn: 0.3839001 test: 0.3846448 best: 0.3846448 (206)
207: learn: 0.3828145 test: 0.3835605 best: 0.3835605 (207)
208: learn: 0.3817981 test: 0.3825466 best: 0.3825466 (208)
209: learn: 0.3807913 test: 0.3815431 best: 0.3815431 (209)
210: learn: 0.3798077 test: 0.3805634 best: 0.3805634 (210)
211: learn: 0.3787604 test: 0.3795238 best: 0.3795238 (211)
212: learn: 0.3777921 test: 0.3785566 best: 0.3785566 (212)
213: learn: 0.3768200 test: 0.3775886 best: 0.3775886 (213)
214: learn: 0.3759820 test: 0.3767524 best: 0.3767524 (214)
215: learn: 0.3749281 test: 0.3756992 best: 0.3756992 (215)
216: learn: 0.3740036 test: 0.3747759 best: 0.3747759 (216)
217: learn: 0.3729686 test: 0.3737472 best: 0.3737472 (217)
218: learn: 0.3720436 test: 0.3728279 best: 0.3728279 (218)
219: learn: 0.3710334 test: 0.3718208 best: 0.3718208 (219)
220: learn: 0.3701005 test: 0.3708895 best: 0.3708895 (220)
221: learn: 0.3690700 test: 0.3698630 best: 0.3698630 (221)
222: learn: 0.3681272 test: 0.3689212 best: 0.3689212 (222)
223: learn: 0.3671625 test: 0.3679581 best: 0.3679581 (223)
224: learn: 0.3662482 test: 0.3670479 best: 0.3670479 (224)
225: learn: 0.3653229 test: 0.3661237 best: 0.3661237 (225)
226: learn: 0.3644204 test: 0.3652249 best: 0.3652249 (226)
227: learn: 0.3634268 test: 0.3642356 best: 0.3642356 (227)
228: learn: 0.3624631 test: 0.3632731 best: 0.3632731 (228)
229: learn: 0.3615858 test: 0.3623998 best: 0.3623998 (229)
230: learn: 0.3605444 test: 0.3613598 best: 0.3613598 (230)
231: learn: 0.3596823 test: 0.3604989 best: 0.3604989 (231)
232: learn: 0.3587469 test: 0.3595667 best: 0.3595667 (232)
233: learn: 0.3578585 test: 0.3586829 best: 0.3586829 (233)
234: learn: 0.3569721 test: 0.3577989 best: 0.3577989 (234)
235: learn: 0.3559943 test: 0.3568254 best: 0.3568254 (235)
236: learn: 0.3549799 test: 0.3558121 best: 0.3558121 (236)
237: learn: 0.3541223 test: 0.3549544 best: 0.3549544 (237)
238: learn: 0.3531415 test: 0.3539761 best: 0.3539761 (238) total: 4.15s remaining: 13.2s
239: learn: 0.3522258 test: 0.3530633 best: 0.3530633 (239)
240: learn: 0.3513210 test: 0.3521599 best: 0.3521599 (240)
241: learn: 0.3503417 test: 0.3511836 best: 0.3511836 (241)
242: learn: 0.3493977 test: 0.3502444 best: 0.3502444 (242)
243: learn: 0.3485183 test: 0.3493670 best: 0.3493670 (243)
244: learn: 0.3476133 test: 0.3484611 best: 0.3484611 (244)
245: learn: 0.3467523 test: 0.3476006 best: 0.3476006 (245)
246: learn: 0.3458444 test: 0.3466960 best: 0.3466960 (246)
247: learn: 0.3449793 test: 0.3458316 best: 0.3458316 (247)
248: learn: 0.3441255 test: 0.3449792 best: 0.3449792 (248)
249: learn: 0.3432883 test: 0.3441459 best: 0.3441459 (249)
250: learn: 0.3424181 test: 0.3432770 best: 0.3432770 (250)
251: learn: 0.3415473 test: 0.3424116 best: 0.3424116 (251)
252: learn: 0.3406632 test: 0.3415281 best: 0.3415281 (252)
253: learn: 0.3397401 test: 0.3406050 best: 0.3406050 (253)
254: learn: 0.3389174 test: 0.3397853 best: 0.3397853 (254)
255: learn: 0.3380088 test: 0.3388772 best: 0.3388772 (255)
256: learn: 0.3371191 test: 0.3379909 best: 0.3379909 (256)
257: learn: 0.3363046 test: 0.3371802 best: 0.3371802 (257)
258: learn: 0.3353392 test: 0.3362194 best: 0.3362194 (258)
259: learn: 0.3345216 test: 0.3354029 best: 0.3354029 (259)
260: learn: 0.3337177 test: 0.3346009 best: 0.3346009 (260)
261: learn: 0.3328727 test: 0.3337606 best: 0.3337606 (261)
262: learn: 0.3320099 test: 0.3329010 best: 0.3329010 (262)
263: learn: 0.3311803 test: 0.3320738 best: 0.3320738 (263)
264: learn: 0.3304069 test: 0.3313039 best: 0.3313039 (264)
265: learn: 0.3296525 test: 0.3305524 best: 0.3305524 (265)
266: learn: 0.3288731 test: 0.3297761 best: 0.3297761 (266)
267: learn: 0.3280558 test: 0.3289602 best: 0.3289602 (267)
268: learn: 0.3272926 test: 0.3281978 best: 0.3281978 (268)
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269: learn: 0.3265684 test: 0.3274767 best: 0.3274767 (269)
270: learn: 0.3257204 test: 0.3266288 best: 0.3266288 (270)
271: learn: 0.3249245 test: 0.3258346 best: 0.3258346 (271)
272: learn: 0.3242400 test: 0.3251502 best: 0.3251502 (272)
273: learn: 0.3233676 test: 0.3242829 best: 0.3242829 (273)
274: learn: 0.3225901 test: 0.3235101 best: 0.3235101 (274)
275: learn: 0.3217923 test: 0.3227133 best: 0.3227133 (275)
276: learn: 0.3210019 test: 0.3219262 best: 0.3219262 (276) total: 4.82s remaining: 12.6s
277: learn: 0.3202296 test: 0.3211560 best: 0.3211560 (277)
278: learn: 0.3194938 test: 0.3204232 best: 0.3204232 (278)
279: learn: 0.3186940 test: 0.3196280 best: 0.3196280 (279)
280: learn: 0.3179471 test: 0.3188823 best: 0.3188823 (280)
281: learn: 0.3171355 test: 0.3180723 best: 0.3180723 (281)
282: learn: 0.3163697 test: 0.3173143 best: 0.3173143 (282)
283: learn: 0.3157225 test: 0.3166694 best: 0.3166694 (283)
284: learn: 0.3149907 test: 0.3159423 best: 0.3159423 (284)
285: learn: 0.3142526 test: 0.3152092 best: 0.3152092 (285)
286: learn: 0.3135133 test: 0.3144713 best: 0.3144713 (286)
287: learn: 0.3128080 test: 0.3137716 best: 0.3137716 (287)
288: learn: 0.3120458 test: 0.3130158 best: 0.3130158 (288)
289: learn: 0.3113250 test: 0.3122962 best: 0.3122962 (289)
290: learn: 0.3105072 test: 0.3114802 best: 0.3114802 (290)
291: learn: 0.3097757 test: 0.3107509 best: 0.3107509 (291)
292: learn: 0.3090563 test: 0.3100347 best: 0.3100347 (292)
293: learn: 0.3082752 test: 0.3092596 best: 0.3092596 (293)
294: learn: 0.3074762 test: 0.3084626 best: 0.3084626 (294)
295: learn: 0.3066925 test: 0.3076814 best: 0.3076814 (295)
296: learn: 0.3060010 test: 0.3069926 best: 0.3069926 (296)
297: learn: 0.3052477 test: 0.3062407 best: 0.3062407 (297)
298: learn: 0.3046087 test: 0.3056024 best: 0.3056024 (298)
299: learn: 0.3038199 test: 0.3048170 best: 0.3048170 (299)
300: learn: 0.3031007 test: 0.3041011 best: 0.3041011 (300)
301: learn: 0.3023644 test: 0.3033673 best: 0.3033673 (301)
302: learn: 0.3016664 test: 0.3026704 best: 0.3026704 (302)
303: learn: 0.3009726 test: 0.3019774 best: 0.3019774 (303)
304: learn: 0.3003031 test: 0.3013114 best: 0.3013114 (304)
305: learn: 0.2995492 test: 0.3005607 best: 0.3005607 (305)
306: learn: 0.2988250 test: 0.2998371 best: 0.2998371 (306)
307: learn: 0.2981328 test: 0.2991480 best: 0.2991480 (307)
308: learn: 0.2974370 test: 0.2984560 best: 0.2984560 (308) total: 5.38s remaining: 12s
309: learn: 0.2966783 test: 0.2977009 best: 0.2977009 (309)
310: learn: 0.2959919 test: 0.2970211 best: 0.2970211 (310)
311: learn: 0.2952396 test: 0.2962719 best: 0.2962719 (311)
312: learn: 0.2945483 test: 0.2955820 best: 0.2955820 (312)
313: learn: 0.2938652 test: 0.2949007 best: 0.2949007 (313)
314: learn: 0.2931713 test: 0.2942107 best: 0.2942107 (314)
315: learn: 0.2924611 test: 0.2935042 best: 0.2935042 (315)
316: learn: 0.2918052 test: 0.2928544 best: 0.2928544 (316)
317: learn: 0.2911164 test: 0.2921717 best: 0.2921717 (317)
318: learn: 0.2903972 test: 0.2914544 best: 0.2914544 (318)
319: learn: 0.2897077 test: 0.2907700 best: 0.2907700 (319)
320: learn: 0.2890332 test: 0.2900971 best: 0.2900971 (320)
321: learn: 0.2883074 test: 0.2893735 best: 0.2893735 (321)
322: learn: 0.2876249 test: 0.2886944 best: 0.2886944 (322)
323: learn: 0.2871305 test: 0.2882004 best: 0.2882004 (323)
324: learn: 0.2864663 test: 0.2875398 best: 0.2875398 (324)
325: learn: 0.2857865 test: 0.2868646 best: 0.2868646 (325)
326: learn: 0.2851170 test: 0.2861969 best: 0.2861969 (326)
327: learn: 0.2844387 test: 0.2855200 best: 0.2855200 (327)
328: learn: 0.2838151 test: 0.2848982 best: 0.2848982 (328)
329: learn: 0.2831700 test: 0.2842576 best: 0.2842576 (329)
330: learn: 0.2825025 test: 0.2835960 best: 0.2835960 (330)
331: learn: 0.2817936 test: 0.2828937 best: 0.2828937 (331)
332: learn: 0.2811699 test: 0.2822729 best: 0.2822729 (332)
333: learn: 0.2804990 test: 0.2816056 best: 0.2816056 (333)
334: learn: 0.2798259 test: 0.2809353 best: 0.2809353 (334)
335: learn: 0.2791713 test: 0.2802829 best: 0.2802829 (335)
336: learn: 0.2785215 test: 0.2796370 best: 0.2796370 (336)
337: learn: 0.2778846 test: 0.2790008 best: 0.2790008 (337)
338: learn: 0.2772113 test: 0.2783302 best: 0.2783302 (338)
339: learn: 0.2765949 test: 0.2777164 best: 0.2777164 (339)
340: learn: 0.2759935 test: 0.2771163 best: 0.2771163 (340)
341: learn: 0.2753288 test: 0.2764551 best: 0.2764551 (341)
342: learn: 0.2747345 test: 0.2758652 best: 0.2758652 (342)
343: learn: 0.2740508 test: 0.2751850 best: 0.2751850 (343)
344: learn: 0.2734927 test: 0.2746281 best: 0.2746281 (344)
345: learn: 0.2728818 test: 0.2740169 best: 0.2740169 (345)
```

```
346: learn: 0.2722585 test: 0.2733950 best: 0.2733950 (346)
347: learn: 0.2716148 test: 0.2727511 best: 0.2727511 (347)
348: learn: 0.2710141 test: 0.2721509 best: 0.2721509 (348)
349: learn: 0.2704246 test: 0.2715640 best: 0.2715640 (349)
350: learn: 0.2698871 test: 0.2710279 best: 0.2710279 (350)
351: learn: 0.2692993 test: 0.2704427 best: 0.2704427 (351)
352: learn: 0.2686536 test: 0.2697984 best: 0.2697984 (352)
353: learn: 0.2680523 test: 0.2692022 best: 0.2692022 (353)
354: learn: 0.2674333 test: 0.2685905 best: 0.2685905 (354)
355: learn: 0.2668949 test: 0.2680560 best: 0.2680560 (355)
356: learn: 0.2662654 test: 0.2674303 best: 0.2674303 (356)
357: learn: 0.2656661 test: 0.2668345 best: 0.2668345 (357)
358: learn: 0.2650410 test: 0.2662116 best: 0.2662116 (358)
359: learn: 0.2644758 test: 0.2656507 best: 0.2656507 (359)
360: learn: 0.2638662 test: 0.2650451 best: 0.2650451 (360)
361: learn: 0.2633522 test: 0.2645318 best: 0.2645318 (361)
362: learn: 0.2627344 test: 0.2639164 best: 0.2639164 (362)
363: learn: 0.2621430 test: 0.2633278 best: 0.2633278 (363)
364: learn: 0.2615186 test: 0.2627050 best: 0.2627050 (364)
365: learn: 0.2609574 test: 0.2621488 best: 0.2621488 (365)
366: learn: 0.2603456 test: 0.2615374 best: 0.2615374 (366)
367: learn: 0.2598060 test: 0.2609995 best: 0.2609995 (367)
368: learn: 0.2593289 test: 0.2605241 best: 0.2605241 (368)
369: learn: 0.2586791 test: 0.2598760 best: 0.2598760 (369)
370: learn: 0.2580917 test: 0.2592911 best: 0.2592911 (370)
371: learn: 0.2575923 test: 0.2587944 best: 0.2587944 (371)
372: learn: 0.2570091 test: 0.2582128 best: 0.2582128 (372)
373: learn: 0.2564741 test: 0.2576780 best: 0.2576780 (373)
374: learn: 0.2559228 test: 0.2571287 best: 0.2571287 (374)
375: learn: 0.2553596 test: 0.2565676 best: 0.2565676 (375)
376: learn: 0.2547633 test: 0.2559723 best: 0.2559723 (376)
377: learn: 0.2542333 test: 0.2554457 best: 0.2554457 (377)
378: learn: 0.2536182 test: 0.2548327 best: 0.2548327 (378)
379: learn: 0.2531185 test: 0.2543349 best: 0.2543349 (379)
380: learn: 0.2525308 test: 0.2537515 best: 0.2537515 (380)
381: learn: 0.2519894 test: 0.2532114 best: 0.2532114 (381)
382: learn: 0.2514228 test: 0.2526464 best: 0.2526464 (382)
383: learn: 0.2508555 test: 0.2520821 best: 0.2520821 (383)
384: learn: 0.2502927 test: 0.2515217 best: 0.2515217 (384)
385: learn: 0.2497916 test: 0.2510249 best: 0.2510249 (385)
386: learn: 0.2492128 test: 0.2504485 best: 0.2504485 (386)
387: learn: 0.2488201 test: 0.2500566 best: 0.2500566 (387)
388: learn: 0.2482733 test: 0.2495113 best: 0.2495113 (388)
389: learn: 0.2477360 test: 0.2489764 best: 0.2489764 (389)
390: learn: 0.2471753 test: 0.2484196 best: 0.2484196 (390)
391: learn: 0.2466468 test: 0.2478952 best: 0.2478952 (391)
392: learn: 0.2461158 test: 0.2473664 best: 0.2473664 (392)
393: learn: 0.2456205 test: 0.2468727 best: 0.2468727 (393)
394: learn: 0.2450780 test: 0.2463342 best: 0.2463342 (394) total: 6.83s remaining: 10.5s
395: learn: 0.2445361 test: 0.2457978 best: 0.2457978 (395)
396: learn: 0.2440582 test: 0.2453224 best: 0.2453224 (396)
397: learn: 0.2435424 test: 0.2448099 best: 0.2448099 (397)
398: learn: 0.2430155 test: 0.2442849 best: 0.2442849 (398)
399: learn: 0.2425277 test: 0.2438005 best: 0.2438005 (399)
400: learn: 0.2420091 test: 0.2432830 best: 0.2432830 (400)
401: learn: 0.2415036 test: 0.2427820 best: 0.2427820 (401)
402: learn: 0.2410023 test: 0.2422821 best: 0.2422821 (402)
403: learn: 0.2404869 test: 0.2417690 best: 0.2417690 (403)
404: learn: 0.2399611 test: 0.2412439 best: 0.2412439 (404)
405: learn: 0.2394695 test: 0.2407544 best: 0.2407544 (405)
406: learn: 0.2389617 test: 0.2402491 best: 0.2402491 (406)
407: learn: 0.2384762 test: 0.2397663 best: 0.2397663 (407)
408: learn: 0.2379643 test: 0.2392570 best: 0.2392570 (408)
409: learn: 0.2374780 test: 0.2387704 best: 0.2387704 (409)
410: learn: 0.2370065 test: 0.2383007 best: 0.2383007 (410)
411: learn: 0.2365057 test: 0.2378022 best: 0.2378022 (411)
412: learn: 0.2360055 test: 0.2373033 best: 0.2373033 (412)
413: learn: 0.2355164 test: 0.2368173 best: 0.2368173 (413)
414: learn: 0.2350738 test: 0.2363762 best: 0.2363762 (414)
415: learn: 0.2345806 test: 0.2358838 best: 0.2358838 (415)
416: learn: 0.2341237 test: 0.2354276 best: 0.2354276 (416) total: 7.25s remaining: 10.1s
417: learn: 0.2336194 test: 0.2349262 best: 0.2349262 (417)
418: learn: 0.2332078 test: 0.2345169 best: 0.2345169 (418)
419: learn: 0.2327197 test: 0.2340319 best: 0.2340319 (419)
420: learn: 0.2322032 test: 0.2335183 best: 0.2335183 (420)
421: learn: 0.2317289 test: 0.2330478 best: 0.2330478 (421)
422: learn: 0.2312645 test: 0.2325860 best: 0.2325860 (422)
```

```
423: learn: 0.2308126 test: 0.2321348 best: 0.2321348 (423)
424: learn: 0.2303513 test: 0.2316757 best: 0.2316757 (424)
425: learn: 0.2298504 test: 0.2311779 best: 0.2311779 (425)
426: learn: 0.2294046 test: 0.2307346 best: 0.2307346 (426)
427: learn: 0.2289478 test: 0.2302836 best: 0.2302836 (427)
428: learn: 0.2284257 test: 0.2297647 best: 0.2297647 (428)
429: learn: 0.2279745 test: 0.2293153 best: 0.2293153 (429)
430: learn: 0.2275019 test: 0.2288455 best: 0.2288455 (430)
431: learn: 0.2270266 test: 0.2283732 best: 0.2283732 (431)
432: learn: 0.2265800 test: 0.2279307 best: 0.2279307 (432)
433: learn: 0.2261072 test: 0.2274558 best: 0.2274558 (433)
434: learn: 0.2256551 test: 0.2270053 best: 0.2270053 (434)
435: learn: 0.2251920 test: 0.2265442 best: 0.2265442 (435)
436: learn: 0.2247223 test: 0.2260797 best: 0.2260797 (436)
437: learn: 0.2242695 test: 0.2256259 best: 0.2256259 (437)
438: learn: 0.2238128 test: 0.2251717 best: 0.2251717 (438)
439: learn: 0.2233484 test: 0.2247093 best: 0.2247093 (439)
440: learn: 0.2229596 test: 0.2243196 best: 0.2243196 (440)
441: learn: 0.2225091 test: 0.2238764 best: 0.2238764 (441)
442: learn: 0.2220775 test: 0.2234482 best: 0.2234482 (442)
443: learn: 0.2216468 test: 0.2230212 best: 0.2230212 (443)
444: learn: 0.2212130 test: 0.2225857 best: 0.2225857 (444)
445: learn: 0.2207268 test: 0.2221030 best: 0.2221030 (445)
446: learn: 0.2203153 test: 0.2216976 best: 0.2216976 (446)
447: learn: 0.2198681 test: 0.2212544 best: 0.2212544 (447)
448: learn: 0.2194317 test: 0.2208228 best: 0.2208228 (448)
449: learn: 0.2189746 test: 0.2203676 best: 0.2203676 (449)
450: learn: 0.2185755 test: 0.2199711 best: 0.2199711 (450)
451: learn: 0.2181476 test: 0.2195440 best: 0.2195440 (451)
452: learn: 0.2177270 test: 0.2191252 best: 0.2191252 (452)
453: learn: 0.2172853 test: 0.2186856 best: 0.2186856 (453)
454: learn: 0.2168869 test: 0.2182885 best: 0.2182885 (454)
455: learn: 0.2164569 test: 0.2178576 best: 0.2178576 (455)
456: learn: 0.2160239 test: 0.2174304 best: 0.2174304 (456)
457: learn: 0.2155665 test: 0.2169751 best: 0.2169751 (457)
458: learn: 0.2151613 test: 0.2165714 best: 0.2165714 (458)
459: learn: 0.2147269 test: 0.2161394 best: 0.2161394 (459)
460: learn: 0.2143055 test: 0.2157196 best: 0.2157196 (460)
461: learn: 0.2138764 test: 0.2152945 best: 0.2152945 (461)
462: learn: 0.2134450 test: 0.2148639 best: 0.2148639 (462)
463: learn: 0.2130289 test: 0.2144519 best: 0.2144519 (463)
464: learn: 0.2126270 test: 0.2140536 best: 0.2140536 (464)
465: learn: 0.2122293 test: 0.2136634 best: 0.2136634 (465)
466: learn: 0.2118312 test: 0.2132679 best: 0.2132679 (466)
467: learn: 0.2114359 test: 0.2128742 best: 0.2128742 (467)
468: learn: 0.2110153 test: 0.2124564 best: 0.2124564 (468)
469: learn: 0.2106148 test: 0.2120572 best: 0.2120572 (469)
470: learn: 0.2102267 test: 0.2116720 best: 0.2116720 (470)
471: learn: 0.2098340 test: 0.2112838 best: 0.2112838 (471)
472: learn: 0.2094460 test: 0.2108974 best: 0.2108974 (472)
473: learn: 0.2090465 test: 0.2105021 best: 0.2105021 (473)
474: learn: 0.2086476 test: 0.2101093 best: 0.2101093 (474)
475: learn: 0.2082349 test: 0.2097003 best: 0.2097003 (475)
476: learn: 0.2078224 test: 0.2092950 best: 0.2092950 (476)
477: learn: 0.2073992 test: 0.2088732 best: 0.2088732 (477)
478: learn: 0.2070126 test: 0.2084876 best: 0.2084876 (478)
479: learn: 0.2066312 test: 0.2081104 best: 0.2081104 (479)
480: learn: 0.2062363 test: 0.2077202 best: 0.2077202 (480)
481: learn: 0.2058778 test: 0.2073637 best: 0.2073637 (481)
482: learn: 0.2054828 test: 0.2069720 best: 0.2069720 (482)
483: learn: 0.2050978 test: 0.2065911 best: 0.2065911 (483)
484: learn: 0.2047165 test: 0.2062124 best: 0.2062124 (484)
485: learn: 0.2043302 test: 0.2058317 best: 0.2058317 (485)
486: learn: 0.2039687 test: 0.2054693 best: 0.2054693 (486)
487: learn: 0.2035956 test: 0.2050967 best: 0.2050967 (487)
488: learn: 0.2032180 test: 0.2047215 best: 0.2047215 (488)
489: learn: 0.2028198 test: 0.2043249 best: 0.2043249 (489)
490: learn: 0.2024387 test: 0.2039440 best: 0.2039440 (490)
491: learn: 0.2020491 test: 0.2035577 best: 0.2035577 (491)
492: learn: 0.2016730 test: 0.2031804 best: 0.2031804 (492)
493: learn: 0.2013073 test: 0.2028155 best: 0.2028155 (493)
494: learn: 0.2009308 test: 0.2024405 best: 0.2024405 (494)
495: learn: 0.2005956 test: 0.2021066 best: 0.2021066 (495)
496: learn: 0.2002221 test: 0.2017335 best: 0.2017335 (496)
497: learn: 0.1998488 test: 0.2013599 best: 0.2013599 (497)
498: learn: 0.1994902 test: 0.2010035 best: 0.2010035 (498)
499: learn: 0.1991041 test: 0.2006234 best: 0.2006234 (499)
```

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500:	learn: 0.1987511	test: 0.2002778	best: 0.2002778 (500)
501:	learn: 0.1983864	test: 0.1999116	best: 0.1999116 (501)
502:	learn: 0.1980302	test: 0.1995601	best: 0.1995601 (502)
503:	learn: 0.1976753	test: 0.1992080	best: 0.1992080 (503)	total: 8.75s	remaining: 8.61s
504:	learn: 0.1972990	test: 0.1988331	best: 0.1988331 (504)
505:	learn: 0.1969459	test: 0.1984800	best: 0.1984800 (505)
506:	learn: 0.1965898	test: 0.1981259	best: 0.1981259 (506)
507:	learn: 0.1962343	test: 0.1977723	best: 0.1977723 (507)
508:	learn: 0.1958914	test: 0.1974311	best: 0.1974311 (508)
509:	learn: 0.1955341	test: 0.1970751	best: 0.1970751 (509)
510:	learn: 0.1951678	test: 0.1967126	best: 0.1967126 (510)
511:	learn: 0.1948052	test: 0.1963530	best: 0.1963530 (511)
512:	learn: 0.1944679	test: 0.1960158	best: 0.1960158 (512)
513:	learn: 0.1941319	test: 0.1956810	best: 0.1956810 (513)
514:	learn: 0.1937732	test: 0.1953254	best: 0.1953254 (514)
515:	learn: 0.1934236	test: 0.1949805	best: 0.1949805 (515)
516:	learn: 0.1930561	test: 0.1946146	best: 0.1946146 (516)
517:	learn: 0.1927083	test: 0.1942723	best: 0.1942723 (517)
518:	learn: 0.1923735	test: 0.1939410	best: 0.1939410 (518)
519:	learn: 0.1920289	test: 0.1935979	best: 0.1935979 (519)
520:	learn: 0.1916764	test: 0.1932472	best: 0.1932472 (520)
521:	learn: 0.1913516	test: 0.1929267	best: 0.1929267 (521)
522:	learn: 0.1909970	test: 0.1925743	best: 0.1925743 (522)
523:	learn: 0.1906755	test: 0.1922558	best: 0.1922558 (523)
524:	learn: 0.1903309	test: 0.1919148	best: 0.1919148 (524)
525:	learn: 0.1899902	test: 0.1915820	best: 0.1915820 (525)
526:	learn: 0.1896519	test: 0.1912490	best: 0.1912490 (526)
527:	learn: 0.1893224	test: 0.1909235	best: 0.1909235 (527)
528:	learn: 0.1889952	test: 0.1906035	best: 0.1906035 (528)
529:	learn: 0.1886545	test: 0.1902663	best: 0.1902663 (529)
530:	learn: 0.1883126	test: 0.1899258	best: 0.1899258 (530)
531:	learn: 0.1879892	test: 0.1896066	best: 0.1896066 (531)
532:	learn: 0.1876971	test: 0.1893146	best: 0.1893146 (532)
533:	learn: 0.1873727	test: 0.1889937	best: 0.1889937 (533)
534:	learn: 0.1870615	test: 0.1886879	best: 0.1886879 (534)
535:	learn: 0.1867493	test: 0.1883782	best: 0.1883782 (535)
536:	learn: 0.1864478	test: 0.1880783	best: 0.1880783 (536)
537:	learn: 0.1861036	test: 0.1877352	best: 0.1877352 (537)	total: 9.44s	remaining: 8.11s
538:	learn: 0.1857816	test: 0.1874148	best: 0.1874148 (538)
539:	learn: 0.1854576	test: 0.1870954	best: 0.1870954 (539)
540:	learn: 0.1851175	test: 0.1867553	best: 0.1867553 (540)
541:	learn: 0.1847873	test: 0.1864289	best: 0.1864289 (541)
542:	learn: 0.1844856	test: 0.1861307	best: 0.1861307 (542)
543:	learn: 0.1841795	test: 0.1858252	best: 0.1858252 (543)
544:	learn: 0.1838595	test: 0.1855062	best: 0.1855062 (544)
545:	learn: 0.1835485	test: 0.1851969	best: 0.1851969 (545)
546:	learn: 0.1832395	test: 0.1848900	best: 0.1848900 (546)
547:	learn: 0.1829473	test: 0.1845988	best: 0.1845988 (547)
548:	learn: 0.1826534	test: 0.1843086	best: 0.1843086 (548)
549:	learn: 0.1823442	test: 0.1840038	best: 0.1840038 (549)
550:	learn: 0.1820655	test: 0.1837233	best: 0.1837233 (550)
551:	learn: 0.1817362	test: 0.1833973	best: 0.1833973 (551)
552:	learn: 0.1814114	test: 0.1830756	best: 0.1830756 (552)
553:	learn: 0.1811278	test: 0.1827965	best: 0.1827965 (553)
554:	learn: 0.1808363	test: 0.1825093	best: 0.1825093 (554)
555:	learn: 0.1805354	test: 0.1822105	best: 0.1822105 (555)
556:	learn: 0.1802321	test: 0.1819093	best: 0.1819093 (556)
557:	learn: 0.1799159	test: 0.1815948	best: 0.1815948 (557)
558:	learn: 0.1795959	test: 0.1812765	best: 0.1812765 (558)
559:	learn: 0.1792893	test: 0.1809740	best: 0.1809740 (559)
560:	learn: 0.1790061	test: 0.1806925	best: 0.1806925 (560)
561:	learn: 0.1786973	test: 0.1803823	best: 0.1803823 (561)
562:	learn: 0.1784048	test: 0.1800920	best: 0.1800920 (562)	total: 9.91s	remaining: 7.69s
563:	learn: 0.1780976	test: 0.1797891	best: 0.1797891 (563)
564:	learn: 0.1778426	test: 0.1795363	best: 0.1795363 (564)
565:	learn: 0.1775265	test: 0.1792240	best: 0.1792240 (565)
566:	learn: 0.1772263	test: 0.1789276	best: 0.1789276 (566)
567:	learn: 0.1769203	test: 0.1786232	best: 0.1786232 (567)
568:	learn: 0.1766408	test: 0.1783456	best: 0.1783456 (568)
569:	learn: 0.1763470	test: 0.1780563	best: 0.1780563 (569)
570:	learn: 0.1760360	test: 0.1777488	best: 0.1777488 (570)
571:	learn: 0.1757286	test: 0.1774429	best: 0.1774429 (571)
572:	learn: 0.1754488	test: 0.1771680	best: 0.1771680 (572)
573:	learn: 0.1751535	test: 0.1768754	best: 0.1768754 (573)
574:	learn: 0.1748604	test: 0.1765837	best: 0.1765837 (574)
575:	learn: 0.1745707	test: 0.1762960	best: 0.1762960 (575)
576:	learn: 0.1742695	test: 0.1759989	best: 0.1759989 (576)
```

```
577: learn: 0.1739850 test: 0.1757157 best: 0.1757157 (577)
578: learn: 0.1737061 test: 0.1754411 best: 0.1754411 (578)
579: learn: 0.1734160 test: 0.1751532 best: 0.1751532 (579)
580: learn: 0.1731515 test: 0.1748889 best: 0.1748889 (580)
581: learn: 0.1728816 test: 0.1746230 best: 0.1746230 (581)
582: learn: 0.1726031 test: 0.1743450 best: 0.1743450 (582)
583: learn: 0.1723255 test: 0.1740713 best: 0.1740713 (583)
584: learn: 0.1720546 test: 0.1738020 best: 0.1738020 (584) total: 10.3s remaining: 7.32s
585: learn: 0.1717894 test: 0.1735396 best: 0.1735396 (585)
586: learn: 0.1715072 test: 0.1732606 best: 0.1732606 (586)
587: learn: 0.1712128 test: 0.1729689 best: 0.1729689 (587)
588: learn: 0.1709391 test: 0.1726989 best: 0.1726989 (588)
589: learn: 0.1706661 test: 0.1724291 best: 0.1724291 (589)
590: learn: 0.1703832 test: 0.1721491 best: 0.1721491 (590)
591: learn: 0.1701079 test: 0.1718749 best: 0.1718749 (591)
592: learn: 0.1698378 test: 0.1716079 best: 0.1716079 (592)
593: learn: 0.1695653 test: 0.1713353 best: 0.1713353 (593)
594: learn: 0.1692909 test: 0.1710632 best: 0.1710632 (594)
595: learn: 0.1690123 test: 0.1707894 best: 0.1707894 (595)
596: learn: 0.1687550 test: 0.1705363 best: 0.1705363 (596)
597: learn: 0.1685111 test: 0.1702946 best: 0.1702946 (597)
598: learn: 0.1682656 test: 0.1700518 best: 0.1700518 (598)
599: learn: 0.1680055 test: 0.1697963 best: 0.1697963 (599)
600: learn: 0.1677447 test: 0.1695386 best: 0.1695386 (600)
601: learn: 0.1674797 test: 0.1692784 best: 0.1692784 (601)
602: learn: 0.1672170 test: 0.1690174 best: 0.1690174 (602)
603: learn: 0.1669691 test: 0.1687723 best: 0.1687723 (603)
604: learn: 0.1667213 test: 0.1685273 best: 0.1685273 (604)
605: learn: 0.1664710 test: 0.1682774 best: 0.1682774 (605)
606: learn: 0.1662165 test: 0.1680280 best: 0.1680280 (606)
607: learn: 0.1659599 test: 0.1677723 best: 0.1677723 (607)
608: learn: 0.1657129 test: 0.1675286 best: 0.1675286 (608)
609: learn: 0.1654521 test: 0.1672706 best: 0.1672706 (609)
610: learn: 0.1652078 test: 0.1670310 best: 0.1670310 (610)
611: learn: 0.1649479 test: 0.1667756 best: 0.1667756 (611)
612: learn: 0.1647091 test: 0.1665392 best: 0.1665392 (612)
613: learn: 0.1644455 test: 0.1662777 best: 0.1662777 (613)
614: learn: 0.1641745 test: 0.1660098 best: 0.1660098 (614)
615: learn: 0.1639234 test: 0.1657613 best: 0.1657613 (615)
616: learn: 0.1637016 test: 0.1655438 best: 0.1655438 (616)
617: learn: 0.1634569 test: 0.1653007 best: 0.1653007 (617)
618: learn: 0.1632193 test: 0.1650655 best: 0.1650655 (618)
619: learn: 0.1630042 test: 0.1648525 best: 0.1648525 (619)
620: learn: 0.1627620 test: 0.1646110 best: 0.1646110 (620)
621: learn: 0.1625185 test: 0.1643712 best: 0.1643712 (621)
622: learn: 0.1622776 test: 0.1641355 best: 0.1641355 (622)
623: learn: 0.1620230 test: 0.1638814 best: 0.1638814 (623)
624: learn: 0.1617925 test: 0.1636548 best: 0.1636548 (624)
625: learn: 0.1615623 test: 0.1634243 best: 0.1634243 (625)
626: learn: 0.1613398 test: 0.1632046 best: 0.1632046 (626)
627: learn: 0.1611065 test: 0.1629723 best: 0.1629723 (627)
628: learn: 0.1608846 test: 0.1627557 best: 0.1627557 (628)
629: learn: 0.1606456 test: 0.1625209 best: 0.1625209 (629)
630: learn: 0.1604001 test: 0.1622818 best: 0.1622818 (630)
631: learn: 0.1601733 test: 0.1620574 best: 0.1620574 (631)
632: learn: 0.1599473 test: 0.1618361 best: 0.1618361 (632)
633: learn: 0.1597239 test: 0.1616166 best: 0.1616166 (633)
634: learn: 0.1594952 test: 0.1613917 best: 0.1613917 (634)
635: learn: 0.1592729 test: 0.1611728 best: 0.1611728 (635)
636: learn: 0.1590434 test: 0.1609446 best: 0.1609446 (636)
637: learn: 0.1588162 test: 0.1607193 best: 0.1607193 (637)
638: learn: 0.1585783 test: 0.1604833 best: 0.1604833 (638)
639: learn: 0.1583564 test: 0.1602652 best: 0.1602652 (639)
640: learn: 0.1581296 test: 0.1600445 best: 0.1600445 (640)
641: learn: 0.1579198 test: 0.1598393 best: 0.1598393 (641)
642: learn: 0.1576913 test: 0.1596135 best: 0.1596135 (642)
643: learn: 0.1574763 test: 0.1594029 best: 0.1594029 (643)
644: learn: 0.1572456 test: 0.1591738 best: 0.1591738 (644)
645: learn: 0.1570106 test: 0.1589422 best: 0.1589422 (645)
646: learn: 0.1567807 test: 0.1587169 best: 0.1587169 (646)
647: learn: 0.1565517 test: 0.1584923 best: 0.1584923 (647)
648: learn: 0.1563273 test: 0.1582709 best: 0.1582709 (648)
649: learn: 0.1561080 test: 0.1580558 best: 0.1580558 (649)
650: learn: 0.1558986 test: 0.1578503 best: 0.1578503 (650)
651: learn: 0.1556924 test: 0.1576469 best: 0.1576469 (651)
652: learn: 0.1554931 test: 0.1574513 best: 0.1574513 (652)
653: learn: 0.1552751 test: 0.1572347 best: 0.1572347 (653)
```

```
654: learn: 0.1550673 test: 0.1570294 best: 0.1570294 (654)
655: learn: 0.1548641 test: 0.1568276 best: 0.1568276 (655)
656: learn: 0.1546497 test: 0.1566180 best: 0.1566180 (656)
657: learn: 0.1544208 test: 0.1563932 best: 0.1563932 (657)
658: learn: 0.1542215 test: 0.1561952 best: 0.1561952 (658)
659: learn: 0.1540020 test: 0.1559769 best: 0.1559769 (659)
660: learn: 0.1537776 test: 0.1557578 best: 0.1557578 (660)
661: learn: 0.1535619 test: 0.1555474 best: 0.1555474 (661)
662: learn: 0.1533673 test: 0.1553554 best: 0.1553554 (662)
663: learn: 0.1531367 test: 0.1551260 best: 0.1551260 (663)
664: learn: 0.1529208 test: 0.1549130 best: 0.1549130 (664)
665: learn: 0.1527129 test: 0.1547070 best: 0.1547070 (665)
666: learn: 0.1525089 test: 0.1545034 best: 0.1545034 (666)
667: learn: 0.1522849 test: 0.1542842 best: 0.1542842 (667)
668: learn: 0.1520840 test: 0.1540874 best: 0.1540874 (668)
669: learn: 0.1518733 test: 0.1538811 best: 0.1538811 (669)
670: learn: 0.1516661 test: 0.1536756 best: 0.1536756 (670) total: 11.8s remaining: 5.77s
671: learn: 0.1514593 test: 0.1534740 best: 0.1534740 (671)
672: learn: 0.1512564 test: 0.1532744 best: 0.1532744 (672)
673: learn: 0.1510583 test: 0.1530787 best: 0.1530787 (673)
674: learn: 0.1508566 test: 0.1528817 best: 0.1528817 (674)
675: learn: 0.1506703 test: 0.1526976 best: 0.1526976 (675)
676: learn: 0.1504799 test: 0.1525110 best: 0.1525110 (676)
677: learn: 0.1502776 test: 0.1523102 best: 0.1523102 (677)
678: learn: 0.1500827 test: 0.1521184 best: 0.1521184 (678)
679: learn: 0.1498918 test: 0.1519315 best: 0.1519315 (679)
680: learn: 0.1496835 test: 0.1517240 best: 0.1517240 (680)
681: learn: 0.1494841 test: 0.1515274 best: 0.1515274 (681)
682: learn: 0.1492730 test: 0.1513178 best: 0.1513178 (682)
683: learn: 0.1490714 test: 0.1511182 best: 0.1511182 (683)
684: learn: 0.1488859 test: 0.1509396 best: 0.1509396 (684)
685: learn: 0.1486836 test: 0.1507423 best: 0.1507423 (685)
686: learn: 0.1484724 test: 0.1505360 best: 0.1505360 (686)
687: learn: 0.1482756 test: 0.1503412 best: 0.1503412 (687)
688: learn: 0.1480676 test: 0.1501359 best: 0.1501359 (688)
689: learn: 0.1478792 test: 0.1499507 best: 0.1499507 (689)
690: learn: 0.1476753 test: 0.1497474 best: 0.1497474 (690)
691: learn: 0.1474825 test: 0.1495574 best: 0.1495574 (691)
692: learn: 0.1473007 test: 0.1493767 best: 0.1493767 (692)
693: learn: 0.1471037 test: 0.1491830 best: 0.1491830 (693)
694: learn: 0.1469102 test: 0.1489940 best: 0.1489940 (694)
695: learn: 0.1467306 test: 0.1488179 best: 0.1488179 (695)
696: learn: 0.1465404 test: 0.1486304 best: 0.1486304 (696)
697: learn: 0.1463474 test: 0.1484410 best: 0.1484410 (697)
698: learn: 0.1461692 test: 0.1482648 best: 0.1482648 (698)
699: learn: 0.1459802 test: 0.1480783 best: 0.1480783 (699)
700: learn: 0.1457979 test: 0.1478966 best: 0.1478966 (700)
701: learn: 0.1455974 test: 0.1477008 best: 0.1477008 (701)
702: learn: 0.1454043 test: 0.1475128 best: 0.1475128 (702)
703: learn: 0.1452203 test: 0.1473308 best: 0.1473308 (703)
704: learn: 0.1450380 test: 0.1471539 best: 0.1471539 (704)
705: learn: 0.1448485 test: 0.1469687 best: 0.1469687 (705)
706: learn: 0.1446692 test: 0.1467915 best: 0.1467915 (706)
707: learn: 0.1444724 test: 0.1465995 best: 0.1465995 (707)
708: learn: 0.1442941 test: 0.1464257 best: 0.1464257 (708)
709: learn: 0.1441143 test: 0.1462509 best: 0.1462509 (709)
710: learn: 0.1439442 test: 0.1460871 best: 0.1460871 (710)
711: learn: 0.1437465 test: 0.1458914 best: 0.1458914 (711)
712: learn: 0.1435494 test: 0.1456968 best: 0.1456968 (712)
713: learn: 0.1433810 test: 0.1455310 best: 0.1455310 (713)
714: learn: 0.1432112 test: 0.1453648 best: 0.1453648 (714)
715: learn: 0.1430263 test: 0.1451853 best: 0.1451853 (715)
716: learn: 0.1428422 test: 0.1450039 best: 0.1450039 (716)
717: learn: 0.1426568 test: 0.1448215 best: 0.1448215 (717)
718: learn: 0.1424750 test: 0.1446428 best: 0.1446428 (718)
719: learn: 0.1422917 test: 0.1444618 best: 0.1444618 (719)
720: learn: 0.1421063 test: 0.1442789 best: 0.1442789 (720)
721: learn: 0.1419449 test: 0.1441213 best: 0.1441213 (721)
722: learn: 0.1417648 test: 0.1439425 best: 0.1439425 (722)
723: learn: 0.1415907 test: 0.1437736 best: 0.1437736 (723)
724: learn: 0.1414041 test: 0.1435916 best: 0.1435916 (724)
725: learn: 0.1412375 test: 0.1434294 best: 0.1434294 (725)
726: learn: 0.1410654 test: 0.1432612 best: 0.1432612 (726)
727: learn: 0.1408938 test: 0.1430908 best: 0.1430908 (727)
728: learn: 0.1407135 test: 0.1429142 best: 0.1429142 (728)
729: learn: 0.1405396 test: 0.1427413 best: 0.1427413 (729)
730: learn: 0.1403667 test: 0.1425714 best: 0.1425714 (730)
```

```
731: learn: 0.1402047 test: 0.1424100 best: 0.1424100 (731)
732: learn: 0.1400353 test: 0.1422442 best: 0.1422442 (732)
733: learn: 0.1398605 test: 0.1420756 best: 0.1420756 (733)
734: learn: 0.1396816 test: 0.1419008 best: 0.1419008 (734)
735: learn: 0.1395007 test: 0.1417250 best: 0.1417250 (735)
736: learn: 0.1393286 test: 0.1415569 best: 0.1415569 (736)
737: learn: 0.1391660 test: 0.1413956 best: 0.1413956 (737)
738: learn: 0.1390122 test: 0.1412476 best: 0.1412476 (738)
739: learn: 0.1388412 test: 0.1410806 best: 0.1410806 (739)
740: learn: 0.1386715 test: 0.1409138 best: 0.1409138 (740)
741: learn: 0.1385027 test: 0.1407519 best: 0.1407519 (741)
742: learn: 0.1383441 test: 0.1405978 best: 0.1405978 (742)
743: learn: 0.1381776 test: 0.1404341 best: 0.1404341 (743)
744: learn: 0.1380206 test: 0.1402811 best: 0.1402811 (744)
745: learn: 0.1378554 test: 0.1401207 best: 0.1401207 (745)
746: learn: 0.1377014 test: 0.1399680 best: 0.1399680 (746)
747: learn: 0.1375390 test: 0.1398092 best: 0.1398092 (747)
748: learn: 0.1373795 test: 0.1396540 best: 0.1396540 (748)
749: learn: 0.1372213 test: 0.1394996 best: 0.1394996 (749)
750: learn: 0.1370512 test: 0.1393327 best: 0.1393327 (750)
751: learn: 0.1368886 test: 0.1391751 best: 0.1391751 (751)
752: learn: 0.1367440 test: 0.1390323 best: 0.1390323 (752)
753: learn: 0.1365875 test: 0.1388785 best: 0.1388785 (753)
754: learn: 0.1364360 test: 0.1387294 best: 0.1387294 (754)
755: learn: 0.1362863 test: 0.1385838 best: 0.1385838 (755) total: 13.2s remaining: 4.26s
756: learn: 0.1361156 test: 0.1384147 best: 0.1384147 (756)
757: learn: 0.1359594 test: 0.1382616 best: 0.1382616 (757)
758: learn: 0.1358167 test: 0.1381230 best: 0.1381230 (758)
759: learn: 0.1356501 test: 0.1379616 best: 0.1379616 (759)
760: learn: 0.1354763 test: 0.1377931 best: 0.1377931 (760)
761: learn: 0.1353086 test: 0.1376309 best: 0.1376309 (761)
762: learn: 0.1351485 test: 0.1374745 best: 0.1374745 (762)
763: learn: 0.1349807 test: 0.1373102 best: 0.1373102 (763)
764: learn: 0.1348168 test: 0.1371503 best: 0.1371503 (764)
765: learn: 0.1346552 test: 0.1369924 best: 0.1369924 (765)
766: learn: 0.1344856 test: 0.1368276 best: 0.1368276 (766)
767: learn: 0.1343234 test: 0.1366702 best: 0.1366702 (767)
768: learn: 0.1341660 test: 0.1365190 best: 0.1365190 (768)
769: learn: 0.1340155 test: 0.1363745 best: 0.1363745 (769)
770: learn: 0.1338684 test: 0.1362312 best: 0.1362312 (770)
771: learn: 0.1337051 test: 0.1360687 best: 0.1360687 (771)
772: learn: 0.1335554 test: 0.1359207 best: 0.1359207 (772)
773: learn: 0.1334040 test: 0.1357713 best: 0.1357713 (773)
774: learn: 0.1332514 test: 0.1356212 best: 0.1356212 (774)
775: learn: 0.1330969 test: 0.1354696 best: 0.1354696 (775)
776: learn: 0.1329460 test: 0.1353216 best: 0.1353216 (776)
777: learn: 0.1327864 test: 0.1351669 best: 0.1351669 (777)
778: learn: 0.1326360 test: 0.1350200 best: 0.1350200 (778)
779: learn: 0.1324805 test: 0.1348665 best: 0.1348665 (779)
780: learn: 0.1323279 test: 0.1347181 best: 0.1347181 (780)
781: learn: 0.1321792 test: 0.1345731 best: 0.1345731 (781)
782: learn: 0.1320294 test: 0.1344277 best: 0.1344277 (782)
783: learn: 0.1318885 test: 0.1342916 best: 0.1342916 (783)
784: learn: 0.1317503 test: 0.1341587 best: 0.1341587 (784)
785: learn: 0.1315907 test: 0.1340000 best: 0.1340000 (785)
786: learn: 0.1314401 test: 0.1338541 best: 0.1338541 (786)
787: learn: 0.1312851 test: 0.1337018 best: 0.1337018 (787)
788: learn: 0.1311386 test: 0.1335593 best: 0.1335593 (788)
789: learn: 0.1310048 test: 0.1334292 best: 0.1334292 (789)
790: learn: 0.1308664 test: 0.1332934 best: 0.1332934 (790)
791: learn: 0.1307031 test: 0.1331338 best: 0.1331338 (791)
792: learn: 0.1305623 test: 0.1329951 best: 0.1329951 (792)
793: learn: 0.1304166 test: 0.1328513 best: 0.1328513 (793)
794: learn: 0.1302881 test: 0.1327239 best: 0.1327239 (794)
795: learn: 0.1301536 test: 0.1325919 best: 0.1325919 (795)
796: learn: 0.1300100 test: 0.1324507 best: 0.1324507 (796)
797: learn: 0.1298714 test: 0.1323152 best: 0.1323152 (797)
798: learn: 0.1297315 test: 0.1321786 best: 0.1321786 (798)
799: learn: 0.1295931 test: 0.1320449 best: 0.1320449 (799)
800: learn: 0.1294463 test: 0.1319036 best: 0.1319036 (800)
801: learn: 0.1293218 test: 0.1317845 best: 0.1317845 (801)
802: learn: 0.1291697 test: 0.1316350 best: 0.1316350 (802)
803: learn: 0.1290282 test: 0.1314946 best: 0.1314946 (803)
804: learn: 0.1289055 test: 0.1313757 best: 0.1313757 (804)
805: learn: 0.1287596 test: 0.1312339 best: 0.1312339 (805)
806: learn: 0.1285963 test: 0.1310742 best: 0.1310742 (806)
807: learn: 0.1284707 test: 0.1309510 best: 0.1309510 (807)
```

```
808: learn: 0.1283344 test: 0.1308171 best: 0.1308171 (808)
809: learn: 0.1281967 test: 0.1306810 best: 0.1306810 (809)
810: learn: 0.1280622 test: 0.1305485 best: 0.1305485 (810)
811: learn: 0.1279238 test: 0.1304137 best: 0.1304137 (811)
812: learn: 0.1277946 test: 0.1302872 best: 0.1302872 (812)
813: learn: 0.1276636 test: 0.1301600 best: 0.1301600 (813)
814: learn: 0.1275299 test: 0.1300289 best: 0.1300289 (814)
815: learn: 0.1273879 test: 0.1298914 best: 0.1298914 (815)
816: learn: 0.1272434 test: 0.1297500 best: 0.1297500 (816)
817: learn: 0.1271171 test: 0.1296289 best: 0.1296289 (817)
818: learn: 0.1269751 test: 0.1294881 best: 0.1294881 (818)
819: learn: 0.1268351 test: 0.1293529 best: 0.1293529 (819)
820: learn: 0.1267093 test: 0.1292296 best: 0.1292296 (820)
821: learn: 0.1265724 test: 0.1290955 best: 0.1290955 (821)
822: learn: 0.1264471 test: 0.1289721 best: 0.1289721 (822)
823: learn: 0.1263153 test: 0.1288447 best: 0.1288447 (823)
824: learn: 0.1261913 test: 0.1287230 best: 0.1287230 (824)
825: learn: 0.1260594 test: 0.1285957 best: 0.1285957 (825)
826: learn: 0.1259360 test: 0.1284747 best: 0.1284747 (826)
827: learn: 0.1258001 test: 0.1283409 best: 0.1283409 (827)
828: learn: 0.1256711 test: 0.1282173 best: 0.1282173 (828)
829: learn: 0.1255523 test: 0.1281028 best: 0.1281028 (829)
830: learn: 0.1254264 test: 0.1279816 best: 0.1279816 (830)
831: learn: 0.1252963 test: 0.1278546 best: 0.1278546 (831)
832: learn: 0.1251741 test: 0.1277340 best: 0.1277340 (832)
833: learn: 0.1250452 test: 0.1276077 best: 0.1276077 (833)
834: learn: 0.1249117 test: 0.1274786 best: 0.1274786 (834)
835: learn: 0.1247848 test: 0.1273547 best: 0.1273547 (835)
836: learn: 0.1246550 test: 0.1272259 best: 0.1272259 (836)
837: learn: 0.1245256 test: 0.1270994 best: 0.1270994 (837)
838: learn: 0.1243995 test: 0.1269784 best: 0.1269784 (838)
839: learn: 0.1242710 test: 0.1268550 best: 0.1268550 (839)
840: learn: 0.1241513 test: 0.1267383 best: 0.1267383 (840) total: 14.6s remaining: 2.77s
841: learn: 0.1240218 test: 0.1266115 best: 0.1266115 (841)
842: learn: 0.1239103 test: 0.1265036 best: 0.1265036 (842)
843: learn: 0.1237763 test: 0.1263733 best: 0.1263733 (843)
844: learn: 0.1236517 test: 0.1262512 best: 0.1262512 (844)
845: learn: 0.1235177 test: 0.1261187 best: 0.1261187 (845)
846: learn: 0.1233951 test: 0.1259993 best: 0.1259993 (846)
847: learn: 0.1232697 test: 0.1258770 best: 0.1258770 (847)
848: learn: 0.1231481 test: 0.1257576 best: 0.1257576 (848)
849: learn: 0.1230276 test: 0.1256407 best: 0.1256407 (849)
850: learn: 0.1229280 test: 0.1255442 best: 0.1255442 (850)
851: learn: 0.1228181 test: 0.1254383 best: 0.1254383 (851)
852: learn: 0.1227018 test: 0.1253260 best: 0.1253260 (852)
853: learn: 0.1225735 test: 0.1252001 best: 0.1252001 (853)
854: learn: 0.1224542 test: 0.1250836 best: 0.1250836 (854)
855: learn: 0.1223281 test: 0.1249619 best: 0.1249619 (855)
856: learn: 0.1222145 test: 0.1248530 best: 0.1248530 (856)
857: learn: 0.1220926 test: 0.1247335 best: 0.1247335 (857)
858: learn: 0.1219733 test: 0.1246189 best: 0.1246189 (858)
859: learn: 0.1218565 test: 0.1245064 best: 0.1245064 (859)
860: learn: 0.1217369 test: 0.1243904 best: 0.1243904 (860)
861: learn: 0.1216103 test: 0.1242672 best: 0.1242672 (861)
862: learn: 0.1214755 test: 0.1241342 best: 0.1241342 (862)
863: learn: 0.1213505 test: 0.1240109 best: 0.1240109 (863)
864: learn: 0.1212339 test: 0.1238982 best: 0.1238982 (864)
865: learn: 0.1211084 test: 0.1237767 best: 0.1237767 (865)
866: learn: 0.1209883 test: 0.1236596 best: 0.1236596 (866)
867: learn: 0.1208749 test: 0.1235499 best: 0.1235499 (867)
868: learn: 0.1207528 test: 0.1234298 best: 0.1234298 (868)
869: learn: 0.1206380 test: 0.1233181 best: 0.1233181 (869)
870: learn: 0.1205402 test: 0.1232232 best: 0.1232232 (870)
871: learn: 0.1204235 test: 0.1231104 best: 0.1231104 (871)
872: learn: 0.1203205 test: 0.1230097 best: 0.1230097 (872)
873: learn: 0.1202082 test: 0.1228993 best: 0.1228993 (873)
874: learn: 0.1201040 test: 0.1227951 best: 0.1227951 (874)
875: learn: 0.1199996 test: 0.1226936 best: 0.1226936 (875)
876: learn: 0.1198898 test: 0.1225874 best: 0.1225874 (876)
877: learn: 0.1197757 test: 0.1224761 best: 0.1224761 (877)
878: learn: 0.1196749 test: 0.1223781 best: 0.1223781 (878)
879: learn: 0.1195703 test: 0.1222796 best: 0.1222796 (879)
880: learn: 0.1194575 test: 0.1221692 best: 0.1221692 (880)
881: learn: 0.1193424 test: 0.1220588 best: 0.1220588 (881)
882: learn: 0.1192369 test: 0.1219544 best: 0.1219544 (882)
883: learn: 0.1191305 test: 0.1218515 best: 0.1218515 (883)
884: learn: 0.1190081 test: 0.1217311 best: 0.1217311 (884)
```

```
885: learn: 0.1188888 test: 0.1216143 best: 0.1216143 (885)
886: learn: 0.1187793 test: 0.1215068 best: 0.1215068 (886)
887: learn: 0.1186748 test: 0.1214039 best: 0.1214039 (887)
888: learn: 0.1185720 test: 0.1213054 best: 0.1213054 (888)
889: learn: 0.1184635 test: 0.1212028 best: 0.1212028 (889)
890: learn: 0.1183543 test: 0.1210977 best: 0.1210977 (890)
891: learn: 0.1182489 test: 0.1209959 best: 0.1209959 (891)
892: learn: 0.1181398 test: 0.1208894 best: 0.1208894 (892)
893: learn: 0.1180416 test: 0.1207959 best: 0.1207959 (893)
894: learn: 0.1179495 test: 0.1207046 best: 0.1207046 (894)
895: learn: 0.1178458 test: 0.1206039 best: 0.1206039 (895)
896: learn: 0.1177426 test: 0.1205042 best: 0.1205042 (896)
897: learn: 0.1176243 test: 0.1203906 best: 0.1203906 (897)
898: learn: 0.1175208 test: 0.1202910 best: 0.1202910 (898)
899: learn: 0.1174231 test: 0.1201964 best: 0.1201964 (899)
900: learn: 0.1173201 test: 0.1200951 best: 0.1200951 (900)
901: learn: 0.1172094 test: 0.1199888 best: 0.1199888 (901)
902: learn: 0.1171077 test: 0.1198911 best: 0.1198911 (902)
903: learn: 0.1170006 test: 0.1197865 best: 0.1197865 (903)
904: learn: 0.1169031 test: 0.1196934 best: 0.1196934 (904) total: 15.7s remaining: 1.65s
905: learn: 0.1168058 test: 0.1195983 best: 0.1195983 (905)
906: learn: 0.1166971 test: 0.1194935 best: 0.1194935 (906)
907: learn: 0.1165926 test: 0.1193946 best: 0.1193946 (907)
908: learn: 0.1164786 test: 0.1192872 best: 0.1192872 (908)
909: learn: 0.1163744 test: 0.1191890 best: 0.1191890 (909)
910: learn: 0.1162727 test: 0.1190902 best: 0.1190902 (910)
911: learn: 0.1161699 test: 0.1189914 best: 0.1189914 (911)
912: learn: 0.1160742 test: 0.1188997 best: 0.1188997 (912)
913: learn: 0.1159759 test: 0.1188064 best: 0.1188064 (913)
914: learn: 0.1158748 test: 0.1187089 best: 0.1187089 (914)
915: learn: 0.1157690 test: 0.1186080 best: 0.1186080 (915)
916: learn: 0.1156610 test: 0.1185035 best: 0.1185035 (916)
917: learn: 0.1155623 test: 0.1184096 best: 0.1184096 (917)
918: learn: 0.1154660 test: 0.1183178 best: 0.1183178 (918)
919: learn: 0.1153709 test: 0.1182251 best: 0.1182251 (919)
920: learn: 0.1152740 test: 0.1181331 best: 0.1181331 (920)
921: learn: 0.1151816 test: 0.1180406 best: 0.1180406 (921)
922: learn: 0.1150777 test: 0.1179386 best: 0.1179386 (922)
923: learn: 0.1149975 test: 0.1178615 best: 0.1178615 (923)
924: learn: 0.1149081 test: 0.1177722 best: 0.1177722 (924)
925: learn: 0.1148072 test: 0.1176755 best: 0.1176755 (925)
926: learn: 0.1147111 test: 0.1175843 best: 0.1175843 (926)
927: learn: 0.1146085 test: 0.1174867 best: 0.1174867 (927)
928: learn: 0.1145050 test: 0.1173896 best: 0.1173896 (928)
929: learn: 0.1144007 test: 0.1172903 best: 0.1172903 (929)
930: learn: 0.1143286 test: 0.1172215 best: 0.1172215 (930)
931: learn: 0.1142213 test: 0.1171163 best: 0.1171163 (931)
932: learn: 0.1141235 test: 0.1170207 best: 0.1170207 (932)
933: learn: 0.1140283 test: 0.1169304 best: 0.1169304 (933)
934: learn: 0.1139204 test: 0.1168251 best: 0.1168251 (934)
935: learn: 0.1138277 test: 0.1167338 best: 0.1167338 (935)
936: learn: 0.1137359 test: 0.1166474 best: 0.1166474 (936)
937: learn: 0.1136432 test: 0.1165566 best: 0.1165566 (937)
938: learn: 0.1135580 test: 0.1164749 best: 0.1164749 (938)
939: learn: 0.1134605 test: 0.1163834 best: 0.1163834 (939)
940: learn: 0.1133650 test: 0.1162941 best: 0.1162941 (940)
941: learn: 0.1132723 test: 0.1162053 best: 0.1162053 (941)
942: learn: 0.1131883 test: 0.1161237 best: 0.1161237 (942)
943: learn: 0.1130909 test: 0.1160287 best: 0.1160287 (943)
944: learn: 0.1129988 test: 0.1159413 best: 0.1159413 (944)
945: learn: 0.1129004 test: 0.1158465 best: 0.1158465 (945)
946: learn: 0.1127990 test: 0.1157504 best: 0.1157504 (946)
947: learn: 0.1127135 test: 0.1156668 best: 0.1156668 (947)
948: learn: 0.1126174 test: 0.1155753 best: 0.1155753 (948)
949: learn: 0.1125162 test: 0.1154773 best: 0.1154773 (949)
950: learn: 0.1124163 test: 0.1153806 best: 0.1153806 (950)
951: learn: 0.1123076 test: 0.1152759 best: 0.1152759 (951)
952: learn: 0.1122155 test: 0.1151862 best: 0.1151862 (952)
953: learn: 0.1121246 test: 0.1151007 best: 0.1151007 (953)
954: learn: 0.1120269 test: 0.1150078 best: 0.1150078 (954)
955: learn: 0.1119356 test: 0.1149208 best: 0.1149208 (955)
956: learn: 0.1118492 test: 0.1148359 best: 0.1148359 (956)
957: learn: 0.1117391 test: 0.1147324 best: 0.1147324 (957)
958: learn: 0.1116475 test: 0.1146436 best: 0.1146436 (958)
959: learn: 0.1115526 test: 0.1145493 best: 0.1145493 (959)
960: learn: 0.1114696 test: 0.1144706 best: 0.1144706 (960)
961: learn: 0.1113790 test: 0.1143826 best: 0.1143826 (961)
```

```
962: learn: 0.1112874 test: 0.1142951 best: 0.1142951 (962)
963: learn: 0.1111970 test: 0.1142119 best: 0.1142119 (963)
964: learn: 0.1111179 test: 0.1141355 best: 0.1141355 (964)
965: learn: 0.1110280 test: 0.1140494 best: 0.1140494 (965)
966: learn: 0.1109259 test: 0.1139520 best: 0.1139520 (966)
967: learn: 0.1108290 test: 0.1138596 best: 0.1138596 (967)
968: learn: 0.1107378 test: 0.1137713 best: 0.1137713 (968)
969: learn: 0.1106504 test: 0.1136866 best: 0.1136866 (969)
970: learn: 0.1105648 test: 0.1136071 best: 0.1136071 (970)
971: learn: 0.1104756 test: 0.1135223 best: 0.1135223 (971)
972: learn: 0.1103891 test: 0.1134417 best: 0.1134417 (972)
973: learn: 0.1103018 test: 0.1133605 best: 0.1133605 (973)
974: learn: 0.1102117 test: 0.1132721 best: 0.1132721 (974)
975: learn: 0.1101290 test: 0.1131950 best: 0.1131950 (975)
976: learn: 0.1100459 test: 0.1131151 best: 0.1131151 (976)
977: learn: 0.1099597 test: 0.1130349 best: 0.1130349 (977)
978: learn: 0.1098759 test: 0.1129554 best: 0.1129554 (978)
979: learn: 0.1097885 test: 0.1128723 best: 0.1128723 (979)
980: learn: 0.1096929 test: 0.1127798 best: 0.1127798 (980)
981: learn: 0.1096022 test: 0.1126924 best: 0.1126924 (981)
982: learn: 0.1095205 test: 0.1126135 best: 0.1126135 (982)
983: learn: 0.1094449 test: 0.1125420 best: 0.1125420 (983)
984: learn: 0.1093610 test: 0.1124625 best: 0.1124625 (984)
985: learn: 0.1092823 test: 0.1123858 best: 0.1123858 (985)
986: learn: 0.1091978 test: 0.1123063 best: 0.1123063 (986)
987: learn: 0.1091078 test: 0.1122180 best: 0.1122180 (987)
988: learn: 0.1090309 test: 0.1121447 best: 0.1121447 (988)
989: learn: 0.1089495 test: 0.1120686 best: 0.1120686 (989)
990: learn: 0.1088637 test: 0.1119877 best: 0.1119877 (990) total: 17.2s remaining: 156ms
991: learn: 0.1087867 test: 0.1119142 best: 0.1119142 (991)
992: learn: 0.1087042 test: 0.1118350 best: 0.1118350 (992)
993: learn: 0.1086199 test: 0.1117546 best: 0.1117546 (993)
994: learn: 0.1085321 test: 0.1116703 best: 0.1116703 (994)
995: learn: 0.1084448 test: 0.1115873 best: 0.1115873 (995)
996: learn: 0.1083500 test: 0.1114948 best: 0.1114948 (996)
997: learn: 0.1082585 test: 0.1114072 best: 0.1114072 (997)
998: learn: 0.1081742 test: 0.1113276 best: 0.1113276 (998)
999: learn: 0.1080968 test: 0.1112530 best: 0.1112530 (999) total: 17.4s remaining: 0us
0: learn: 0.6714260 test: 0.6714241 best: 0.6714241 (0)
1: learn: 0.6507381 test: 0.6507851 best: 0.6507851 (1)
2: learn: 0.6325910 test: 0.6327092 best: 0.6327092 (2)
3: learn: 0.6136876 test: 0.6138433 best: 0.6138433 (3)
4: learn: 0.5962852 test: 0.5964489 best: 0.5964489 (4)
5: learn: 0.5776116 test: 0.5778153 best: 0.5778153 (5)
6: learn: 0.5612911 test: 0.5615348 best: 0.5615348 (6)
7: learn: 0.5444255 test: 0.5447219 best: 0.5447219 (7)
8: learn: 0.5288128 test: 0.5291157 best: 0.5291157 (8)
9: learn: 0.5137740 test: 0.5141037 best: 0.5141037 (9)
10: learn: 0.4983699 test: 0.4987721 best: 0.4987721 (10)
11: learn: 0.4842834 test: 0.4847247 best: 0.4847247 (11)
12: learn: 0.4713567 test: 0.4718411 best: 0.4718411 (12)
13: learn: 0.4585599 test: 0.4590641 best: 0.4590641 (13)
14: learn: 0.4448793 test: 0.4454260 best: 0.4454260 (14)
15: learn: 0.4316814 test: 0.4322835 best: 0.4322835 (15)
16: learn: 0.4205854 test: 0.4211999 best: 0.4211999 (16)
17: learn: 0.4092291 test: 0.4098581 best: 0.4098581 (17)
18: learn: 0.3978216 test: 0.3985034 best: 0.3985034 (18)
19: learn: 0.3877088 test: 0.3884234 best: 0.3884234 (19)
20: learn: 0.3777033 test: 0.3784331 best: 0.3784331 (20)
21: learn: 0.3686228 test: 0.3693838 best: 0.3693838 (21)
22: learn: 0.3587130 test: 0.3594935 best: 0.3594935 (22)
23: learn: 0.3503029 test: 0.3511096 best: 0.3511096 (23)
24: learn: 0.3423157 test: 0.3431339 best: 0.3431339 (24)
25: learn: 0.3344869 test: 0.3353234 best: 0.3353234 (25)
26: learn: 0.3264353 test: 0.3273094 best: 0.3273094 (26) total: 540ms remaining: 19.5s
27: learn: 0.3183796 test: 0.3193059 best: 0.3193059 (27)
28: learn: 0.3105583 test: 0.3115289 best: 0.3115289 (28)
29: learn: 0.3031241 test: 0.3040932 best: 0.3040932 (29)
30: learn: 0.2962252 test: 0.2972052 best: 0.2972052 (30)
31: learn: 0.2892716 test: 0.2903330 best: 0.2903330 (31)
32: learn: 0.2825387 test: 0.2836352 best: 0.2836352 (32)
33: learn: 0.2753432 test: 0.2764506 best: 0.2764506 (33)
34: learn: 0.2696250 test: 0.2707438 best: 0.2707438 (34)
35: learn: 0.2645052 test: 0.2656526 best: 0.2656526 (35)
36: learn: 0.2586974 test: 0.2598998 best: 0.2598998 (36)
37: learn: 0.2534272 test: 0.2546603 best: 0.2546603 (37)
38: learn: 0.2483209 test: 0.2495796 best: 0.2495796 (38)
```

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38: learn: 0.2485289 test: 0.2498798 best: 0.2498798 (38)
39: learn: 0.2429153 test: 0.2441942 best: 0.2441942 (39)
40: learn: 0.2373059 test: 0.2385959 best: 0.2385959 (40)
41: learn: 0.2331396 test: 0.2344861 best: 0.2344861 (41)
42: learn: 0.2277212 test: 0.2290817 best: 0.2290817 (42)
43: learn: 0.2227747 test: 0.2241492 best: 0.2241492 (43)
44: learn: 0.2186200 test: 0.2200172 best: 0.2200172 (44)
45: learn: 0.2145883 test: 0.2160268 best: 0.2160268 (45)
46: learn: 0.2103426 test: 0.2118273 best: 0.2118273 (46)
47: learn: 0.2067827 test: 0.2082753 best: 0.2082753 (47)
48: learn: 0.2028917 test: 0.2044169 best: 0.2044169 (48)
49: learn: 0.1994921 test: 0.2010257 best: 0.2010257 (49)
50: learn: 0.1957801 test: 0.1973386 best: 0.1973386 (50)
51: learn: 0.1924892 test: 0.1940755 best: 0.1940755 (51)
52: learn: 0.1891497 test: 0.1907665 best: 0.1907665 (52)
53: learn: 0.1854740 test: 0.1871028 best: 0.1871028 (53)
54: learn: 0.1827161 test: 0.1843992 best: 0.1843992 (54)
55: learn: 0.1797517 test: 0.1814748 best: 0.1814748 (55)
56: learn: 0.1767845 test: 0.1785249 best: 0.1785249 (56)
57: learn: 0.1738727 test: 0.1756411 best: 0.1756411 (57)
58: learn: 0.1711528 test: 0.1729054 best: 0.1729054 (58)
59: learn: 0.1685290 test: 0.1702874 best: 0.1702874 (59)
60: learn: 0.1659173 test: 0.1677095 best: 0.1677095 (60)
61: learn: 0.1635380 test: 0.1653557 best: 0.1653557 (61)
62: learn: 0.1607205 test: 0.1625602 best: 0.1625602 (62)
63: learn: 0.1582547 test: 0.1601390 best: 0.1601390 (63)
64: learn: 0.1564051 test: 0.1583151 best: 0.1583151 (64)
65: learn: 0.1543253 test: 0.1562808 best: 0.1562808 (65)
66: learn: 0.1524128 test: 0.1543741 best: 0.1543741 (66)
67: learn: 0.1503508 test: 0.1523351 best: 0.1523351 (67)
68: learn: 0.1482205 test: 0.1502144 best: 0.1502144 (68)
69: learn: 0.1463092 test: 0.1483160 best: 0.1483160 (69)
70: learn: 0.1445833 test: 0.1466270 best: 0.1466270 (70)
71: learn: 0.1427824 test: 0.1448618 best: 0.1448618 (71)
72: learn: 0.1408344 test: 0.1429405 best: 0.1429405 (72)
73: learn: 0.1391710 test: 0.1413091 best: 0.1413091 (73)
74: learn: 0.1374801 test: 0.1396567 best: 0.1396567 (74)
75: learn: 0.1358994 test: 0.1381115 best: 0.1381115 (75)
76: learn: 0.1344027 test: 0.1366710 best: 0.1366710 (76)
77: learn: 0.1328716 test: 0.1351695 best: 0.1351695 (77)
78: learn: 0.1313999 test: 0.1337600 best: 0.1337600 (78)
79: learn: 0.1300740 test: 0.1324739 best: 0.1324739 (79)
80: learn: 0.1286733 test: 0.1311056 best: 0.1311056 (80)
81: learn: 0.1273109 test: 0.1297658 best: 0.1297658 (81)
82: learn: 0.1260497 test: 0.1285721 best: 0.1285721 (82)
83: learn: 0.1248588 test: 0.1274292 best: 0.1274292 (83)
84: learn: 0.1236142 test: 0.1262365 best: 0.1262365 (84)
85: learn: 0.1222060 test: 0.1248660 best: 0.1248660 (85)
86: learn: 0.1211180 test: 0.1238068 best: 0.1238068 (86)
87: learn: 0.1197958 test: 0.1225402 best: 0.1225402 (87)
88: learn: 0.1185684 test: 0.1213636 best: 0.1213636 (88)
89: learn: 0.1175907 test: 0.1204060 best: 0.1204060 (89)
90: learn: 0.1164249 test: 0.1192684 best: 0.1192684 (90)
91: learn: 0.1154300 test: 0.1182985 best: 0.1182985 (91)
92: learn: 0.1145092 test: 0.1174026 best: 0.1174026 (92)
93: learn: 0.1135370 test: 0.1164756 best: 0.1164756 (93)
94: learn: 0.1125592 test: 0.1155661 best: 0.1155661 (94)
95: learn: 0.1115879 test: 0.1146304 best: 0.1146304 (95)
96: learn: 0.1107537 test: 0.1138346 best: 0.1138346 (96)
97: learn: 0.1098914 test: 0.1130301 best: 0.1130301 (97)
98: learn: 0.1090362 test: 0.1122208 best: 0.1122208 (98)
99: learn: 0.1082104 test: 0.1114238 best: 0.1114238 (99)
100: learn: 0.1074783 test: 0.1107281 best: 0.1107281 (100)
101: learn: 0.1066454 test: 0.1099427 best: 0.1099427 (101)
102: learn: 0.1059172 test: 0.1092340 best: 0.1092340 (102)
103: learn: 0.1051620 test: 0.1085242 best: 0.1085242 (103)
104: learn: 0.1044439 test: 0.1078451 best: 0.1078451 (104)
105: learn: 0.1037088 test: 0.1071515 best: 0.1071515 (105)
106: learn: 0.1030148 test: 0.1064918 best: 0.1064918 (106)
107: learn: 0.1024433 test: 0.1059501 best: 0.1059501 (107)
108: learn: 0.1017532 test: 0.1052791 best: 0.1052791 (108)
109: learn: 0.1010583 test: 0.1046235 best: 0.1046235 (109)
110: learn: 0.1004068 test: 0.1040323 best: 0.1040323 (110)
111: learn: 0.0998224 test: 0.1034875 best: 0.1034875 (111)
112: learn: 0.0992004 test: 0.1029137 best: 0.1029137 (112) total: 2.02s remaining: 15.8s
113: learn: 0.0985876 test: 0.1023487 best: 0.1023487 (113)
114: learn: 0.0980620 test: 0.1018538 best: 0.1018538 (114)
115: learn: 0.0975236 test: 0.1013340 best: 0.1013340 (115)
```

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115: learn: 0.0975258 test: 0.1015540 best: 0.1015540 (115)
116: learn: 0.0968962 test: 0.1007415 best: 0.1007415 (116)
117: learn: 0.0963195 test: 0.1002114 best: 0.1002114 (117)
118: learn: 0.0958165 test: 0.0997467 best: 0.0997467 (118)
119: learn: 0.0952860 test: 0.0992631 best: 0.0992631 (119)
120: learn: 0.0948331 test: 0.0988456 best: 0.0988456 (120)
121: learn: 0.0944056 test: 0.0984556 best: 0.0984556 (121)
122: learn: 0.0938890 test: 0.0979816 best: 0.0979816 (122)
123: learn: 0.0934425 test: 0.0975810 best: 0.0975810 (123)
124: learn: 0.0929485 test: 0.0971216 best: 0.0971216 (124)
125: learn: 0.0923711 test: 0.0965826 best: 0.0965826 (125)
126: learn: 0.0919093 test: 0.0961638 best: 0.0961638 (126)
127: learn: 0.0914622 test: 0.0957633 best: 0.0957633 (127)
128: learn: 0.0910166 test: 0.0953671 best: 0.0953671 (128)
129: learn: 0.0906146 test: 0.0950126 best: 0.0950126 (129)
130: learn: 0.0901395 test: 0.0945794 best: 0.0945794 (130)
131: learn: 0.0897401 test: 0.0942178 best: 0.0942178 (131)
132: learn: 0.0893582 test: 0.0939015 best: 0.0939015 (132)
133: learn: 0.0889702 test: 0.0935830 best: 0.0935830 (133)
134: learn: 0.0886250 test: 0.0932810 best: 0.0932810 (134)
135: learn: 0.0882610 test: 0.0929539 best: 0.0929539 (135)
136: learn: 0.0879065 test: 0.0926127 best: 0.0926127 (136)
137: learn: 0.0875703 test: 0.0923345 best: 0.0923345 (137)
138: learn: 0.0872554 test: 0.0920602 best: 0.0920602 (138)
139: learn: 0.0869065 test: 0.0917419 best: 0.0917419 (139)
140: learn: 0.0865479 test: 0.0914227 best: 0.0914227 (140)
141: learn: 0.0862289 test: 0.0911246 best: 0.0911246 (141)
142: learn: 0.0859200 test: 0.0908711 best: 0.0908711 (142)
143: learn: 0.0855804 test: 0.0905665 best: 0.0905665 (143)
144: learn: 0.0852768 test: 0.0902720 best: 0.0902720 (144)
145: learn: 0.0849740 test: 0.0900197 best: 0.0900197 (145)
146: learn: 0.0846653 test: 0.0897605 best: 0.0897605 (146)
147: learn: 0.0843579 test: 0.0894793 best: 0.0894793 (147)
148: learn: 0.0840970 test: 0.0892663 best: 0.0892663 (148)
149: learn: 0.0838396 test: 0.0890499 best: 0.0890499 (149)
150: learn: 0.0835744 test: 0.0888137 best: 0.0888137 (150)
151: learn: 0.0832984 test: 0.0885756 best: 0.0885756 (151)
152: learn: 0.0830125 test: 0.0883225 best: 0.0883225 (152)
153: learn: 0.0827746 test: 0.0881200 best: 0.0881200 (153)
154: learn: 0.0825217 test: 0.0879258 best: 0.0879258 (154)
155: learn: 0.0822932 test: 0.0877445 best: 0.0877445 (155)
156: learn: 0.0820615 test: 0.0875499 best: 0.0875499 (156)
157: learn: 0.0818706 test: 0.0873857 best: 0.0873857 (157)
158: learn: 0.0816290 test: 0.0871813 best: 0.0871813 (158)
159: learn: 0.0814129 test: 0.0870108 best: 0.0870108 (159)
160: learn: 0.0811300 test: 0.0867889 best: 0.0867889 (160)
161: learn: 0.0808964 test: 0.0865938 best: 0.0865938 (161)
162: learn: 0.0806590 test: 0.0863896 best: 0.0863896 (162)
163: learn: 0.0804264 test: 0.0861881 best: 0.0861881 (163)
164: learn: 0.0802047 test: 0.0859948 best: 0.0859948 (164)
165: learn: 0.0799942 test: 0.0858223 best: 0.0858223 (165)
166: learn: 0.0798201 test: 0.0856917 best: 0.0856917 (166)
167: learn: 0.0796187 test: 0.0855382 best: 0.0855382 (167)
168: learn: 0.0793994 test: 0.0853794 best: 0.0853794 (168)
169: learn: 0.0792350 test: 0.0852342 best: 0.0852342 (169)
170: learn: 0.0790699 test: 0.0851168 best: 0.0851168 (170)
171: learn: 0.0788513 test: 0.0849351 best: 0.0849351 (171)
172: learn: 0.0786230 test: 0.0847337 best: 0.0847337 (172)
173: learn: 0.0784564 test: 0.0846203 best: 0.0846203 (173)
174: learn: 0.0782701 test: 0.0844906 best: 0.0844906 (174)
175: learn: 0.0780679 test: 0.0843010 best: 0.0843010 (175)
176: learn: 0.0778402 test: 0.0841051 best: 0.0841051 (176)
177: learn: 0.0776135 test: 0.0839222 best: 0.0839222 (177)
178: learn: 0.0774125 test: 0.0837605 best: 0.0837605 (178)
179: learn: 0.0772253 test: 0.0835936 best: 0.0835936 (179)
180: learn: 0.0770850 test: 0.0835052 best: 0.0835052 (180)
181: learn: 0.0768942 test: 0.0833493 best: 0.0833493 (181)
182: learn: 0.0767668 test: 0.0832432 best: 0.0832432 (182)
183: learn: 0.0765748 test: 0.0830812 best: 0.0830812 (183)
184: learn: 0.0763877 test: 0.0829448 best: 0.0829448 (184)
185: learn: 0.0762646 test: 0.0828505 best: 0.0828505 (185)
186: learn: 0.0760770 test: 0.0826946 best: 0.0826946 (186)
187: learn: 0.0759240 test: 0.0825728 best: 0.0825728 (187)
188: learn: 0.0757760 test: 0.0824504 best: 0.0824504 (188)
189: learn: 0.0756291 test: 0.0823501 best: 0.0823501 (189)
190: learn: 0.0755183 test: 0.0822661 best: 0.0822661 (190)
191: learn: 0.0753970 test: 0.0821875 best: 0.0821875 (191)
192: learn: 0.0752840 test: 0.0821089 best: 0.0821089 (192)
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192: learn: 0.0752840 test: 0.0821089 best: 0.0821089 (192)
193: learn: 0.0752080 test: 0.0820558 best: 0.0820558 (193)
194: learn: 0.0750245 test: 0.0819045 best: 0.0819045 (194)
195: learn: 0.0749088 test: 0.0818171 best: 0.0818171 (195)
196: learn: 0.0747479 test: 0.0816957 best: 0.0816957 (196)
197: learn: 0.0746327 test: 0.0816050 best: 0.0816050 (197) total: 3.46s remaining: 14s
198: learn: 0.0744945 test: 0.0815002 best: 0.0815002 (198)
199: learn: 0.0743510 test: 0.0813770 best: 0.0813770 (199)
200: learn: 0.0741950 test: 0.0812542 best: 0.0812542 (200)
201: learn: 0.0740655 test: 0.0811712 best: 0.0811712 (201)
202: learn: 0.0739758 test: 0.0811146 best: 0.0811146 (202)
203: learn: 0.0738339 test: 0.0810019 best: 0.0810019 (203)
204: learn: 0.0737180 test: 0.0809199 best: 0.0809199 (204)
205: learn: 0.0735809 test: 0.0808209 best: 0.0808209 (205)
206: learn: 0.0734221 test: 0.0807124 best: 0.0807124 (206)
207: learn: 0.0732764 test: 0.0806104 best: 0.0806104 (207)
208: learn: 0.0731415 test: 0.0805053 best: 0.0805053 (208)
209: learn: 0.0729932 test: 0.0803982 best: 0.0803982 (209)
210: learn: 0.0728605 test: 0.0802971 best: 0.0802971 (210)
211: learn: 0.0727340 test: 0.0802178 best: 0.0802178 (211)
212: learn: 0.0725829 test: 0.0801154 best: 0.0801154 (212)
213: learn: 0.0724821 test: 0.0800606 best: 0.0800606 (213)
214: learn: 0.0723608 test: 0.0799899 best: 0.0799899 (214)
215: learn: 0.0722589 test: 0.0799108 best: 0.0799108 (215)
216: learn: 0.0721487 test: 0.0798339 best: 0.0798339 (216)
217: learn: 0.0720356 test: 0.0797617 best: 0.0797617 (217)
218: learn: 0.0719519 test: 0.0797160 best: 0.0797160 (218)
219: learn: 0.0718545 test: 0.0796456 best: 0.0796456 (219)
220: learn: 0.0717467 test: 0.0795820 best: 0.0795820 (220)
221: learn: 0.0716506 test: 0.0795254 best: 0.0795254 (221)
222: learn: 0.0715339 test: 0.0794588 best: 0.0794588 (222)
223: learn: 0.0714276 test: 0.0793828 best: 0.0793828 (223)
224: learn: 0.0713050 test: 0.0793148 best: 0.0793148 (224)
225: learn: 0.0712026 test: 0.0792360 best: 0.0792360 (225)
226: learn: 0.0711133 test: 0.0791672 best: 0.0791672 (226)
227: learn: 0.0709983 test: 0.0791141 best: 0.0791141 (227)
228: learn: 0.0708996 test: 0.0790627 best: 0.0790627 (228)
229: learn: 0.0707831 test: 0.0789885 best: 0.0789885 (229)
230: learn: 0.0706911 test: 0.0789282 best: 0.0789282 (230)
231: learn: 0.0706116 test: 0.0788845 best: 0.0788845 (231)
232: learn: 0.0705388 test: 0.0788529 best: 0.0788529 (232)
233: learn: 0.0704425 test: 0.0787820 best: 0.0787820 (233)
234: learn: 0.0703587 test: 0.0787291 best: 0.0787291 (234)
235: learn: 0.0702519 test: 0.0786755 best: 0.0786755 (235)
236: learn: 0.0701471 test: 0.0786157 best: 0.0786157 (236)
237: learn: 0.0700678 test: 0.0785630 best: 0.0785630 (237)
238: learn: 0.0699745 test: 0.0785012 best: 0.0785012 (238)
239: learn: 0.0698817 test: 0.0784537 best: 0.0784537 (239)
240: learn: 0.0697848 test: 0.0784014 best: 0.0784014 (240) total: 4.23s remaining: 13.3s
241: learn: 0.0696922 test: 0.0783518 best: 0.0783518 (241)
242: learn: 0.0696017 test: 0.0782927 best: 0.0782927 (242)
243: learn: 0.0695294 test: 0.0782371 best: 0.0782371 (243)
244: learn: 0.0694448 test: 0.0781862 best: 0.0781862 (244)
245: learn: 0.0693587 test: 0.0781331 best: 0.0781331 (245)
246: learn: 0.0692653 test: 0.0780726 best: 0.0780726 (246)
247: learn: 0.0691822 test: 0.0780282 best: 0.0780282 (247)
248: learn: 0.0691016 test: 0.0779822 best: 0.0779822 (248)
249: learn: 0.0690270 test: 0.0779389 best: 0.0779389 (249)
250: learn: 0.0689536 test: 0.0778884 best: 0.0778884 (250)
251: learn: 0.0688676 test: 0.0778417 best: 0.0778417 (251)
252: learn: 0.0687870 test: 0.0777947 best: 0.0777947 (252)
253: learn: 0.0687173 test: 0.0777465 best: 0.0777465 (253) total: 4.52s remaining: 13.3s
254: learn: 0.0686199 test: 0.0777061 best: 0.0777061 (254)
255: learn: 0.0685510 test: 0.0776624 best: 0.0776624 (255)
256: learn: 0.0684948 test: 0.0776352 best: 0.0776352 (256)
257: learn: 0.0684245 test: 0.0775948 best: 0.0775948 (257)
258: learn: 0.0683537 test: 0.0775370 best: 0.0775370 (258)
259: learn: 0.0682643 test: 0.0774814 best: 0.0774814 (259)
260: learn: 0.0681876 test: 0.0774380 best: 0.0774380 (260)
261: learn: 0.0681023 test: 0.0773905 best: 0.0773905 (261)
262: learn: 0.0680080 test: 0.0773411 best: 0.0773411 (262)
263: learn: 0.0679561 test: 0.0773231 best: 0.0773231 (263)
264: learn: 0.0678893 test: 0.0773044 best: 0.0773044 (264)
265: learn: 0.0678371 test: 0.0772741 best: 0.0772741 (265)
266: learn: 0.0677613 test: 0.0772413 best: 0.0772413 (266)
267: learn: 0.0677006 test: 0.0772154 best: 0.0772154 (267)
268: learn: 0.0676526 test: 0.0771852 best: 0.0771852 (268)
269: learn: 0.0675971 test: 0.0771595 best: 0.0771595 (269)
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269: learn: 0.0675971 test: 0.0771395 best: 0.0771395 (269)
270: learn: 0.0675433 test: 0.0771429 best: 0.0771429 (270)
271: learn: 0.0674719 test: 0.0771029 best: 0.0771029 (271)
272: learn: 0.0674076 test: 0.0770754 best: 0.0770754 (272)
273: learn: 0.0673543 test: 0.0770652 best: 0.0770652 (273)
274: learn: 0.0672819 test: 0.0770258 best: 0.0770258 (274)
275: learn: 0.0672121 test: 0.0769957 best: 0.0769957 (275)
276: learn: 0.0671614 test: 0.0769662 best: 0.0769662 (276)
277: learn: 0.0670942 test: 0.0769321 best: 0.0769321 (277)
278: learn: 0.0670449 test: 0.0769117 best: 0.0769117 (278)
279: learn: 0.0669846 test: 0.0768760 best: 0.0768760 (279)
280: learn: 0.0669329 test: 0.0768571 best: 0.0768571 (280)
281: learn: 0.0668583 test: 0.0768225 best: 0.0768225 (281)
282: learn: 0.0668194 test: 0.0768140 best: 0.0768140 (282) total: 5.04s remaining: 12.8s
283: learn: 0.0667424 test: 0.0767828 best: 0.0767828 (283)
284: learn: 0.0666918 test: 0.0767687 best: 0.0767687 (284)
285: learn: 0.0666308 test: 0.0767456 best: 0.0767456 (285)
286: learn: 0.0665602 test: 0.0767104 best: 0.0767104 (286)
287: learn: 0.0665066 test: 0.0766923 best: 0.0766923 (287)
288: learn: 0.0664505 test: 0.0766773 best: 0.0766773 (288)
289: learn: 0.0663891 test: 0.0766404 best: 0.0766404 (289)
290: learn: 0.0663378 test: 0.0766172 best: 0.0766172 (290)
291: learn: 0.0662815 test: 0.0765958 best: 0.0765958 (291)
292: learn: 0.0662219 test: 0.0765657 best: 0.0765657 (292)
293: learn: 0.0661625 test: 0.0765373 best: 0.0765373 (293)
294: learn: 0.0661021 test: 0.0764953 best: 0.0764953 (294)
295: learn: 0.0660466 test: 0.0764754 best: 0.0764754 (295)
296: learn: 0.0659865 test: 0.0764480 best: 0.0764480 (296)
297: learn: 0.0659280 test: 0.0764463 best: 0.0764463 (297)
298: learn: 0.0658708 test: 0.0764231 best: 0.0764231 (298)
299: learn: 0.0658099 test: 0.0763956 best: 0.0763956 (299)
300: learn: 0.0657580 test: 0.0763688 best: 0.0763688 (300)
301: learn: 0.0656995 test: 0.0763639 best: 0.0763639 (301)
302: learn: 0.0656502 test: 0.0763382 best: 0.0763382 (302)
303: learn: 0.0656005 test: 0.0763193 best: 0.0763193 (303)
304: learn: 0.0655595 test: 0.0763042 best: 0.0763042 (304)
305: learn: 0.0654973 test: 0.0762668 best: 0.0762668 (305)
306: learn: 0.0654410 test: 0.0762394 best: 0.0762394 (306)
307: learn: 0.0653897 test: 0.0762210 best: 0.0762210 (307)
308: learn: 0.0653357 test: 0.0761889 best: 0.0761889 (308)
309: learn: 0.0652737 test: 0.0761714 best: 0.0761714 (309)
310: learn: 0.0652352 test: 0.0761440 best: 0.0761440 (310)
311: learn: 0.0651772 test: 0.0761248 best: 0.0761248 (311)
312: learn: 0.0651239 test: 0.0761046 best: 0.0761046 (312)
313: learn: 0.0650575 test: 0.0760947 best: 0.0760947 (313)
314: learn: 0.0650077 test: 0.0760834 best: 0.0760834 (314)
315: learn: 0.0649588 test: 0.0760643 best: 0.0760643 (315)
316: learn: 0.0649200 test: 0.0760559 best: 0.0760559 (316)
317: learn: 0.0648750 test: 0.0760397 best: 0.0760397 (317)
318: learn: 0.0648194 test: 0.0760261 best: 0.0760261 (318)
319: learn: 0.0647616 test: 0.0760146 best: 0.0760146 (319)
320: learn: 0.0647119 test: 0.0759880 best: 0.0759880 (320)
321: learn: 0.0646639 test: 0.0759682 best: 0.0759682 (321)
322: learn: 0.0646265 test: 0.0759557 best: 0.0759557 (322)
323: learn: 0.0645745 test: 0.0759351 best: 0.0759351 (323)
324: learn: 0.0645319 test: 0.0759143 best: 0.0759143 (324)
325: learn: 0.0644914 test: 0.0759076 best: 0.0759076 (325)
326: learn: 0.0644464 test: 0.0758956 best: 0.0758956 (326)
327: learn: 0.0644023 test: 0.0758780 best: 0.0758780 (327)
328: learn: 0.0643478 test: 0.0758691 best: 0.0758691 (328)
329: learn: 0.0642941 test: 0.0758418 best: 0.0758418 (329)
330: learn: 0.0642502 test: 0.0758256 best: 0.0758256 (330)
331: learn: 0.0641864 test: 0.0757998 best: 0.0757998 (331)
332: learn: 0.0641349 test: 0.0757881 best: 0.0757881 (332)
333: learn: 0.0640928 test: 0.0757803 best: 0.0757803 (333)
334: learn: 0.0640623 test: 0.0757724 best: 0.0757724 (334)
335: learn: 0.0640170 test: 0.0757574 best: 0.0757574 (335)
336: learn: 0.0639698 test: 0.0757379 best: 0.0757379 (336)
337: learn: 0.0639306 test: 0.0757237 best: 0.0757237 (337)
338: learn: 0.0638941 test: 0.0757091 best: 0.0757091 (338)
339: learn: 0.0638434 test: 0.0756834 best: 0.0756834 (339)
340: learn: 0.0637952 test: 0.0756595 best: 0.0756595 (340)
341: learn: 0.0637525 test: 0.0756427 best: 0.0756427 (341)
342: learn: 0.0637030 test: 0.0756246 best: 0.0756246 (342)
343: learn: 0.0636455 test: 0.0756077 best: 0.0756077 (343)
344: learn: 0.0636052 test: 0.0755873 best: 0.0755873 (344)
345: learn: 0.0635810 test: 0.0755938 best: 0.0755873 (344)
346: learn: 0.0635364 test: 0.0755923 best: 0.0755873 (344)
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346: learn: 0.0635264 test: 0.0755922 best: 0.0755873 (344)
347: learn: 0.0634869 test: 0.0755813 best: 0.0755813 (347)
348: learn: 0.0634346 test: 0.0755731 best: 0.0755731 (348)
349: learn: 0.0633978 test: 0.0755616 best: 0.0755616 (349)
350: learn: 0.0633661 test: 0.0755541 best: 0.0755541 (350)
351: learn: 0.0633183 test: 0.0755303 best: 0.0755303 (351) total: 6.22s remaining: 11.5s
352: learn: 0.0632852 test: 0.0755172 best: 0.0755172 (352)
353: learn: 0.0632477 test: 0.0755018 best: 0.0755018 (353)
354: learn: 0.0632054 test: 0.0754948 best: 0.0754948 (354)
355: learn: 0.0631611 test: 0.0754863 best: 0.0754863 (355)
356: learn: 0.0631151 test: 0.0754694 best: 0.0754694 (356)
357: learn: 0.0630719 test: 0.0754640 best: 0.0754640 (357)
358: learn: 0.0630259 test: 0.0754451 best: 0.0754451 (358)
359: learn: 0.0629928 test: 0.0754309 best: 0.0754309 (359)
360: learn: 0.0629512 test: 0.0754178 best: 0.0754178 (360)
361: learn: 0.0629046 test: 0.0754126 best: 0.0754126 (361)
362: learn: 0.0628567 test: 0.0754031 best: 0.0754031 (362)
363: learn: 0.0628171 test: 0.0753935 best: 0.0753935 (363)
364: learn: 0.0627683 test: 0.0753793 best: 0.0753793 (364)
365: learn: 0.0627156 test: 0.0753764 best: 0.0753764 (365)
366: learn: 0.0626783 test: 0.0753613 best: 0.0753613 (366)
367: learn: 0.0626439 test: 0.0753600 best: 0.0753600 (367)
368: learn: 0.0626139 test: 0.0753546 best: 0.0753546 (368)
369: learn: 0.0625751 test: 0.0753379 best: 0.0753379 (369)
370: learn: 0.0625281 test: 0.0753283 best: 0.0753283 (370)
371: learn: 0.0625031 test: 0.0753259 best: 0.0753259 (371)
372: learn: 0.0624530 test: 0.0753126 best: 0.0753126 (372)
373: learn: 0.0624108 test: 0.0753094 best: 0.0753094 (373)
374: learn: 0.0623819 test: 0.0753047 best: 0.0753047 (374)
375: learn: 0.0623449 test: 0.0752861 best: 0.0752861 (375)
376: learn: 0.0623004 test: 0.0752802 best: 0.0752802 (376)
377: learn: 0.0622722 test: 0.0752636 best: 0.0752636 (377)
378: learn: 0.0622351 test: 0.0752549 best: 0.0752549 (378)
379: learn: 0.0622096 test: 0.0752466 best: 0.0752466 (379)
380: learn: 0.0621695 test: 0.0752356 best: 0.0752356 (380)
381: learn: 0.0621302 test: 0.0752233 best: 0.0752233 (381)
382: learn: 0.0620886 test: 0.0752111 best: 0.0752111 (382)
383: learn: 0.0620595 test: 0.0752062 best: 0.0752062 (383)
384: learn: 0.0620316 test: 0.0751998 best: 0.0751998 (384)
385: learn: 0.0620025 test: 0.0751936 best: 0.0751936 (385)
386: learn: 0.0619543 test: 0.0751962 best: 0.0751936 (385)
387: learn: 0.0619100 test: 0.0751812 best: 0.0751812 (387)
388: learn: 0.0618669 test: 0.0751650 best: 0.0751650 (388)
389: learn: 0.0618271 test: 0.0751456 best: 0.0751456 (389)
390: learn: 0.0617970 test: 0.0751457 best: 0.0751456 (389)
391: learn: 0.0617656 test: 0.0751362 best: 0.0751362 (391)
392: learn: 0.0617381 test: 0.0751303 best: 0.0751303 (392) total: 6.97s remaining: 10.8s
393: learn: 0.0616871 test: 0.0751121 best: 0.0751121 (393)
394: learn: 0.0616391 test: 0.0751063 best: 0.0751063 (394)
395: learn: 0.0616000 test: 0.0751018 best: 0.0751018 (395)
396: learn: 0.0615592 test: 0.0750996 best: 0.0750996 (396)
397: learn: 0.0615241 test: 0.0750982 best: 0.0750982 (397)
398: learn: 0.0614770 test: 0.0751088 best: 0.0750982 (397)
399: learn: 0.0614202 test: 0.0751056 best: 0.0750982 (397)
400: learn: 0.0613749 test: 0.0751145 best: 0.0750982 (397)
401: learn: 0.0613353 test: 0.0751081 best: 0.0750982 (397)
402: learn: 0.0612925 test: 0.0750994 best: 0.0750982 (397)
403: learn: 0.0612576 test: 0.0750872 best: 0.0750872 (403)
404: learn: 0.0612173 test: 0.0750730 best: 0.0750730 (404)
405: learn: 0.0611883 test: 0.0750610 best: 0.0750610 (405)
406: learn: 0.0611509 test: 0.0750491 best: 0.0750491 (406)
407: learn: 0.0611193 test: 0.0750443 best: 0.0750443 (407)
408: learn: 0.0610784 test: 0.0750304 best: 0.0750304 (408)
409: learn: 0.0610532 test: 0.0750291 best: 0.0750291 (409)
410: learn: 0.0610094 test: 0.0750140 best: 0.0750140 (410)
411: learn: 0.0609546 test: 0.0750003 best: 0.0750003 (411)
412: learn: 0.0609023 test: 0.0749942 best: 0.0749942 (412)
413: learn: 0.0608623 test: 0.0749893 best: 0.0749893 (413)
414: learn: 0.0608351 test: 0.0749860 best: 0.0749860 (414)
415: learn: 0.0608052 test: 0.0749667 best: 0.0749667 (415)
416: learn: 0.0607751 test: 0.0749510 best: 0.0749510 (416)
417: learn: 0.0607357 test: 0.0749483 best: 0.0749483 (417)
418: learn: 0.0606958 test: 0.0749440 best: 0.0749440 (418)
419: learn: 0.0606612 test: 0.0749303 best: 0.0749303 (419)
420: learn: 0.0606196 test: 0.0749159 best: 0.0749159 (420)
421: learn: 0.0605942 test: 0.0749085 best: 0.0749085 (421)
422: learn: 0.0605559 test: 0.0748883 best: 0.0748883 (422)
423: learn: 0.0605185 test: 0.0748730 best: 0.0748730 (423)
```

```
423: learn: 0.0605185 test: 0.0748739 best: 0.0748739 (423)
424: learn: 0.0604801 test: 0.0748652 best: 0.0748652 (424)
425: learn: 0.0604506 test: 0.0748583 best: 0.0748583 (425)
426: learn: 0.0604268 test: 0.0748569 best: 0.0748569 (426)
427: learn: 0.0603964 test: 0.0748516 best: 0.0748516 (427)
428: learn: 0.0603610 test: 0.0748282 best: 0.0748282 (428)
429: learn: 0.0603131 test: 0.0748176 best: 0.0748176 (429)
430: learn: 0.0602887 test: 0.0748164 best: 0.0748164 (430)
431: learn: 0.0602488 test: 0.0748028 best: 0.0748028 (431)
432: learn: 0.0602122 test: 0.0748006 best: 0.0748006 (432)
433: learn: 0.0601657 test: 0.0747974 best: 0.0747974 (433)
434: learn: 0.0601370 test: 0.0747938 best: 0.0747938 (434)
435: learn: 0.0601118 test: 0.0747818 best: 0.0747818 (435)
436: learn: 0.0600878 test: 0.0747810 best: 0.0747810 (436)
437: learn: 0.0600565 test: 0.0747761 best: 0.0747761 (437)
438: learn: 0.0600276 test: 0.0747742 best: 0.0747742 (438)
439: learn: 0.0600012 test: 0.0747652 best: 0.0747652 (439)
440: learn: 0.0599683 test: 0.0747606 best: 0.0747606 (440)
441: learn: 0.0599432 test: 0.0747528 best: 0.0747528 (441)
442: learn: 0.0598990 test: 0.0747441 best: 0.0747441 (442)
443: learn: 0.0598627 test: 0.0747319 best: 0.0747319 (443)
444: learn: 0.0598342 test: 0.0747287 best: 0.0747287 (444)
445: learn: 0.0597958 test: 0.0747212 best: 0.0747212 (445)
446: learn: 0.0597680 test: 0.0747203 best: 0.0747203 (446)
447: learn: 0.0597266 test: 0.0747194 best: 0.0747194 (447)
448: learn: 0.0596879 test: 0.0746983 best: 0.0746983 (448)
449: learn: 0.0596516 test: 0.0746854 best: 0.0746854 (449)
450: learn: 0.0596193 test: 0.0746846 best: 0.0746846 (450)
451: learn: 0.0595992 test: 0.0746847 best: 0.0746846 (450)
452: learn: 0.0595694 test: 0.0746808 best: 0.0746808 (452)
453: learn: 0.0595344 test: 0.0746838 best: 0.0746808 (452)
454: learn: 0.0594829 test: 0.0746782 best: 0.0746782 (454)
455: learn: 0.0594570 test: 0.0746747 best: 0.0746747 (455)
456: learn: 0.0594096 test: 0.0746546 best: 0.0746546 (456)
457: learn: 0.0593802 test: 0.0746526 best: 0.0746526 (457)
458: learn: 0.0593410 test: 0.0746411 best: 0.0746411 (458)
459: learn: 0.0593078 test: 0.0746369 best: 0.0746369 (459)
460: learn: 0.0592771 test: 0.0746271 best: 0.0746271 (460)
461: learn: 0.0592453 test: 0.0746233 best: 0.0746233 (461)
462: learn: 0.0592085 test: 0.0746174 best: 0.0746174 (462)
463: learn: 0.0591804 test: 0.0746139 best: 0.0746139 (463)
464: learn: 0.0591319 test: 0.0746006 best: 0.0746006 (464)
465: learn: 0.0591002 test: 0.0745883 best: 0.0745883 (465)
466: learn: 0.0590576 test: 0.0745766 best: 0.0745766 (466)
467: learn: 0.0590194 test: 0.0745789 best: 0.0745766 (466)
468: learn: 0.0589939 test: 0.0745699 best: 0.0745699 (468)
469: learn: 0.0589656 test: 0.0745561 best: 0.0745561 (469)
470: learn: 0.0589342 test: 0.0745526 best: 0.0745526 (470)
471: learn: 0.0588895 test: 0.0745519 best: 0.0745519 (471)
472: learn: 0.0588607 test: 0.0745460 best: 0.0745460 (472)
473: learn: 0.0588248 test: 0.0745426 best: 0.0745426 (473)
474: learn: 0.0587978 test: 0.0745442 best: 0.0745426 (473)
475: learn: 0.0587742 test: 0.0745391 best: 0.0745391 (475)
476: learn: 0.0587501 test: 0.0745328 best: 0.0745328 (476)
477: learn: 0.0587228 test: 0.0745286 best: 0.0745286 (477) total: 8.55s remaining: 9.34s
478: learn: 0.0586736 test: 0.0745176 best: 0.0745176 (478)
479: learn: 0.0586295 test: 0.0745202 best: 0.0745176 (478)
480: learn: 0.0586007 test: 0.0745214 best: 0.0745176 (478)
481: learn: 0.0585732 test: 0.0745164 best: 0.0745164 (481)
482: learn: 0.0585479 test: 0.0745150 best: 0.0745150 (482)
483: learn: 0.0585283 test: 0.0745043 best: 0.0745043 (483)
484: learn: 0.0584865 test: 0.0745006 best: 0.0745006 (484)
485: learn: 0.0584412 test: 0.0744990 best: 0.0744990 (485)
486: learn: 0.0584174 test: 0.0744915 best: 0.0744915 (486)
487: learn: 0.0583832 test: 0.0744897 best: 0.0744897 (487)
488: learn: 0.0583455 test: 0.0744848 best: 0.0744848 (488)
489: learn: 0.0583122 test: 0.0744742 best: 0.0744742 (489)
490: learn: 0.0582740 test: 0.0744697 best: 0.0744697 (490)
491: learn: 0.0582555 test: 0.0744645 best: 0.0744645 (491)
492: learn: 0.0582145 test: 0.0744406 best: 0.0744406 (492) total: 8.86s remaining: 9.12s
493: learn: 0.0581833 test: 0.0744418 best: 0.0744406 (492)
494: learn: 0.0581601 test: 0.0744373 best: 0.0744373 (494)
495: learn: 0.0581240 test: 0.0744342 best: 0.0744342 (495)
496: learn: 0.0580879 test: 0.0744352 best: 0.0744342 (495)
497: learn: 0.0580638 test: 0.0744403 best: 0.0744342 (495)
498: learn: 0.0580335 test: 0.0744392 best: 0.0744342 (495)
499: learn: 0.0580166 test: 0.0744285 best: 0.0744285 (499)
```

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500: learn: 0.0579813 test: 0.0744291 best: 0.0744285 (499)
501: learn: 0.0579515 test: 0.0744286 best: 0.0744285 (499)
502: learn: 0.0579316 test: 0.0744183 best: 0.0744183 (502)
503: learn: 0.0579097 test: 0.0744156 best: 0.0744156 (503)
504: learn: 0.0578891 test: 0.0744156 best: 0.0744156 (503)
505: learn: 0.0578659 test: 0.0744118 best: 0.0744118 (505)
506: learn: 0.0578494 test: 0.0744053 best: 0.0744053 (506)
507: learn: 0.0578207 test: 0.0744050 best: 0.0744050 (507)
508: learn: 0.0577940 test: 0.0744039 best: 0.0744039 (508)
509: learn: 0.0577675 test: 0.0743998 best: 0.0743998 (509)
510: learn: 0.0577327 test: 0.0743955 best: 0.0743955 (510)
511: learn: 0.0577093 test: 0.0744032 best: 0.0743955 (510)
512: learn: 0.0576738 test: 0.0743997 best: 0.0743955 (510)
513: learn: 0.0576454 test: 0.0743898 best: 0.0743898 (513)
514: learn: 0.0576217 test: 0.0743891 best: 0.0743891 (514)
515: learn: 0.0575831 test: 0.0743835 best: 0.0743835 (515)
516: learn: 0.0575533 test: 0.0743828 best: 0.0743828 (516)
517: learn: 0.0575196 test: 0.0743878 best: 0.0743828 (516)
518: learn: 0.0574874 test: 0.0743725 best: 0.0743725 (518)
519: learn: 0.0574684 test: 0.0743679 best: 0.0743679 (519)
520: learn: 0.0574481 test: 0.0743694 best: 0.0743679 (519)
521: learn: 0.0574203 test: 0.0743702 best: 0.0743679 (519)
522: learn: 0.0573867 test: 0.0743649 best: 0.0743649 (522)
523: learn: 0.0573423 test: 0.0743562 best: 0.0743562 (523)
524: learn: 0.0573168 test: 0.0743486 best: 0.0743486 (524)
525: learn: 0.0572923 test: 0.0743466 best: 0.0743466 (525)
526: learn: 0.0572576 test: 0.0743538 best: 0.0743466 (525)
527: learn: 0.0572268 test: 0.0743452 best: 0.0743452 (527)
528: learn: 0.0572128 test: 0.0743520 best: 0.0743452 (527)
529: learn: 0.0571874 test: 0.0743466 best: 0.0743452 (527)
530: learn: 0.0571528 test: 0.0743404 best: 0.0743404 (530)
531: learn: 0.0571273 test: 0.0743429 best: 0.0743404 (530)
532: learn: 0.0571061 test: 0.0743470 best: 0.0743404 (530)
533: learn: 0.0570716 test: 0.0743456 best: 0.0743404 (530)
534: learn: 0.0570278 test: 0.0743453 best: 0.0743404 (530) total: 9.62s remaining: 8.36s
535: learn: 0.0570028 test: 0.0743361 best: 0.0743361 (535)
536: learn: 0.0569728 test: 0.0743337 best: 0.0743337 (536)
537: learn: 0.0569410 test: 0.0743297 best: 0.0743297 (537)
538: learn: 0.0569049 test: 0.0743284 best: 0.0743284 (538)
539: learn: 0.0568788 test: 0.0743217 best: 0.0743217 (539)
540: learn: 0.0568510 test: 0.0743193 best: 0.0743193 (540)
541: learn: 0.0568232 test: 0.0743138 best: 0.0743138 (541)
542: learn: 0.0567921 test: 0.0743192 best: 0.0743138 (541)
543: learn: 0.0567630 test: 0.0743180 best: 0.0743138 (541)
544: learn: 0.0567332 test: 0.0743138 best: 0.0743138 (544)
545: learn: 0.0566998 test: 0.0743156 best: 0.0743138 (544)
546: learn: 0.0566760 test: 0.0743153 best: 0.0743138 (544)
547: learn: 0.0566423 test: 0.0743095 best: 0.0743095 (547)
548: learn: 0.0566226 test: 0.0743061 best: 0.0743061 (548)
549: learn: 0.0565910 test: 0.0743056 best: 0.0743056 (549)
550: learn: 0.0565732 test: 0.0743010 best: 0.0743010 (550)
551: learn: 0.0565389 test: 0.0742930 best: 0.0742930 (551)
552: learn: 0.0565027 test: 0.0742891 best: 0.0742891 (552)
553: learn: 0.0564758 test: 0.0742785 best: 0.0742785 (553)
554: learn: 0.0564438 test: 0.0742703 best: 0.0742703 (554)
555: learn: 0.0564125 test: 0.0742679 best: 0.0742679 (555)
556: learn: 0.0563974 test: 0.0742692 best: 0.0742679 (555)
557: learn: 0.0563833 test: 0.0742676 best: 0.0742676 (557)
558: learn: 0.0563655 test: 0.0742644 best: 0.0742644 (558)
559: learn: 0.0563348 test: 0.0742692 best: 0.0742644 (558)
560: learn: 0.0562999 test: 0.0742784 best: 0.0742644 (558)
561: learn: 0.0562681 test: 0.0742748 best: 0.0742644 (558)
562: learn: 0.0562333 test: 0.0742662 best: 0.0742644 (558)
563: learn: 0.0562046 test: 0.0742658 best: 0.0742644 (558)
564: learn: 0.0561701 test: 0.0742754 best: 0.0742644 (558)
565: learn: 0.0561450 test: 0.0742802 best: 0.0742644 (558)
566: learn: 0.0561120 test: 0.0742784 best: 0.0742644 (558)
567: learn: 0.0560807 test: 0.0742727 best: 0.0742644 (558)
568: learn: 0.0560485 test: 0.0742707 best: 0.0742644 (558)
569: learn: 0.0560248 test: 0.0742619 best: 0.0742619 (569)
570: learn: 0.0559975 test: 0.0742606 best: 0.0742606 (570)
571: learn: 0.0559703 test: 0.0742573 best: 0.0742573 (571)
572: learn: 0.0559478 test: 0.0742511 best: 0.0742511 (572)
573: learn: 0.0559158 test: 0.0742506 best: 0.0742506 (573)
574: learn: 0.0558888 test: 0.0742419 best: 0.0742419 (574)
575: learn: 0.0558608 test: 0.0742442 best: 0.0742419 (574)
576: learn: 0.0558379 test: 0.0742403 best: 0.0742403 (576)
```

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577: learn: 0.0558100 test: 0.0742359 best: 0.0742359 (577)
578: learn: 0.0557793 test: 0.0742345 best: 0.0742345 (578)
579: learn: 0.0557550 test: 0.0742396 best: 0.0742345 (578)
580: learn: 0.0557299 test: 0.0742301 best: 0.0742301 (580)
581: learn: 0.0557039 test: 0.0742248 best: 0.0742248 (581)
582: learn: 0.0556804 test: 0.0742201 best: 0.0742201 (582)
583: learn: 0.0556543 test: 0.0742216 best: 0.0742201 (582)
584: learn: 0.0556250 test: 0.0742104 best: 0.0742104 (584)
585: learn: 0.0556053 test: 0.0742124 best: 0.0742104 (584)
586: learn: 0.0555708 test: 0.0742042 best: 0.0742042 (586)
587: learn: 0.0555446 test: 0.0741988 best: 0.0741988 (587)
588: learn: 0.0555142 test: 0.0741988 best: 0.0741988 (587)
589: learn: 0.0554764 test: 0.0742038 best: 0.0741988 (587)
590: learn: 0.0554473 test: 0.0742058 best: 0.0741988 (587)
591: learn: 0.0554255 test: 0.0741994 best: 0.0741988 (587)
592: learn: 0.0553832 test: 0.0741944 best: 0.0741944 (592)
593: learn: 0.0553648 test: 0.0741906 best: 0.0741906 (593)
594: learn: 0.0553380 test: 0.0741877 best: 0.0741877 (594)
595: learn: 0.0553077 test: 0.0741835 best: 0.0741835 (595)
596: learn: 0.0552847 test: 0.0741775 best: 0.0741775 (596)
597: learn: 0.0552564 test: 0.0741710 best: 0.0741710 (597)
598: learn: 0.0552325 test: 0.0741722 best: 0.0741710 (597)
599: learn: 0.0552085 test: 0.0741705 best: 0.0741705 (599)
600: learn: 0.0551739 test: 0.0741750 best: 0.0741705 (599)
601: learn: 0.0551435 test: 0.0741726 best: 0.0741705 (599)
602: learn: 0.0551127 test: 0.0741623 best: 0.0741623 (602)
603: learn: 0.0550919 test: 0.0741603 best: 0.0741603 (603)
604: learn: 0.0550573 test: 0.0741578 best: 0.0741578 (604)
605: learn: 0.0550363 test: 0.0741561 best: 0.0741561 (605)
606: learn: 0.0550189 test: 0.0741452 best: 0.0741452 (606)
607: learn: 0.0549848 test: 0.0741377 best: 0.0741377 (607)
608: learn: 0.0549658 test: 0.0741350 best: 0.0741350 (608)
609: learn: 0.0549367 test: 0.0741303 best: 0.0741303 (609)
610: learn: 0.0549115 test: 0.0741329 best: 0.0741303 (609)
611: learn: 0.0548798 test: 0.0741304 best: 0.0741303 (609)
612: learn: 0.0548614 test: 0.0741278 best: 0.0741278 (612)
613: learn: 0.0548425 test: 0.0741256 best: 0.0741256 (613)
614: learn: 0.0548158 test: 0.0741238 best: 0.0741238 (614)
615: learn: 0.0547849 test: 0.0741159 best: 0.0741159 (615)
616: learn: 0.0547647 test: 0.0741144 best: 0.0741144 (616)
617: learn: 0.0547402 test: 0.0741058 best: 0.0741058 (617)
618: learn: 0.0547091 test: 0.0741066 best: 0.0741058 (617)
619: learn: 0.0546755 test: 0.0740957 best: 0.0740957 (619)
620: learn: 0.0546525 test: 0.0740984 best: 0.0740957 (619)
621: learn: 0.0546303 test: 0.0741048 best: 0.0740957 (619) total: 11.1s remaining: 6.73s
622: learn: 0.0546071 test: 0.0741067 best: 0.0740957 (619)
623: learn: 0.0545899 test: 0.0741030 best: 0.0740957 (619)
624: learn: 0.0545600 test: 0.0741025 best: 0.0740957 (619)
625: learn: 0.0545358 test: 0.0741017 best: 0.0740957 (619)
626: learn: 0.0544953 test: 0.0740802 best: 0.0740802 (626)
627: learn: 0.0544764 test: 0.0740806 best: 0.0740802 (626)
628: learn: 0.0544548 test: 0.0740776 best: 0.0740776 (628)
629: learn: 0.0544311 test: 0.0740748 best: 0.0740748 (629)
630: learn: 0.0544042 test: 0.0740719 best: 0.0740719 (630)
631: learn: 0.0543782 test: 0.0740703 best: 0.0740703 (631)
632: learn: 0.0543619 test: 0.0740707 best: 0.0740703 (631)
633: learn: 0.0543402 test: 0.0740718 best: 0.0740703 (631)
634: learn: 0.0543236 test: 0.0740685 best: 0.0740685 (634)
635: learn: 0.0542870 test: 0.0740535 best: 0.0740535 (635)
636: learn: 0.0542556 test: 0.0740448 best: 0.0740448 (636)
637: learn: 0.0542273 test: 0.0740433 best: 0.0740433 (637)
638: learn: 0.0542083 test: 0.0740366 best: 0.0740366 (638)
639: learn: 0.0541699 test: 0.0740181 best: 0.0740181 (639)
640: learn: 0.0541532 test: 0.0740267 best: 0.0740181 (639)
641: learn: 0.0541217 test: 0.0740209 best: 0.0740181 (639)
642: learn: 0.0541026 test: 0.0740183 best: 0.0740181 (639)
643: learn: 0.0540774 test: 0.0740221 best: 0.0740181 (639)
644: learn: 0.0540536 test: 0.0740075 best: 0.0740075 (644)
645: learn: 0.0540315 test: 0.0740002 best: 0.0740002 (645)
646: learn: 0.0539990 test: 0.0739947 best: 0.0739947 (646)
647: learn: 0.0539716 test: 0.0739937 best: 0.0739937 (647)
648: learn: 0.0539445 test: 0.0739929 best: 0.0739929 (648)
649: learn: 0.0539162 test: 0.0739916 best: 0.0739916 (649)
650: learn: 0.0538974 test: 0.0739884 best: 0.0739884 (650)
651: learn: 0.0538697 test: 0.0739907 best: 0.0739884 (650)
652: learn: 0.0538389 test: 0.0739838 best: 0.0739838 (652)
653: learn: 0.0538085 test: 0.0739805 best: 0.0739805 (653) total: 11.7s remaining: 6.17s
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654: learn: 0.0537818 test: 0.0739835 best: 0.0739805 (653)
655: learn: 0.0537486 test: 0.0739792 best: 0.0739792 (655)
656: learn: 0.0537249 test: 0.0739789 best: 0.0739789 (656)
657: learn: 0.0537060 test: 0.0739754 best: 0.0739754 (657)
658: learn: 0.0536713 test: 0.0739602 best: 0.0739602 (658)
659: learn: 0.0536471 test: 0.0739609 best: 0.0739602 (658)
660: learn: 0.0536152 test: 0.0739553 best: 0.0739553 (660)
661: learn: 0.0535802 test: 0.0739551 best: 0.0739551 (661)
662: learn: 0.0535519 test: 0.0739472 best: 0.0739472 (662)
663: learn: 0.0535238 test: 0.0739480 best: 0.0739472 (662)
664: learn: 0.0534952 test: 0.0739484 best: 0.0739472 (662)
665: learn: 0.0534747 test: 0.0739502 best: 0.0739472 (662)
666: learn: 0.0534464 test: 0.0739470 best: 0.0739470 (666)
667: learn: 0.0534179 test: 0.0739517 best: 0.0739470 (666)
668: learn: 0.0533797 test: 0.0739393 best: 0.0739393 (668)
669: learn: 0.0533564 test: 0.0739335 best: 0.0739335 (669)
670: learn: 0.0533383 test: 0.0739334 best: 0.0739334 (670)
671: learn: 0.0533151 test: 0.0739364 best: 0.0739334 (670)
672: learn: 0.0532954 test: 0.0739373 best: 0.0739334 (670)
673: learn: 0.0532676 test: 0.0739450 best: 0.0739334 (670)
674: learn: 0.0532397 test: 0.0739443 best: 0.0739334 (670)
675: learn: 0.0532189 test: 0.0739395 best: 0.0739334 (670)
676: learn: 0.0531870 test: 0.0739288 best: 0.0739288 (676)
677: learn: 0.0531680 test: 0.0739189 best: 0.0739189 (677)
678: learn: 0.0531477 test: 0.0739128 best: 0.0739128 (678) total: 12.1s remaining: 5.74s
679: learn: 0.0531029 test: 0.0739198 best: 0.0739128 (678)
680: learn: 0.0530883 test: 0.0739132 best: 0.0739128 (678)
681: learn: 0.0530633 test: 0.0739029 best: 0.0739029 (681)
682: learn: 0.0530312 test: 0.0738972 best: 0.0738972 (682)
683: learn: 0.0529940 test: 0.0738954 best: 0.0738954 (683)
684: learn: 0.0529619 test: 0.0738923 best: 0.0738923 (684)
685: learn: 0.0529344 test: 0.0738937 best: 0.0738923 (684)
686: learn: 0.0529090 test: 0.0738840 best: 0.0738840 (686)
687: learn: 0.0528802 test: 0.0738771 best: 0.0738771 (687)
688: learn: 0.0528497 test: 0.0738762 best: 0.0738762 (688)
689: learn: 0.0528188 test: 0.0738725 best: 0.0738725 (689)
690: learn: 0.0527924 test: 0.0738639 best: 0.0738639 (690)
691: learn: 0.0527714 test: 0.0738651 best: 0.0738639 (690)
692: learn: 0.0527388 test: 0.0738755 best: 0.0738639 (690)
693: learn: 0.0527151 test: 0.0738780 best: 0.0738639 (690)
694: learn: 0.0526913 test: 0.0738722 best: 0.0738639 (690)
695: learn: 0.0526714 test: 0.0738684 best: 0.0738639 (690)
696: learn: 0.0526467 test: 0.0738621 best: 0.0738621 (696)
697: learn: 0.0526133 test: 0.0738457 best: 0.0738457 (697)
698: learn: 0.0525888 test: 0.0738430 best: 0.0738430 (698)
699: learn: 0.0525660 test: 0.0738411 best: 0.0738411 (699)
700: learn: 0.0525370 test: 0.0738370 best: 0.0738370 (700) total: 12.6s remaining: 5.36s
701: learn: 0.0525156 test: 0.0738330 best: 0.0738330 (701)
702: learn: 0.0524876 test: 0.0738376 best: 0.0738330 (701)
703: learn: 0.0524692 test: 0.0738376 best: 0.0738330 (701)
704: learn: 0.0524497 test: 0.0738292 best: 0.0738292 (704)
705: learn: 0.0524233 test: 0.0738255 best: 0.0738255 (705)
706: learn: 0.0523888 test: 0.0738302 best: 0.0738255 (705)
707: learn: 0.0523633 test: 0.0738284 best: 0.0738255 (705)
708: learn: 0.0523450 test: 0.0738221 best: 0.0738221 (708)
709: learn: 0.0523053 test: 0.0738131 best: 0.0738131 (709)
710: learn: 0.0522840 test: 0.0738052 best: 0.0738052 (710)
711: learn: 0.0522539 test: 0.0738043 best: 0.0738043 (711)
712: learn: 0.0522254 test: 0.0738096 best: 0.0738043 (711)
713: learn: 0.0522151 test: 0.0738106 best: 0.0738043 (711)
714: learn: 0.0521918 test: 0.0738021 best: 0.0738021 (714)
715: learn: 0.0521712 test: 0.0737975 best: 0.0737975 (715)
716: learn: 0.0521355 test: 0.0737921 best: 0.0737921 (716)
717: learn: 0.0521095 test: 0.0737866 best: 0.0737866 (717)
718: learn: 0.0520688 test: 0.0737894 best: 0.0737866 (717)
719: learn: 0.0520493 test: 0.0737833 best: 0.0737833 (719)
720: learn: 0.0520215 test: 0.0737884 best: 0.0737833 (719)
721: learn: 0.0519984 test: 0.0737917 best: 0.0737833 (719)
722: learn: 0.0519741 test: 0.0737936 best: 0.0737833 (719)
723: learn: 0.0519558 test: 0.0737867 best: 0.0737833 (719)
724: learn: 0.0519324 test: 0.0737843 best: 0.0737833 (719)
725: learn: 0.0519032 test: 0.0737794 best: 0.0737794 (725)
726: learn: 0.0518684 test: 0.0737757 best: 0.0737757 (726)
727: learn: 0.0518425 test: 0.0737754 best: 0.0737754 (727)
728: learn: 0.0518204 test: 0.0737740 best: 0.0737740 (728)
729: learn: 0.0517922 test: 0.0737780 best: 0.0737740 (728)
730: learn: 0.0517630 test: 0.0737772 best: 0.0737740 (728)
```

```
731: learn: 0.0517447 test: 0.0737703 best: 0.0737703 (731)
732: learn: 0.0517262 test: 0.0737616 best: 0.0737616 (732)
733: learn: 0.0516997 test: 0.0737628 best: 0.0737616 (732)
734: learn: 0.0516745 test: 0.0737601 best: 0.0737601 (734)
735: learn: 0.0516581 test: 0.0737610 best: 0.0737601 (734)
736: learn: 0.0516303 test: 0.0737615 best: 0.0737601 (734)
737: learn: 0.0516113 test: 0.0737560 best: 0.0737560 (737)
738: learn: 0.0515870 test: 0.0737596 best: 0.0737560 (737)
739: learn: 0.0515660 test: 0.0737512 best: 0.0737512 (739)
740: learn: 0.0515461 test: 0.0737463 best: 0.0737463 (740)
741: learn: 0.0515289 test: 0.0737497 best: 0.0737463 (740)
742: learn: 0.0515098 test: 0.0737474 best: 0.0737463 (740)
743: learn: 0.0514975 test: 0.0737429 best: 0.0737429 (743)
744: learn: 0.0514684 test: 0.0737469 best: 0.0737429 (743)
745: learn: 0.0514393 test: 0.0737400 best: 0.0737400 (745)
746: learn: 0.0513960 test: 0.0737384 best: 0.0737384 (746)
747: learn: 0.0513679 test: 0.0737388 best: 0.0737384 (746)
748: learn: 0.0513485 test: 0.0737407 best: 0.0737384 (746)
749: learn: 0.0513267 test: 0.0737319 best: 0.0737319 (749)
750: learn: 0.0513128 test: 0.0737329 best: 0.0737319 (749)
751: learn: 0.0512902 test: 0.0737375 best: 0.0737319 (749)
752: learn: 0.0512633 test: 0.0737292 best: 0.0737292 (752) total: 13.5s remaining: 4.42s
753: learn: 0.0512485 test: 0.0737303 best: 0.0737292 (752)
754: learn: 0.0512217 test: 0.0737194 best: 0.0737194 (754)
755: learn: 0.0511934 test: 0.0737174 best: 0.0737174 (755)
756: learn: 0.0511667 test: 0.0737129 best: 0.0737129 (756)
757: learn: 0.0511464 test: 0.0737091 best: 0.0737091 (757)
758: learn: 0.0511269 test: 0.0737041 best: 0.0737041 (758)
759: learn: 0.0511125 test: 0.0737042 best: 0.0737041 (758)
760: learn: 0.0510943 test: 0.0737136 best: 0.0737041 (758)
761: learn: 0.0510626 test: 0.0737130 best: 0.0737041 (758)
762: learn: 0.0510432 test: 0.0737138 best: 0.0737041 (758)
763: learn: 0.0510180 test: 0.0737151 best: 0.0737041 (758)
764: learn: 0.0509976 test: 0.0737057 best: 0.0737041 (758)
765: learn: 0.0509766 test: 0.0736988 best: 0.0736988 (765)
766: learn: 0.0509579 test: 0.0736977 best: 0.0736977 (766)
767: learn: 0.0509447 test: 0.0737019 best: 0.0736977 (766)
768: learn: 0.0509221 test: 0.0736975 best: 0.0736975 (768)
769: learn: 0.0508967 test: 0.0736856 best: 0.0736856 (769)
770: learn: 0.0508711 test: 0.0736786 best: 0.0736786 (770)
771: learn: 0.0508519 test: 0.0736816 best: 0.0736786 (770)
772: learn: 0.0508330 test: 0.0736811 best: 0.0736786 (770)
773: learn: 0.0508088 test: 0.0736847 best: 0.0736786 (770)
774: learn: 0.0507735 test: 0.0736891 best: 0.0736786 (770)
775: learn: 0.0507566 test: 0.0736876 best: 0.0736786 (770) total: 13.9s remaining: 4.02s
776: learn: 0.0507208 test: 0.0736887 best: 0.0736786 (770)
777: learn: 0.0506957 test: 0.0736933 best: 0.0736786 (770)
778: learn: 0.0506696 test: 0.0736942 best: 0.0736786 (770)
779: learn: 0.0506465 test: 0.0736950 best: 0.0736786 (770)
780: learn: 0.0506153 test: 0.0736939 best: 0.0736786 (770)
781: learn: 0.0505910 test: 0.0736940 best: 0.0736786 (770)
782: learn: 0.0505793 test: 0.0736955 best: 0.0736786 (770)
783: learn: 0.0505512 test: 0.0736885 best: 0.0736786 (770)
784: learn: 0.0505219 test: 0.0736875 best: 0.0736786 (770)
785: learn: 0.0504949 test: 0.0736952 best: 0.0736786 (770)
786: learn: 0.0504696 test: 0.0736941 best: 0.0736786 (770)
787: learn: 0.0504459 test: 0.0736905 best: 0.0736786 (770)
788: learn: 0.0504226 test: 0.0736971 best: 0.0736786 (770)
789: learn: 0.0504025 test: 0.0736942 best: 0.0736786 (770)
790: learn: 0.0503713 test: 0.0736891 best: 0.0736786 (770)
791: learn: 0.0503519 test: 0.0736910 best: 0.0736786 (770)
792: learn: 0.0503368 test: 0.0736866 best: 0.0736786 (770)
793: learn: 0.0503130 test: 0.0736909 best: 0.0736786 (770)
794: learn: 0.0503067 test: 0.0736894 best: 0.0736786 (770)
795: learn: 0.0502654 test: 0.0736795 best: 0.0736786 (770)
796: learn: 0.0502237 test: 0.0736712 best: 0.0736712 (796)
797: learn: 0.0502048 test: 0.0736778 best: 0.0736712 (796)
798: learn: 0.0501820 test: 0.0736780 best: 0.0736712 (796) total: 14.4s remaining: 3.62s
799: learn: 0.0501554 test: 0.0736853 best: 0.0736712 (796)
800: learn: 0.0501317 test: 0.0736784 best: 0.0736712 (796)
801: learn: 0.0501086 test: 0.0736766 best: 0.0736712 (796)
802: learn: 0.0500828 test: 0.0736725 best: 0.0736712 (796)
803: learn: 0.0500496 test: 0.0736710 best: 0.0736710 (803)
804: learn: 0.0500203 test: 0.0736791 best: 0.0736710 (803)
805: learn: 0.0500076 test: 0.0736815 best: 0.0736710 (803)
806: learn: 0.0499851 test: 0.0736840 best: 0.0736710 (803)
807: learn: 0.0499611 test: 0.0736875 best: 0.0736710 (803)
```

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808: learn: 0.0499349 test: 0.0736842 best: 0.0736710 (803)
809: learn: 0.0499122 test: 0.0736791 best: 0.0736710 (803)
810: learn: 0.0498897 test: 0.0736805 best: 0.0736710 (803)
811: learn: 0.0498631 test: 0.0736849 best: 0.0736710 (803)
812: learn: 0.0498439 test: 0.0736844 best: 0.0736710 (803)
813: learn: 0.0498176 test: 0.0736815 best: 0.0736710 (803)
814: learn: 0.0497931 test: 0.0736821 best: 0.0736710 (803)
815: learn: 0.0497749 test: 0.0736833 best: 0.0736710 (803)
816: learn: 0.0497446 test: 0.0736811 best: 0.0736710 (803)
817: learn: 0.0497148 test: 0.0736826 best: 0.0736710 (803)
818: learn: 0.0496948 test: 0.0736842 best: 0.0736710 (803)
819: learn: 0.0496819 test: 0.0736840 best: 0.0736710 (803)
820: learn: 0.0496580 test: 0.0736881 best: 0.0736710 (803)
821: learn: 0.0496354 test: 0.0736832 best: 0.0736710 (803)
822: learn: 0.0496165 test: 0.0736862 best: 0.0736710 (803) total: 14.8s remaining: 3.19s
823: learn: 0.0495891 test: 0.0736750 best: 0.0736710 (803)
824: learn: 0.0495549 test: 0.0736703 best: 0.0736703 (824)
825: learn: 0.0495334 test: 0.0736676 best: 0.0736676 (825)
826: learn: 0.0495100 test: 0.0736706 best: 0.0736676 (825)
827: learn: 0.0494773 test: 0.0736713 best: 0.0736676 (825)
828: learn: 0.0494547 test: 0.0736736 best: 0.0736676 (825)
829: learn: 0.0494338 test: 0.0736752 best: 0.0736676 (825)
830: learn: 0.0494039 test: 0.0736686 best: 0.0736676 (825)
831: learn: 0.0493843 test: 0.0736648 best: 0.0736648 (831)
832: learn: 0.0493593 test: 0.0736663 best: 0.0736648 (831)
833: learn: 0.0493378 test: 0.0736651 best: 0.0736648 (831)
834: learn: 0.0493170 test: 0.0736678 best: 0.0736648 (831)
835: learn: 0.0492844 test: 0.0736706 best: 0.0736648 (831)
836: learn: 0.0492616 test: 0.0736729 best: 0.0736648 (831)
837: learn: 0.0492455 test: 0.0736753 best: 0.0736648 (831)
838: learn: 0.0492304 test: 0.0736756 best: 0.0736648 (831)
839: learn: 0.0492171 test: 0.0736716 best: 0.0736648 (831)
840: learn: 0.0491916 test: 0.0736667 best: 0.0736648 (831)
841: learn: 0.0491486 test: 0.0736762 best: 0.0736648 (831)
842: learn: 0.0491282 test: 0.0736776 best: 0.0736648 (831)
843: learn: 0.0491082 test: 0.0736771 best: 0.0736648 (831)
844: learn: 0.0490854 test: 0.0736760 best: 0.0736648 (831)
845: learn: 0.0490635 test: 0.0736757 best: 0.0736648 (831)
846: learn: 0.0490441 test: 0.0736805 best: 0.0736648 (831)
847: learn: 0.0490293 test: 0.0736888 best: 0.0736648 (831)
848: learn: 0.0490062 test: 0.0736944 best: 0.0736648 (831)
849: learn: 0.0489868 test: 0.0736934 best: 0.0736648 (831)
850: learn: 0.0489560 test: 0.0736917 best: 0.0736648 (831)
851: learn: 0.0489396 test: 0.0736958 best: 0.0736648 (831)
852: learn: 0.0489262 test: 0.0736909 best: 0.0736648 (831)
853: learn: 0.0489061 test: 0.0736816 best: 0.0736648 (831)
854: learn: 0.0488821 test: 0.0736812 best: 0.0736648 (831)
855: learn: 0.0488631 test: 0.0736931 best: 0.0736648 (831)
856: learn: 0.0488434 test: 0.0736941 best: 0.0736648 (831)
857: learn: 0.0488129 test: 0.0736998 best: 0.0736648 (831)
858: learn: 0.0487927 test: 0.0737107 best: 0.0736648 (831)
859: learn: 0.0487659 test: 0.0737030 best: 0.0736648 (831)
860: learn: 0.0487418 test: 0.0736979 best: 0.0736648 (831)
861: learn: 0.0487221 test: 0.0736996 best: 0.0736648 (831)
862: learn: 0.0486963 test: 0.0736941 best: 0.0736648 (831)
863: learn: 0.0486784 test: 0.0736923 best: 0.0736648 (831)
864: learn: 0.0486500 test: 0.0736813 best: 0.0736648 (831)
865: learn: 0.0486277 test: 0.0736791 best: 0.0736648 (831)
866: learn: 0.0486126 test: 0.0736722 best: 0.0736648 (831)
867: learn: 0.0485905 test: 0.0736716 best: 0.0736648 (831)
868: learn: 0.0485713 test: 0.0736736 best: 0.0736648 (831)
869: learn: 0.0485464 test: 0.0736761 best: 0.0736648 (831)
870: learn: 0.0485328 test: 0.0736750 best: 0.0736648 (831)
871: learn: 0.0485182 test: 0.0736737 best: 0.0736648 (831)
872: learn: 0.0484938 test: 0.0736790 best: 0.0736648 (831)
873: learn: 0.0484638 test: 0.0736793 best: 0.0736648 (831)
874: learn: 0.0484449 test: 0.0736711 best: 0.0736648 (831)
875: learn: 0.0484210 test: 0.0736662 best: 0.0736648 (831)
876: learn: 0.0484089 test: 0.0736673 best: 0.0736648 (831)
877: learn: 0.0483907 test: 0.0736735 best: 0.0736648 (831)
878: learn: 0.0483761 test: 0.0736749 best: 0.0736648 (831)
879: learn: 0.0483564 test: 0.0736740 best: 0.0736648 (831)
880: learn: 0.0483326 test: 0.0736711 best: 0.0736648 (831)
881: learn: 0.0483009 test: 0.0736710 best: 0.0736648 (831)
882: learn: 0.0482783 test: 0.0736677 best: 0.0736648 (831)
883: learn: 0.0482592 test: 0.0736638 best: 0.0736638 (883)
884: learn: 0.0482443 test: 0.0736667 best: 0.0736638 (883)
```

```
885: learn: 0.0482221 test: 0.0736717 best: 0.0736638 (883)
886: learn: 0.0481848 test: 0.0736688 best: 0.0736638 (883)
887: learn: 0.0481671 test: 0.0736666 best: 0.0736638 (883)
888: learn: 0.0481349 test: 0.0736696 best: 0.0736638 (883)
889: learn: 0.0481173 test: 0.0736663 best: 0.0736638 (883)
890: learn: 0.0480982 test: 0.0736656 best: 0.0736638 (883)
891: learn: 0.0480790 test: 0.0736646 best: 0.0736638 (883)
892: learn: 0.0480583 test: 0.0736636 best: 0.0736636 (892)
893: learn: 0.0480321 test: 0.0736687 best: 0.0736636 (892)
894: learn: 0.0480106 test: 0.0736681 best: 0.0736636 (892)
895: learn: 0.0479949 test: 0.0736670 best: 0.0736636 (892)
896: learn: 0.0479668 test: 0.0736734 best: 0.0736636 (892)
897: learn: 0.0479522 test: 0.0736696 best: 0.0736636 (892)
898: learn: 0.0479315 test: 0.0736620 best: 0.0736620 (898)
899: learn: 0.0479096 test: 0.0736631 best: 0.0736620 (898)
900: learn: 0.0478857 test: 0.0736617 best: 0.0736617 (900)
901: learn: 0.0478709 test: 0.0736581 best: 0.0736581 (901)
902: learn: 0.0478488 test: 0.0736656 best: 0.0736581 (901)
903: learn: 0.0478332 test: 0.0736681 best: 0.0736581 (901)
904: learn: 0.0478065 test: 0.0736696 best: 0.0736581 (901)
905: learn: 0.0477928 test: 0.0736704 best: 0.0736581 (901)
906: learn: 0.0477768 test: 0.0736667 best: 0.0736581 (901)
907: learn: 0.0477595 test: 0.0736647 best: 0.0736581 (901) total: 16.2s remaining: 1.65s
908: learn: 0.0477375 test: 0.0736542 best: 0.0736542 (908)
909: learn: 0.0477238 test: 0.0736539 best: 0.0736539 (909)
910: learn: 0.0476851 test: 0.0736593 best: 0.0736539 (909)
911: learn: 0.0476546 test: 0.0736620 best: 0.0736539 (909)
912: learn: 0.0476368 test: 0.0736597 best: 0.0736539 (909)
913: learn: 0.0476146 test: 0.0736522 best: 0.0736522 (913)
914: learn: 0.0475840 test: 0.0736437 best: 0.0736437 (914)
915: learn: 0.0475652 test: 0.0736402 best: 0.0736402 (915)
916: learn: 0.0475487 test: 0.0736451 best: 0.0736402 (915)
917: learn: 0.0475249 test: 0.0736353 best: 0.0736353 (917)
918: learn: 0.0474994 test: 0.0736373 best: 0.0736353 (917)
919: learn: 0.0474756 test: 0.0736451 best: 0.0736353 (917)
920: learn: 0.0474600 test: 0.0736479 best: 0.0736353 (917)
921: learn: 0.0474392 test: 0.0736378 best: 0.0736353 (917)
922: learn: 0.0474131 test: 0.0736431 best: 0.0736353 (917)
923: learn: 0.0473933 test: 0.0736421 best: 0.0736353 (917)
924: learn: 0.0473795 test: 0.0736459 best: 0.0736353 (917)
925: learn: 0.0473558 test: 0.0736541 best: 0.0736353 (917)
926: learn: 0.0473424 test: 0.0736530 best: 0.0736353 (917)
927: learn: 0.0473263 test: 0.0736473 best: 0.0736353 (917)
928: learn: 0.0473132 test: 0.0736480 best: 0.0736353 (917)
929: learn: 0.0472990 test: 0.0736442 best: 0.0736353 (917)
930: learn: 0.0472820 test: 0.0736464 best: 0.0736353 (917)
931: learn: 0.0472650 test: 0.0736491 best: 0.0736353 (917)
932: learn: 0.0472415 test: 0.0736551 best: 0.0736353 (917)
933: learn: 0.0472235 test: 0.0736572 best: 0.0736353 (917)
934: learn: 0.0472058 test: 0.0736491 best: 0.0736353 (917)
935: learn: 0.0471932 test: 0.0736499 best: 0.0736353 (917)
936: learn: 0.0471699 test: 0.0736532 best: 0.0736353 (917)
937: learn: 0.0471604 test: 0.0736574 best: 0.0736353 (917)
938: learn: 0.0471380 test: 0.0736527 best: 0.0736353 (917)
939: learn: 0.0471246 test: 0.0736487 best: 0.0736353 (917)
940: learn: 0.0471080 test: 0.0736491 best: 0.0736353 (917)
941: learn: 0.0470919 test: 0.0736466 best: 0.0736353 (917)
942: learn: 0.0470739 test: 0.0736492 best: 0.0736353 (917)
943: learn: 0.0470560 test: 0.0736503 best: 0.0736353 (917)
944: learn: 0.0470391 test: 0.0736484 best: 0.0736353 (917)
945: learn: 0.0470160 test: 0.0736473 best: 0.0736353 (917)
946: learn: 0.0470044 test: 0.0736463 best: 0.0736353 (917)
947: learn: 0.0469938 test: 0.0736427 best: 0.0736353 (917)
948: learn: 0.0469877 test: 0.0736442 best: 0.0736353 (917)
949: learn: 0.0469762 test: 0.0736407 best: 0.0736353 (917)
950: learn: 0.0469667 test: 0.0736374 best: 0.0736353 (917)
951: learn: 0.0469369 test: 0.0736356 best: 0.0736353 (917)
952: learn: 0.0469177 test: 0.0736297 best: 0.0736297 (952)
953: learn: 0.0468920 test: 0.0736317 best: 0.0736297 (952)
954: learn: 0.0468707 test: 0.0736384 best: 0.0736297 (952)
955: learn: 0.0468599 test: 0.0736433 best: 0.0736297 (952)
956: learn: 0.0468374 test: 0.0736454 best: 0.0736297 (952)
957: learn: 0.0468250 test: 0.0736496 best: 0.0736297 (952)
958: learn: 0.0468091 test: 0.0736536 best: 0.0736297 (952)
959: learn: 0.0467874 test: 0.0736543 best: 0.0736297 (952)
960: learn: 0.0467749 test: 0.0736529 best: 0.0736297 (952) total: 17.1s remaining: 696ms
961: learn: 0.0467640 test: 0.0736504 best: 0.0736297 (952)
```

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962: learn: 0.0467482  test: 0.0736478  best: 0.0736297 (952)
963: learn: 0.0467316  test: 0.0736448  best: 0.0736297 (952)
964: learn: 0.0467090  test: 0.0736431  best: 0.0736297 (952)
965: learn: 0.0466959  test: 0.0736443  best: 0.0736297 (952)
966: learn: 0.0466726  test: 0.0736473  best: 0.0736297 (952)
967: learn: 0.0466570  test: 0.0736458  best: 0.0736297 (952)
968: learn: 0.0466417  test: 0.0736455  best: 0.0736297 (952)
969: learn: 0.0466145  test: 0.0736478  best: 0.0736297 (952)
970: learn: 0.0465997  test: 0.0736490  best: 0.0736297 (952)
971: learn: 0.0465810  test: 0.0736503  best: 0.0736297 (952)
972: learn: 0.0465632  test: 0.0736450  best: 0.0736297 (952)
973: learn: 0.0465461  test: 0.0736431  best: 0.0736297 (952)
974: learn: 0.0465279  test: 0.0736475  best: 0.0736297 (952)
975: learn: 0.0465110  test: 0.0736514  best: 0.0736297 (952)
976: learn: 0.0464834  test: 0.0736552  best: 0.0736297 (952)
977: learn: 0.0464702  test: 0.0736559  best: 0.0736297 (952)
978: learn: 0.0464649  test: 0.0736551  best: 0.0736297 (952)
979: learn: 0.0464442  test: 0.0736536  best: 0.0736297 (952)
980: learn: 0.0464304  test: 0.0736509  best: 0.0736297 (952)
981: learn: 0.0464129  test: 0.0736541  best: 0.0736297 (952)
982: learn: 0.0464035  test: 0.0736552  best: 0.0736297 (952)
983: learn: 0.0463935  test: 0.0736546  best: 0.0736297 (952)
984: learn: 0.0463664  test: 0.0736547  best: 0.0736297 (952)
985: learn: 0.0463618  test: 0.0736524  best: 0.0736297 (952)
986: learn: 0.0463456  test: 0.0736540  best: 0.0736297 (952)
987: learn: 0.0463279  test: 0.0736566  best: 0.0736297 (952)
988: learn: 0.0463103  test: 0.0736520  best: 0.0736297 (952)
989: learn: 0.0462870  test: 0.0736571  best: 0.0736297 (952)
990: learn: 0.0462710  test: 0.0736590  best: 0.0736297 (952)
991: learn: 0.0462539  test: 0.0736547  best: 0.0736297 (952)
992: learn: 0.0462454  test: 0.0736571  best: 0.0736297 (952)
993: learn: 0.0462315  test: 0.0736665  best: 0.0736297 (952)
994: learn: 0.0462191  test: 0.0736648  best: 0.0736297 (952)
995: learn: 0.0462007  test: 0.0736649  best: 0.0736297 (952)
996: learn: 0.0461811  test: 0.0736700  best: 0.0736297 (952)
997: learn: 0.0461707  test: 0.0736746  best: 0.0736297 (952)
998: learn: 0.0461491  test: 0.0736811  best: 0.0736297 (952)
999: learn: 0.0461319  test: 0.0736783  best: 0.0736297 (952) total: 17.8s remaining: 0us
0: learn: 0.5014148  test: 0.5014378  best: 0.5014378 (0)
1: learn: 0.3724525  test: 0.3727424  best: 0.3727424 (1)
2: learn: 0.2886893  test: 0.2895607  best: 0.2895607 (2)
3: learn: 0.2299920  test: 0.2311742  best: 0.2311742 (3)
4: learn: 0.1911468  test: 0.1924538  best: 0.1924538 (4)
5: learn: 0.1597878  test: 0.1614658  best: 0.1614658 (5)
6: learn: 0.1390125  test: 0.1410453  best: 0.1410453 (6)
7: learn: 0.1234662  test: 0.1258640  best: 0.1258640 (7)
8: learn: 0.1122253  test: 0.1147314  best: 0.1147314 (8)
9: learn: 0.1037257  test: 0.1068834  best: 0.1068834 (9)
10: learn: 0.0976488  test: 0.1010897  best: 0.1010897 (10)
11: learn: 0.0924611  test: 0.0961572  best: 0.0961572 (11)
12: learn: 0.0881529  test: 0.0921734  best: 0.0921734 (12)
13: learn: 0.0847562  test: 0.0890389  best: 0.0890389 (13)
14: learn: 0.0816609  test: 0.0863506  best: 0.0863506 (14)
15: learn: 0.0795846  test: 0.0845177  best: 0.0845177 (15)
16: learn: 0.0774045  test: 0.0825013  best: 0.0825013 (16)
17: learn: 0.0757874  test: 0.0814839  best: 0.0814839 (17)
18: learn: 0.0747289  test: 0.0806646  best: 0.0806646 (18)
19: learn: 0.0735146  test: 0.0797555  best: 0.0797555 (19)
20: learn: 0.0724291  test: 0.0790374  best: 0.0790374 (20)
21: learn: 0.0715146  test: 0.0785937  best: 0.0785937 (21)
22: learn: 0.0705130  test: 0.0780001  best: 0.0780001 (22)
23: learn: 0.0696320  test: 0.0777971  best: 0.0777971 (23)
24: learn: 0.0688408  test: 0.0773953  best: 0.0773953 (24)
25: learn: 0.0684051  test: 0.0772571  best: 0.0772571 (25)
26: learn: 0.0675280  test: 0.0767885  best: 0.0767885 (26)
27: learn: 0.0669330  test: 0.0766596  best: 0.0766596 (27)
28: learn: 0.0662370  test: 0.0763236  best: 0.0763236 (28)
29: learn: 0.0657488  test: 0.0761185  best: 0.0761185 (29)
30: learn: 0.0650164  test: 0.0759670  best: 0.0759670 (30) total: 598ms remaining: 18.7s
31: learn: 0.0646187  test: 0.0758133  best: 0.0758133 (31)
32: learn: 0.0642175  test: 0.0756072  best: 0.0756072 (32)
33: learn: 0.0639650  test: 0.0754459  best: 0.0754459 (33)
34: learn: 0.0636628  test: 0.0753258  best: 0.0753258 (34)
35: learn: 0.0633013  test: 0.0752946  best: 0.0752946 (35)
36: learn: 0.0630015  test: 0.0751789  best: 0.0751789 (36)
37: learn: 0.0625906  test: 0.0750673  best: 0.0750673 (37)
38: learn: 0.0623682  test: 0.0750458  best: 0.0750458 (38)
```

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39: learn: 0.0620485 test: 0.0749995 best: 0.0749995 (39)
40: learn: 0.0616626 test: 0.0749674 best: 0.0749674 (40)
41: learn: 0.0612662 test: 0.0748513 best: 0.0748513 (41)
42: learn: 0.0607907 test: 0.0747507 best: 0.0747507 (42)
43: learn: 0.0604840 test: 0.0747437 best: 0.0747437 (43)
44: learn: 0.0600524 test: 0.0746457 best: 0.0746457 (44)
45: learn: 0.0598556 test: 0.0745514 best: 0.0745514 (45)
46: learn: 0.0595049 test: 0.0744965 best: 0.0744965 (46)
47: learn: 0.0591921 test: 0.0744984 best: 0.0744965 (46)
48: learn: 0.0589262 test: 0.0744531 best: 0.0744531 (48)
49: learn: 0.0586328 test: 0.0743101 best: 0.0743101 (49)
50: learn: 0.0584308 test: 0.0743432 best: 0.0743101 (49)
51: learn: 0.0580390 test: 0.0742924 best: 0.0742924 (51)
52: learn: 0.0577609 test: 0.0743935 best: 0.0742924 (51)
53: learn: 0.0574598 test: 0.0744511 best: 0.0742924 (51)
54: learn: 0.0571365 test: 0.0744618 best: 0.0742924 (51)
55: learn: 0.0568243 test: 0.0743839 best: 0.0742924 (51)
56: learn: 0.0565943 test: 0.0743797 best: 0.0742924 (51)
57: learn: 0.0563192 test: 0.0743918 best: 0.0742924 (51)
58: learn: 0.0560399 test: 0.0743715 best: 0.0742924 (51)
59: learn: 0.0557614 test: 0.0742775 best: 0.0742775 (59)
60: learn: 0.0554249 test: 0.0742173 best: 0.0742173 (60)
61: learn: 0.0552282 test: 0.0742612 best: 0.0742173 (60)
62: learn: 0.0549897 test: 0.0742899 best: 0.0742173 (60)
63: learn: 0.0546179 test: 0.0740908 best: 0.0740908 (63)
64: learn: 0.0544483 test: 0.0741165 best: 0.0740908 (63)
65: learn: 0.0540688 test: 0.0740683 best: 0.0740683 (65)
66: learn: 0.0538923 test: 0.0740218 best: 0.0740218 (66)
67: learn: 0.0536566 test: 0.0740281 best: 0.0740218 (66)
68: learn: 0.0533278 test: 0.0739942 best: 0.0739942 (68)
69: learn: 0.0531825 test: 0.0739870 best: 0.0739870 (69)
70: learn: 0.0528823 test: 0.0740934 best: 0.0739870 (69)
71: learn: 0.0526538 test: 0.0741527 best: 0.0739870 (69)
72: learn: 0.0524760 test: 0.0740660 best: 0.0739870 (69)
73: learn: 0.0522162 test: 0.0740548 best: 0.0739870 (69)
74: learn: 0.0520355 test: 0.0740859 best: 0.0739870 (69)
75: learn: 0.0518133 test: 0.0740902 best: 0.0739870 (69)
76: learn: 0.0515738 test: 0.0741003 best: 0.0739870 (69)
77: learn: 0.0513206 test: 0.0741096 best: 0.0739870 (69)
78: learn: 0.0511524 test: 0.0740909 best: 0.0739870 (69)
79: learn: 0.0508744 test: 0.0741042 best: 0.0739870 (69)
80: learn: 0.0507181 test: 0.0741448 best: 0.0739870 (69)
81: learn: 0.0504147 test: 0.0741915 best: 0.0739870 (69)
82: learn: 0.0501474 test: 0.0740752 best: 0.0739870 (69)
83: learn: 0.0499041 test: 0.0739645 best: 0.0739645 (83)
84: learn: 0.0497540 test: 0.0739557 best: 0.0739557 (84)
85: learn: 0.0494825 test: 0.0739859 best: 0.0739557 (84)
86: learn: 0.0492790 test: 0.0740483 best: 0.0739557 (84)
87: learn: 0.0490482 test: 0.0740405 best: 0.0739557 (84)
88: learn: 0.0488250 test: 0.0740719 best: 0.0739557 (84)
89: learn: 0.0486090 test: 0.0740155 best: 0.0739557 (84)
90: learn: 0.0484852 test: 0.0739920 best: 0.0739557 (84)
91: learn: 0.0482631 test: 0.0740425 best: 0.0739557 (84)
92: learn: 0.0480539 test: 0.0739988 best: 0.0739557 (84)
93: learn: 0.0479238 test: 0.0739935 best: 0.0739557 (84)
94: learn: 0.0477638 test: 0.0740397 best: 0.0739557 (84)
95: learn: 0.0476612 test: 0.0740370 best: 0.0739557 (84)
96: learn: 0.0475071 test: 0.0740397 best: 0.0739557 (84)
97: learn: 0.0472428 test: 0.0740644 best: 0.0739557 (84)
98: learn: 0.0470909 test: 0.0740268 best: 0.0739557 (84)
99: learn: 0.0468594 test: 0.0740328 best: 0.0739557 (84)
100: learn: 0.0466287 test: 0.0740190 best: 0.0739557 (84)
101: learn: 0.0463817 test: 0.0740016 best: 0.0739557 (84)
102: learn: 0.0461105 test: 0.0739593 best: 0.0739557 (84)
103: learn: 0.0459429 test: 0.0739568 best: 0.0739557 (84)
104: learn: 0.0457942 test: 0.0739366 best: 0.0739366 (104)
105: learn: 0.0456488 test: 0.0739630 best: 0.0739366 (104)
106: learn: 0.0454410 test: 0.0740231 best: 0.0739366 (104)
107: learn: 0.0452678 test: 0.0740373 best: 0.0739366 (104)
108: learn: 0.0451133 test: 0.0740485 best: 0.0739366 (104)
109: learn: 0.0449633 test: 0.0740791 best: 0.0739366 (104)
110: learn: 0.0448458 test: 0.0740999 best: 0.0739366 (104)
111: learn: 0.0446521 test: 0.0740859 best: 0.0739366 (104)
112: learn: 0.0445561 test: 0.0740422 best: 0.0739366 (104)
113: learn: 0.0443988 test: 0.0740476 best: 0.0739366 (104)
114: learn: 0.0442980 test: 0.0740378 best: 0.0739366 (104)
115: learn: 0.0441044 test: 0.0740316 best: 0.0739366 (104)
```

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116: learn: 0.0439325 test: 0.0740441 best: 0.0739366 (104) total: 2.15s remaining: 16.2s
117: learn: 0.0438083 test: 0.0740879 best: 0.0739366 (104)
118: learn: 0.0436480 test: 0.0741432 best: 0.0739366 (104)
119: learn: 0.0434193 test: 0.0741287 best: 0.0739366 (104)
120: learn: 0.0433168 test: 0.0741018 best: 0.0739366 (104)
121: learn: 0.0431949 test: 0.0741219 best: 0.0739366 (104)
122: learn: 0.0430777 test: 0.0741395 best: 0.0739366 (104)
123: learn: 0.0428179 test: 0.0742010 best: 0.0739366 (104)
124: learn: 0.0426978 test: 0.0741957 best: 0.0739366 (104)
125: learn: 0.0426249 test: 0.0741876 best: 0.0739366 (104)
126: learn: 0.0425658 test: 0.0741907 best: 0.0739366 (104)
127: learn: 0.0423912 test: 0.0742701 best: 0.0739366 (104)
128: learn: 0.0421894 test: 0.0743122 best: 0.0739366 (104)
129: learn: 0.0420732 test: 0.0743255 best: 0.0739366 (104)
130: learn: 0.0419331 test: 0.0743313 best: 0.0739366 (104)
131: learn: 0.0418119 test: 0.0743102 best: 0.0739366 (104)
132: learn: 0.0416270 test: 0.0743230 best: 0.0739366 (104)
133: learn: 0.0414157 test: 0.0742768 best: 0.0739366 (104)
134: learn: 0.0413494 test: 0.0742821 best: 0.0739366 (104)
135: learn: 0.0412625 test: 0.0742762 best: 0.0739366 (104)
136: learn: 0.0410874 test: 0.0743172 best: 0.0739366 (104)
137: learn: 0.0409433 test: 0.0742984 best: 0.0739366 (104)
138: learn: 0.0406961 test: 0.0743366 best: 0.0739366 (104)
139: learn: 0.0405374 test: 0.0742978 best: 0.0739366 (104)
140: learn: 0.0404540 test: 0.0743146 best: 0.0739366 (104)
141: learn: 0.0403642 test: 0.0743139 best: 0.0739366 (104)
142: learn: 0.0402315 test: 0.0743091 best: 0.0739366 (104)
143: learn: 0.0400341 test: 0.0742836 best: 0.0739366 (104)
144: learn: 0.0399251 test: 0.0742840 best: 0.0739366 (104)
145: learn: 0.0398422 test: 0.0743156 best: 0.0739366 (104)
146: learn: 0.0396309 test: 0.0743810 best: 0.0739366 (104)
147: learn: 0.0394605 test: 0.0743731 best: 0.0739366 (104)
148: learn: 0.0392729 test: 0.0743980 best: 0.0739366 (104)
149: learn: 0.0391293 test: 0.0744291 best: 0.0739366 (104)
150: learn: 0.0390554 test: 0.0744245 best: 0.0739366 (104)
151: learn: 0.0389177 test: 0.0744530 best: 0.0739366 (104)
152: learn: 0.0387371 test: 0.0744834 best: 0.0739366 (104)
153: learn: 0.0385811 test: 0.0745342 best: 0.0739366 (104)
154: learn: 0.0384198 test: 0.0744880 best: 0.0739366 (104)
155: learn: 0.0382239 test: 0.0744686 best: 0.0739366 (104)
156: learn: 0.0379610 test: 0.0744870 best: 0.0739366 (104)
157: learn: 0.0378410 test: 0.0744906 best: 0.0739366 (104)
158: learn: 0.0377302 test: 0.0744392 best: 0.0739366 (104)
159: learn: 0.0376347 test: 0.0745181 best: 0.0739366 (104)
160: learn: 0.0374256 test: 0.0745931 best: 0.0739366 (104)
161: learn: 0.0373566 test: 0.0746344 best: 0.0739366 (104)
162: learn: 0.0372712 test: 0.0746697 best: 0.0739366 (104)
163: learn: 0.0371419 test: 0.0746120 best: 0.0739366 (104)
164: learn: 0.0370178 test: 0.0746697 best: 0.0739366 (104)
165: learn: 0.0368237 test: 0.0746859 best: 0.0739366 (104)
166: learn: 0.0365722 test: 0.0747101 best: 0.0739366 (104)
167: learn: 0.0364206 test: 0.0747302 best: 0.0739366 (104)
168: learn: 0.0362959 test: 0.0747708 best: 0.0739366 (104)
169: learn: 0.0362072 test: 0.0747693 best: 0.0739366 (104)
170: learn: 0.0360347 test: 0.0748528 best: 0.0739366 (104)
171: learn: 0.0359089 test: 0.0748902 best: 0.0739366 (104)
172: learn: 0.0357934 test: 0.0749223 best: 0.0739366 (104)
173: learn: 0.0357320 test: 0.0749073 best: 0.0739366 (104)
174: learn: 0.0355752 test: 0.0748965 best: 0.0739366 (104)
175: learn: 0.0353807 test: 0.0748759 best: 0.0739366 (104)
176: learn: 0.0352328 test: 0.0748604 best: 0.0739366 (104)
177: learn: 0.0350497 test: 0.0748204 best: 0.0739366 (104)
178: learn: 0.0349459 test: 0.0748348 best: 0.0739366 (104)
179: learn: 0.0347962 test: 0.0748440 best: 0.0739366 (104)
180: learn: 0.0346151 test: 0.0748241 best: 0.0739366 (104)
181: learn: 0.0344837 test: 0.0748540 best: 0.0739366 (104)
182: learn: 0.0343664 test: 0.0749083 best: 0.0739366 (104) total: 3.3s remaining: 14.7s
183: learn: 0.0342128 test: 0.0749981 best: 0.0739366 (104)
184: learn: 0.0340906 test: 0.0749964 best: 0.0739366 (104)
185: learn: 0.0339134 test: 0.0750124 best: 0.0739366 (104)
186: learn: 0.0337161 test: 0.0750254 best: 0.0739366 (104)
187: learn: 0.0335523 test: 0.0750499 best: 0.0739366 (104)
188: learn: 0.0334476 test: 0.0750749 best: 0.0739366 (104)
189: learn: 0.0333129 test: 0.0751361 best: 0.0739366 (104)
190: learn: 0.0331402 test: 0.0751167 best: 0.0739366 (104)
191: learn: 0.0330217 test: 0.0751082 best: 0.0739366 (104)
192: learn: 0.0329386 test: 0.0751124 best: 0.0739366 (104)
```

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193: learn: 0.0327906 test: 0.0751299 best: 0.0739366 (104)
194: learn: 0.0326216 test: 0.0750915 best: 0.0739366 (104)
195: learn: 0.0325105 test: 0.0751011 best: 0.0739366 (104)
196: learn: 0.0324002 test: 0.0751200 best: 0.0739366 (104)
197: learn: 0.0322391 test: 0.0752038 best: 0.0739366 (104)
198: learn: 0.0320925 test: 0.0752302 best: 0.0739366 (104)
199: learn: 0.0320141 test: 0.0752004 best: 0.0739366 (104)
200: learn: 0.0318487 test: 0.0751774 best: 0.0739366 (104)
201: learn: 0.0317363 test: 0.0751498 best: 0.0739366 (104)
202: learn: 0.0316047 test: 0.0751796 best: 0.0739366 (104)
203: learn: 0.0315080 test: 0.0751660 best: 0.0739366 (104)
204: learn: 0.0314052 test: 0.0751742 best: 0.0739366 (104)
205: learn: 0.0313481 test: 0.0751490 best: 0.0739366 (104)
206: learn: 0.0311853 test: 0.0751573 best: 0.0739366 (104)
207: learn: 0.0310707 test: 0.0751835 best: 0.0739366 (104)
208: learn: 0.0309640 test: 0.0752336 best: 0.0739366 (104)
209: learn: 0.0308270 test: 0.0752986 best: 0.0739366 (104)
210: learn: 0.0307329 test: 0.0753093 best: 0.0739366 (104)
211: learn: 0.0306281 test: 0.0753007 best: 0.0739366 (104)
212: learn: 0.0304855 test: 0.0753133 best: 0.0739366 (104)
213: learn: 0.0303250 test: 0.0753386 best: 0.0739366 (104)
214: learn: 0.0302020 test: 0.0753461 best: 0.0739366 (104)
215: learn: 0.0301167 test: 0.0753179 best: 0.0739366 (104)
216: learn: 0.0299309 test: 0.0753721 best: 0.0739366 (104)
217: learn: 0.0297928 test: 0.0754035 best: 0.0739366 (104)
218: learn: 0.0297409 test: 0.0753623 best: 0.0739366 (104)
219: learn: 0.0296004 test: 0.0753555 best: 0.0739366 (104)
220: learn: 0.0294764 test: 0.0754390 best: 0.0739366 (104)
221: learn: 0.0292908 test: 0.0754384 best: 0.0739366 (104)
222: learn: 0.0291861 test: 0.0753941 best: 0.0739366 (104)
223: learn: 0.0290095 test: 0.0754440 best: 0.0739366 (104)
224: learn: 0.0289235 test: 0.0755134 best: 0.0739366 (104)
225: learn: 0.0288284 test: 0.0755457 best: 0.0739366 (104)
226: learn: 0.0287182 test: 0.0755987 best: 0.0739366 (104)
227: learn: 0.0285864 test: 0.0756021 best: 0.0739366 (104)
228: learn: 0.0284834 test: 0.0756290 best: 0.0739366 (104)
229: learn: 0.0283072 test: 0.0756808 best: 0.0739366 (104)
230: learn: 0.0282169 test: 0.0757474 best: 0.0739366 (104)
231: learn: 0.0281315 test: 0.0757433 best: 0.0739366 (104)
232: learn: 0.0279286 test: 0.0758396 best: 0.0739366 (104)
233: learn: 0.0278572 test: 0.0758438 best: 0.0739366 (104)
234: learn: 0.0278077 test: 0.0758605 best: 0.0739366 (104)
235: learn: 0.0277013 test: 0.0758908 best: 0.0739366 (104)
236: learn: 0.0275581 test: 0.0759074 best: 0.0739366 (104)
237: learn: 0.0274768 test: 0.0759200 best: 0.0739366 (104)
238: learn: 0.0273664 test: 0.0759502 best: 0.0739366 (104)
239: learn: 0.0272428 test: 0.0760060 best: 0.0739366 (104)
240: learn: 0.0270856 test: 0.0759123 best: 0.0739366 (104)
241: learn: 0.0269744 test: 0.0759394 best: 0.0739366 (104)
242: learn: 0.0268412 test: 0.0759824 best: 0.0739366 (104)
243: learn: 0.0267172 test: 0.0760181 best: 0.0739366 (104)
244: learn: 0.0265876 test: 0.0760124 best: 0.0739366 (104)
245: learn: 0.0264691 test: 0.0760104 best: 0.0739366 (104)
246: learn: 0.0263803 test: 0.0760202 best: 0.0739366 (104)
247: learn: 0.0263463 test: 0.0760100 best: 0.0739366 (104)
248: learn: 0.0262181 test: 0.0760148 best: 0.0739366 (104)
249: learn: 0.0260899 test: 0.0760537 best: 0.0739366 (104)
250: learn: 0.0259512 test: 0.0761194 best: 0.0739366 (104)
251: learn: 0.0258171 test: 0.0761408 best: 0.0739366 (104)
252: learn: 0.0257560 test: 0.0761311 best: 0.0739366 (104)
253: learn: 0.0256367 test: 0.0761691 best: 0.0739366 (104)
254: learn: 0.0255682 test: 0.0761804 best: 0.0739366 (104)
255: learn: 0.0254872 test: 0.0761792 best: 0.0739366 (104)
256: learn: 0.0253430 test: 0.0761328 best: 0.0739366 (104)
257: learn: 0.0252659 test: 0.0761519 best: 0.0739366 (104)
258: learn: 0.0252255 test: 0.0761502 best: 0.0739366 (104)
259: learn: 0.0250762 test: 0.0761513 best: 0.0739366 (104)
260: learn: 0.0250000 test: 0.0761537 best: 0.0739366 (104)
261: learn: 0.0249003 test: 0.0761849 best: 0.0739366 (104)
262: learn: 0.0248341 test: 0.0762189 best: 0.0739366 (104)
263: learn: 0.0247068 test: 0.0762337 best: 0.0739366 (104)
264: learn: 0.0245312 test: 0.0762866 best: 0.0739366 (104)
265: learn: 0.0244420 test: 0.0763283 best: 0.0739366 (104)
266: learn: 0.0243121 test: 0.0763482 best: 0.0739366 (104)
267: learn: 0.0242683 test: 0.0763225 best: 0.0739366 (104)
268: learn: 0.0241888 test: 0.0763422 best: 0.0739366 (104) total: 4.82s remaining: 13.1s
269: learn: 0.0241332 test: 0.0763452 best: 0.0739366 (104)
```

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269: learn: 0.0241003 test: 0.0763454 best: 0.0739366 (104)
270: learn: 0.0240871 test: 0.0763544 best: 0.0739366 (104)
271: learn: 0.0240043 test: 0.0763602 best: 0.0739366 (104)
272: learn: 0.0239180 test: 0.0763500 best: 0.0739366 (104)
273: learn: 0.0238550 test: 0.0763715 best: 0.0739366 (104)
274: learn: 0.0238106 test: 0.0763766 best: 0.0739366 (104)
275: learn: 0.0236244 test: 0.0764798 best: 0.0739366 (104)
276: learn: 0.0235320 test: 0.0764837 best: 0.0739366 (104)
277: learn: 0.0234349 test: 0.0764783 best: 0.0739366 (104)
278: learn: 0.0233097 test: 0.0764486 best: 0.0739366 (104)
279: learn: 0.0231934 test: 0.0765061 best: 0.0739366 (104)
280: learn: 0.0231066 test: 0.0765242 best: 0.0739366 (104)
281: learn: 0.0229986 test: 0.0765824 best: 0.0739366 (104)
282: learn: 0.0229596 test: 0.0765828 best: 0.0739366 (104)
283: learn: 0.0228922 test: 0.0766484 best: 0.0739366 (104)
284: learn: 0.0227945 test: 0.0766558 best: 0.0739366 (104)
285: learn: 0.0227104 test: 0.0766713 best: 0.0739366 (104)
286: learn: 0.0226204 test: 0.0766508 best: 0.0739366 (104)
287: learn: 0.0225867 test: 0.0766739 best: 0.0739366 (104)
288: learn: 0.0225082 test: 0.0767205 best: 0.0739366 (104)
289: learn: 0.0224531 test: 0.0767261 best: 0.0739366 (104)
290: learn: 0.0223340 test: 0.0767252 best: 0.0739366 (104) total: 5.24s remaining: 12.8s
291: learn: 0.0222885 test: 0.0767014 best: 0.0739366 (104)
292: learn: 0.0221926 test: 0.0767450 best: 0.0739366 (104)
293: learn: 0.0221056 test: 0.0767518 best: 0.0739366 (104)
294: learn: 0.0220074 test: 0.0767601 best: 0.0739366 (104)
295: learn: 0.0219267 test: 0.0767836 best: 0.0739366 (104)
296: learn: 0.0218390 test: 0.0768089 best: 0.0739366 (104)
297: learn: 0.0217491 test: 0.0768017 best: 0.0739366 (104)
298: learn: 0.0216586 test: 0.0767622 best: 0.0739366 (104)
299: learn: 0.0215801 test: 0.0767705 best: 0.0739366 (104)
300: learn: 0.0214740 test: 0.0767875 best: 0.0739366 (104)
301: learn: 0.0213715 test: 0.0767754 best: 0.0739366 (104)
302: learn: 0.0212651 test: 0.0768203 best: 0.0739366 (104)
303: learn: 0.0212092 test: 0.0768665 best: 0.0739366 (104)
304: learn: 0.0211114 test: 0.0769046 best: 0.0739366 (104)
305: learn: 0.0210450 test: 0.0769042 best: 0.0739366 (104)
306: learn: 0.0209690 test: 0.0769210 best: 0.0739366 (104)
307: learn: 0.0208774 test: 0.0769718 best: 0.0739366 (104)
308: learn: 0.0208170 test: 0.0769826 best: 0.0739366 (104)
309: learn: 0.0207333 test: 0.0770217 best: 0.0739366 (104)
310: learn: 0.0206463 test: 0.0769838 best: 0.0739366 (104)
311: learn: 0.0205602 test: 0.0769584 best: 0.0739366 (104)
312: learn: 0.0205109 test: 0.0769799 best: 0.0739366 (104)
313: learn: 0.0204176 test: 0.0769899 best: 0.0739366 (104)
314: learn: 0.0203532 test: 0.0770189 best: 0.0739366 (104)
315: learn: 0.0203048 test: 0.0770492 best: 0.0739366 (104)
316: learn: 0.0202170 test: 0.0770959 best: 0.0739366 (104)
317: learn: 0.0201783 test: 0.0770727 best: 0.0739366 (104)
318: learn: 0.0201215 test: 0.0770570 best: 0.0739366 (104)
319: learn: 0.0200600 test: 0.0770662 best: 0.0739366 (104)
320: learn: 0.0200185 test: 0.0770664 best: 0.0739366 (104)
321: learn: 0.0199237 test: 0.0771675 best: 0.0739366 (104)
322: learn: 0.0198383 test: 0.0772533 best: 0.0739366 (104)
323: learn: 0.0197326 test: 0.0773007 best: 0.0739366 (104)
324: learn: 0.0196790 test: 0.0772914 best: 0.0739366 (104)
325: learn: 0.0196014 test: 0.0773131 best: 0.0739366 (104)
326: learn: 0.0194839 test: 0.0773115 best: 0.0739366 (104)
327: learn: 0.0194390 test: 0.0773357 best: 0.0739366 (104)
328: learn: 0.0193650 test: 0.0773546 best: 0.0739366 (104)
329: learn: 0.0192730 test: 0.0774620 best: 0.0739366 (104)
330: learn: 0.0192179 test: 0.0774786 best: 0.0739366 (104)
331: learn: 0.0191680 test: 0.0775250 best: 0.0739366 (104)
332: learn: 0.0190927 test: 0.0776089 best: 0.0739366 (104)
333: learn: 0.0190495 test: 0.0776148 best: 0.0739366 (104)
334: learn: 0.0189922 test: 0.0776174 best: 0.0739366 (104) total: 6.12s remaining: 12.1s
335: learn: 0.0189530 test: 0.0776108 best: 0.0739366 (104)
336: learn: 0.0188683 test: 0.0775888 best: 0.0739366 (104)
337: learn: 0.0187983 test: 0.0775669 best: 0.0739366 (104)
338: learn: 0.0187207 test: 0.0776197 best: 0.0739366 (104)
339: learn: 0.0186268 test: 0.0776809 best: 0.0739366 (104)
340: learn: 0.0185726 test: 0.0776914 best: 0.0739366 (104)
341: learn: 0.0185045 test: 0.0778118 best: 0.0739366 (104)
342: learn: 0.0184594 test: 0.0778569 best: 0.0739366 (104)
343: learn: 0.0183754 test: 0.0778759 best: 0.0739366 (104)
344: learn: 0.0183013 test: 0.0778572 best: 0.0739366 (104)
345: learn: 0.0182425 test: 0.0778504 best: 0.0739366 (104)
346: learn: 0.0182102 test: 0.0778515 best: 0.0739366 (104)
```

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347: learn: 0.0181509 test: 0.0779186 best: 0.0739366 (104)
348: learn: 0.0180920 test: 0.0779527 best: 0.0739366 (104) total: 6.43s remaining: 12s
349: learn: 0.0180313 test: 0.0779844 best: 0.0739366 (104)
350: learn: 0.0179916 test: 0.0779993 best: 0.0739366 (104)
351: learn: 0.0178965 test: 0.0780369 best: 0.0739366 (104)
352: learn: 0.0178062 test: 0.0780594 best: 0.0739366 (104)
353: learn: 0.0177396 test: 0.0781060 best: 0.0739366 (104)
354: learn: 0.0176718 test: 0.0781382 best: 0.0739366 (104)
355: learn: 0.0176496 test: 0.0781368 best: 0.0739366 (104)
356: learn: 0.0176074 test: 0.0781465 best: 0.0739366 (104)
357: learn: 0.0175413 test: 0.0782084 best: 0.0739366 (104)
358: learn: 0.0174927 test: 0.0782110 best: 0.0739366 (104)
359: learn: 0.0174361 test: 0.0782408 best: 0.0739366 (104)
360: learn: 0.0173419 test: 0.0782677 best: 0.0739366 (104)
361: learn: 0.0173001 test: 0.0782934 best: 0.0739366 (104)
362: learn: 0.0172357 test: 0.0782987 best: 0.0739366 (104)
363: learn: 0.0172144 test: 0.0783225 best: 0.0739366 (104)
364: learn: 0.0171506 test: 0.0782672 best: 0.0739366 (104)
365: learn: 0.0170694 test: 0.0783462 best: 0.0739366 (104)
366: learn: 0.0170385 test: 0.0783755 best: 0.0739366 (104)
367: learn: 0.0169603 test: 0.0784039 best: 0.0739366 (104)
368: learn: 0.0168881 test: 0.0784654 best: 0.0739366 (104)
369: learn: 0.0168262 test: 0.0785100 best: 0.0739366 (104)
370: learn: 0.0168061 test: 0.0785061 best: 0.0739366 (104)
371: learn: 0.0167241 test: 0.0784997 best: 0.0739366 (104)
372: learn: 0.0166390 test: 0.0785202 best: 0.0739366 (104)
373: learn: 0.0165510 test: 0.0785402 best: 0.0739366 (104)
374: learn: 0.0165072 test: 0.0785448 best: 0.0739366 (104)
375: learn: 0.0164606 test: 0.0785637 best: 0.0739366 (104)
376: learn: 0.0164048 test: 0.0786694 best: 0.0739366 (104)
377: learn: 0.0163438 test: 0.0786928 best: 0.0739366 (104)
378: learn: 0.0162873 test: 0.0787142 best: 0.0739366 (104)
379: learn: 0.0162543 test: 0.0787169 best: 0.0739366 (104)
380: learn: 0.0162209 test: 0.0787203 best: 0.0739366 (104)
381: learn: 0.0161652 test: 0.0787630 best: 0.0739366 (104)
382: learn: 0.0160978 test: 0.0787567 best: 0.0739366 (104)
383: learn: 0.0160502 test: 0.0787779 best: 0.0739366 (104)
384: learn: 0.0160015 test: 0.0787636 best: 0.0739366 (104)
385: learn: 0.0158592 test: 0.0788367 best: 0.0739366 (104)
386: learn: 0.0158262 test: 0.0788489 best: 0.0739366 (104)
387: learn: 0.0157891 test: 0.0788869 best: 0.0739366 (104)
388: learn: 0.0157550 test: 0.0788836 best: 0.0739366 (104)
389: learn: 0.0157083 test: 0.0788833 best: 0.0739366 (104)
390: learn: 0.0156815 test: 0.0789283 best: 0.0739366 (104)
391: learn: 0.0156289 test: 0.0789140 best: 0.0739366 (104)
392: learn: 0.0155676 test: 0.0789100 best: 0.0739366 (104)
393: learn: 0.0155350 test: 0.0789350 best: 0.0739366 (104)
394: learn: 0.0155093 test: 0.0789641 best: 0.0739366 (104)
395: learn: 0.0154650 test: 0.0790034 best: 0.0739366 (104)
396: learn: 0.0154032 test: 0.0790588 best: 0.0739366 (104)
397: learn: 0.0153702 test: 0.0790636 best: 0.0739366 (104)
398: learn: 0.0153341 test: 0.0790972 best: 0.0739366 (104)
399: learn: 0.0153035 test: 0.0791268 best: 0.0739366 (104)
400: learn: 0.0152614 test: 0.0791778 best: 0.0739366 (104)
401: learn: 0.0152095 test: 0.0791993 best: 0.0739366 (104)
402: learn: 0.0151422 test: 0.0792439 best: 0.0739366 (104)
403: learn: 0.0151087 test: 0.0792589 best: 0.0739366 (104)
404: learn: 0.0150685 test: 0.0792809 best: 0.0739366 (104)
405: learn: 0.0150345 test: 0.0793321 best: 0.0739366 (104)
406: learn: 0.0149938 test: 0.0793314 best: 0.0739366 (104)
407: learn: 0.0149669 test: 0.0793656 best: 0.0739366 (104)
408: learn: 0.0149429 test: 0.0793619 best: 0.0739366 (104)
409: learn: 0.0148817 test: 0.0793974 best: 0.0739366 (104)
410: learn: 0.0148343 test: 0.0794245 best: 0.0739366 (104)
411: learn: 0.0147813 test: 0.0794132 best: 0.0739366 (104)
412: learn: 0.0147252 test: 0.0794353 best: 0.0739366 (104)
413: learn: 0.0147011 test: 0.0794718 best: 0.0739366 (104)
414: learn: 0.0146380 test: 0.0794793 best: 0.0739366 (104)
415: learn: 0.0145761 test: 0.0794962 best: 0.0739366 (104)
416: learn: 0.0145365 test: 0.0795211 best: 0.0739366 (104)
417: learn: 0.0144917 test: 0.0795430 best: 0.0739366 (104)
418: learn: 0.0144456 test: 0.0795648 best: 0.0739366 (104)
419: learn: 0.0143801 test: 0.0796674 best: 0.0739366 (104)
420: learn: 0.0143487 test: 0.0797118 best: 0.0739366 (104)
421: learn: 0.0143264 test: 0.0797213 best: 0.0739366 (104)
422: learn: 0.0142862 test: 0.0797767 best: 0.0739366 (104)
423: learn: 0.0142588 test: 0.0797914 best: 0.0739366 (104)
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423: learn: 0.0142566 test: 0.0797914 best: 0.0739366 (104)
424: learn: 0.0142352 test: 0.0798247 best: 0.0739366 (104)
425: learn: 0.0142055 test: 0.0799021 best: 0.0739366 (104)
426: learn: 0.0141673 test: 0.0798971 best: 0.0739366 (104)
427: learn: 0.0141365 test: 0.0799206 best: 0.0739366 (104)
428: learn: 0.0140972 test: 0.0799684 best: 0.0739366 (104)
429: learn: 0.0140198 test: 0.0800454 best: 0.0739366 (104)
430: learn: 0.0139551 test: 0.0801114 best: 0.0739366 (104)
431: learn: 0.0139085 test: 0.0800954 best: 0.0739366 (104)
432: learn: 0.0138804 test: 0.0801162 best: 0.0739366 (104)
433: learn: 0.0138403 test: 0.0801173 best: 0.0739366 (104)
434: learn: 0.0137674 test: 0.0801423 best: 0.0739366 (104) total: 7.88s remaining: 10.2s
435: learn: 0.0137420 test: 0.0801388 best: 0.0739366 (104)
436: learn: 0.0137121 test: 0.0801772 best: 0.0739366 (104)
437: learn: 0.0136654 test: 0.0802279 best: 0.0739366 (104)
438: learn: 0.0136141 test: 0.0803165 best: 0.0739366 (104)
439: learn: 0.0135792 test: 0.0803227 best: 0.0739366 (104)
440: learn: 0.0134953 test: 0.0803285 best: 0.0739366 (104)
441: learn: 0.0134437 test: 0.0803512 best: 0.0739366 (104)
442: learn: 0.0134220 test: 0.0803724 best: 0.0739366 (104)
443: learn: 0.0133564 test: 0.0804857 best: 0.0739366 (104)
444: learn: 0.0133320 test: 0.0805007 best: 0.0739366 (104)
445: learn: 0.0132997 test: 0.0805075 best: 0.0739366 (104)
446: learn: 0.0132578 test: 0.0805139 best: 0.0739366 (104)
447: learn: 0.0132026 test: 0.0805765 best: 0.0739366 (104)
448: learn: 0.0131551 test: 0.0806285 best: 0.0739366 (104)
449: learn: 0.0131020 test: 0.0806704 best: 0.0739366 (104)
450: learn: 0.0130630 test: 0.0807238 best: 0.0739366 (104)
451: learn: 0.0130052 test: 0.0807578 best: 0.0739366 (104)
452: learn: 0.0129791 test: 0.0807839 best: 0.0739366 (104)
453: learn: 0.0129489 test: 0.0807939 best: 0.0739366 (104)
454: learn: 0.0129317 test: 0.0807799 best: 0.0739366 (104)
455: learn: 0.0128949 test: 0.0807907 best: 0.0739366 (104)
456: learn: 0.0128564 test: 0.0808309 best: 0.0739366 (104)
457: learn: 0.0128200 test: 0.0808787 best: 0.0739366 (104)
458: learn: 0.0127914 test: 0.0809244 best: 0.0739366 (104)
459: learn: 0.0127544 test: 0.0809345 best: 0.0739366 (104)
460: learn: 0.0127374 test: 0.0809441 best: 0.0739366 (104)
461: learn: 0.0127217 test: 0.0809577 best: 0.0739366 (104)
462: learn: 0.0126725 test: 0.0809579 best: 0.0739366 (104)
463: learn: 0.0126306 test: 0.0809667 best: 0.0739366 (104) total: 8.42s remaining: 9.73s
464: learn: 0.0125927 test: 0.0809745 best: 0.0739366 (104)
465: learn: 0.0125716 test: 0.0810077 best: 0.0739366 (104)
466: learn: 0.0125054 test: 0.0810657 best: 0.0739366 (104)
467: learn: 0.0124755 test: 0.0811018 best: 0.0739366 (104)
468: learn: 0.0124229 test: 0.0811006 best: 0.0739366 (104)
469: learn: 0.0123959 test: 0.0811242 best: 0.0739366 (104)
470: learn: 0.0123510 test: 0.0812015 best: 0.0739366 (104)
471: learn: 0.0123161 test: 0.0812205 best: 0.0739366 (104)
472: learn: 0.0122921 test: 0.0812161 best: 0.0739366 (104)
473: learn: 0.0122643 test: 0.0812397 best: 0.0739366 (104)
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475: learn: 0.0122081 test: 0.0812845 best: 0.0739366 (104)
476: learn: 0.0121756 test: 0.0813284 best: 0.0739366 (104)
477: learn: 0.0121378 test: 0.0813518 best: 0.0739366 (104)
478: learn: 0.0121074 test: 0.0813813 best: 0.0739366 (104)
479: learn: 0.0120665 test: 0.0814225 best: 0.0739366 (104)
480: learn: 0.0120380 test: 0.0814440 best: 0.0739366 (104)
481: learn: 0.0120083 test: 0.0814668 best: 0.0739366 (104)
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487: learn: 0.0117877 test: 0.0815900 best: 0.0739366 (104)
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490: learn: 0.0117406 test: 0.0816325 best: 0.0739366 (104)
491: learn: 0.0117146 test: 0.0816764 best: 0.0739366 (104)
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494: learn: 0.0115278 test: 0.0818177 best: 0.0739366 (104)
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496: learn: 0.0114705 test: 0.0818083 best: 0.0739366 (104)
497: learn: 0.0114346 test: 0.0817942 best: 0.0739366 (104)
498: learn: 0.0114213 test: 0.0818062 best: 0.0739366 (104)
499: learn: 0.0113995 test: 0.0818069 best: 0.0739366 (104)
500: learn: 0.0113856 test: 0.0818238 best: 0.0739366 (104)
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500: learn: 0.0113656 test: 0.0818238 best: 0.0739366 (104)
501: learn: 0.0113425 test: 0.0818555 best: 0.0739366 (104)
502: learn: 0.0113183 test: 0.0819116 best: 0.0739366 (104)
503: learn: 0.0112799 test: 0.0819710 best: 0.0739366 (104)
504: learn: 0.0112476 test: 0.0819837 best: 0.0739366 (104)
505: learn: 0.0112207 test: 0.0820075 best: 0.0739366 (104)
506: learn: 0.0112028 test: 0.0820261 best: 0.0739366 (104)
507: learn: 0.0111672 test: 0.0820322 best: 0.0739366 (104)
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510: learn: 0.0110966 test: 0.0820540 best: 0.0739366 (104)
511: learn: 0.0110784 test: 0.0820745 best: 0.0739366 (104)
512: learn: 0.0110672 test: 0.0820930 best: 0.0739366 (104)
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514: learn: 0.0110029 test: 0.0820755 best: 0.0739366 (104)
515: learn: 0.0109819 test: 0.0820831 best: 0.0739366 (104)
516: learn: 0.0109432 test: 0.0821470 best: 0.0739366 (104)
517: learn: 0.0109048 test: 0.0821952 best: 0.0739366 (104)
518: learn: 0.0108833 test: 0.0822181 best: 0.0739366 (104)
519: learn: 0.0108625 test: 0.0822571 best: 0.0739366 (104)
520: learn: 0.0108468 test: 0.0822732 best: 0.0739366 (104)
521: learn: 0.0108179 test: 0.0822610 best: 0.0739366 (104)
522: learn: 0.0108063 test: 0.0822793 best: 0.0739366 (104)
523: learn: 0.0107789 test: 0.0822985 best: 0.0739366 (104)
524: learn: 0.0107398 test: 0.0823226 best: 0.0739366 (104)
525: learn: 0.0106965 test: 0.0823631 best: 0.0739366 (104)
526: learn: 0.0106662 test: 0.0823786 best: 0.0739366 (104)
527: learn: 0.0106506 test: 0.0824112 best: 0.0739366 (104)
528: learn: 0.0106027 test: 0.0824969 best: 0.0739366 (104)
529: learn: 0.0105763 test: 0.0824928 best: 0.0739366 (104)
530: learn: 0.0105500 test: 0.0825052 best: 0.0739366 (104)
531: learn: 0.0105214 test: 0.0825398 best: 0.0739366 (104)
532: learn: 0.0104964 test: 0.0825712 best: 0.0739366 (104)
533: learn: 0.0104551 test: 0.0826000 best: 0.0739366 (104)
534: learn: 0.0104372 test: 0.0826205 best: 0.0739366 (104)
535: learn: 0.0104186 test: 0.0826779 best: 0.0739366 (104)
536: learn: 0.0103967 test: 0.0827135 best: 0.0739366 (104)
537: learn: 0.0103671 test: 0.0827409 best: 0.0739366 (104)
538: learn: 0.0103027 test: 0.0828167 best: 0.0739366 (104)
539: learn: 0.0102872 test: 0.0828048 best: 0.0739366 (104)
540: learn: 0.0102649 test: 0.0828490 best: 0.0739366 (104)
541: learn: 0.0102214 test: 0.0828964 best: 0.0739366 (104)
542: learn: 0.0101905 test: 0.0829238 best: 0.0739366 (104)
543: learn: 0.0101765 test: 0.0829090 best: 0.0739366 (104)
544: learn: 0.0101503 test: 0.0829022 best: 0.0739366 (104)
545: learn: 0.0101207 test: 0.0829397 best: 0.0739366 (104)
546: learn: 0.0101005 test: 0.0829811 best: 0.0739366 (104)
547: learn: 0.0100833 test: 0.0830504 best: 0.0739366 (104)
548: learn: 0.0100699 test: 0.0830380 best: 0.0739366 (104)
549: learn: 0.0100475 test: 0.0830351 best: 0.0739366 (104) total: 9.86s remaining: 8.07s
550: learn: 0.0100157 test: 0.0830447 best: 0.0739366 (104)
551: learn: 0.0099912 test: 0.0830642 best: 0.0739366 (104)
552: learn: 0.0099668 test: 0.0830996 best: 0.0739366 (104)
553: learn: 0.0099401 test: 0.0831556 best: 0.0739366 (104)
554: learn: 0.0099062 test: 0.0831545 best: 0.0739366 (104)
555: learn: 0.0098734 test: 0.0831848 best: 0.0739366 (104)
556: learn: 0.0098417 test: 0.0831878 best: 0.0739366 (104)
557: learn: 0.0098131 test: 0.0832325 best: 0.0739366 (104)
558: learn: 0.0097710 test: 0.0832627 best: 0.0739366 (104)
559: learn: 0.0097566 test: 0.0832600 best: 0.0739366 (104)
560: learn: 0.0097352 test: 0.0832866 best: 0.0739366 (104)
561: learn: 0.0097054 test: 0.0833371 best: 0.0739366 (104)
562: learn: 0.0096883 test: 0.0833309 best: 0.0739366 (104)
563: learn: 0.0096618 test: 0.0833382 best: 0.0739366 (104)
564: learn: 0.0096490 test: 0.0833371 best: 0.0739366 (104)
565: learn: 0.0096319 test: 0.0833783 best: 0.0739366 (104)
566: learn: 0.0096232 test: 0.0833873 best: 0.0739366 (104)
567: learn: 0.0096098 test: 0.0833952 best: 0.0739366 (104)
568: learn: 0.0095975 test: 0.0834226 best: 0.0739366 (104)
569: learn: 0.0095716 test: 0.0834487 best: 0.0739366 (104)
570: learn: 0.0095584 test: 0.0834538 best: 0.0739366 (104)
571: learn: 0.0095412 test: 0.0834624 best: 0.0739366 (104)
572: learn: 0.0095120 test: 0.0834297 best: 0.0739366 (104)
573: learn: 0.0094986 test: 0.0834308 best: 0.0739366 (104)
574: learn: 0.0094801 test: 0.0834470 best: 0.0739366 (104)
575: learn: 0.0094615 test: 0.0834551 best: 0.0739366 (104)
576: learn: 0.0094432 test: 0.0834614 best: 0.0739366 (104)
577: learn: 0.0094245 test: 0.0834887 best: 0.0739366 (104)
```

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577: learn: 0.0094245 test: 0.0834887 best: 0.0739366 (104)
578: learn: 0.0094127 test: 0.0834919 best: 0.0739366 (104)
579: learn: 0.0093791 test: 0.0835090 best: 0.0739366 (104)
580: learn: 0.0093564 test: 0.0835218 best: 0.0739366 (104)
581: learn: 0.0093424 test: 0.0835187 best: 0.0739366 (104)
582: learn: 0.0093203 test: 0.0835553 best: 0.0739366 (104)
583: learn: 0.0092788 test: 0.0836072 best: 0.0739366 (104)
584: learn: 0.0092524 test: 0.0836322 best: 0.0739366 (104)
585: learn: 0.0092279 test: 0.0836318 best: 0.0739366 (104)
586: learn: 0.0092066 test: 0.0836507 best: 0.0739366 (104)
587: learn: 0.0091796 test: 0.0836884 best: 0.0739366 (104)
588: learn: 0.0091397 test: 0.0837315 best: 0.0739366 (104)
589: learn: 0.0091168 test: 0.0837509 best: 0.0739366 (104)
590: learn: 0.0090945 test: 0.0837650 best: 0.0739366 (104)
591: learn: 0.0090606 test: 0.0838052 best: 0.0739366 (104)
592: learn: 0.0090324 test: 0.0838375 best: 0.0739366 (104)
593: learn: 0.0090081 test: 0.0838768 best: 0.0739366 (104)
594: learn: 0.0089844 test: 0.0839112 best: 0.0739366 (104)
595: learn: 0.0089684 test: 0.0839160 best: 0.0739366 (104)
596: learn: 0.0089600 test: 0.0839222 best: 0.0739366 (104)
597: learn: 0.0089457 test: 0.0839516 best: 0.0739366 (104)
598: learn: 0.0089067 test: 0.0839619 best: 0.0739366 (104)
599: learn: 0.0088901 test: 0.0839480 best: 0.0739366 (104)
600: learn: 0.0088744 test: 0.0839669 best: 0.0739366 (104)
601: learn: 0.0088394 test: 0.0839186 best: 0.0739366 (104)
602: learn: 0.0088285 test: 0.0839544 best: 0.0739366 (104)
603: learn: 0.0088060 test: 0.0839670 best: 0.0739366 (104)
604: learn: 0.0087914 test: 0.0839785 best: 0.0739366 (104)
605: learn: 0.0087702 test: 0.0839919 best: 0.0739366 (104)
606: learn: 0.0087582 test: 0.0839902 best: 0.0739366 (104)
607: learn: 0.0087273 test: 0.0839988 best: 0.0739366 (104)
608: learn: 0.0087071 test: 0.0839972 best: 0.0739366 (104)
609: learn: 0.0086951 test: 0.0840105 best: 0.0739366 (104)
610: learn: 0.0086847 test: 0.0840178 best: 0.0739366 (104)
611: learn: 0.0086606 test: 0.0840709 best: 0.0739366 (104)
612: learn: 0.0086436 test: 0.0841111 best: 0.0739366 (104)
613: learn: 0.0086246 test: 0.0841260 best: 0.0739366 (104)
614: learn: 0.0086021 test: 0.0841602 best: 0.0739366 (104)
615: learn: 0.0085718 test: 0.0842138 best: 0.0739366 (104)
616: learn: 0.0085467 test: 0.0842103 best: 0.0739366 (104)
617: learn: 0.0085271 test: 0.0842320 best: 0.0739366 (104)
618: learn: 0.0085003 test: 0.0842537 best: 0.0739366 (104)
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620: learn: 0.0084446 test: 0.0843103 best: 0.0739366 (104)
621: learn: 0.0084145 test: 0.0843316 best: 0.0739366 (104)
622: learn: 0.0083915 test: 0.0843581 best: 0.0739366 (104)
623: learn: 0.0083766 test: 0.0843710 best: 0.0739366 (104)
624: learn: 0.0083395 test: 0.0844371 best: 0.0739366 (104)
625: learn: 0.0083205 test: 0.0844437 best: 0.0739366 (104)
626: learn: 0.0083067 test: 0.0844805 best: 0.0739366 (104)
627: learn: 0.0082800 test: 0.0845169 best: 0.0739366 (104)
628: learn: 0.0082651 test: 0.0845371 best: 0.0739366 (104)
629: learn: 0.0082343 test: 0.0846002 best: 0.0739366 (104)
630: learn: 0.0082153 test: 0.0846676 best: 0.0739366 (104)
631: learn: 0.0081948 test: 0.0846799 best: 0.0739366 (104)
632: learn: 0.0081795 test: 0.0847352 best: 0.0739366 (104)
633: learn: 0.0081576 test: 0.0847638 best: 0.0739366 (104)
634: learn: 0.0081202 test: 0.0848083 best: 0.0739366 (104)
635: learn: 0.0081073 test: 0.0848114 best: 0.0739366 (104)
636: learn: 0.0080876 test: 0.0848710 best: 0.0739366 (104) total: 11.3s remaining: 6.45s
637: learn: 0.0080696 test: 0.0849176 best: 0.0739366 (104)
638: learn: 0.0080534 test: 0.0849473 best: 0.0739366 (104)
639: learn: 0.0080325 test: 0.0849822 best: 0.0739366 (104)
640: learn: 0.0080179 test: 0.0849639 best: 0.0739366 (104)
641: learn: 0.0079930 test: 0.0850196 best: 0.0739366 (104)
642: learn: 0.0079662 test: 0.0850917 best: 0.0739366 (104)
643: learn: 0.0079485 test: 0.0851633 best: 0.0739366 (104)
644: learn: 0.0079374 test: 0.0852062 best: 0.0739366 (104)
645: learn: 0.0079130 test: 0.0852661 best: 0.0739366 (104)
646: learn: 0.0079001 test: 0.0853074 best: 0.0739366 (104)
647: learn: 0.0078820 test: 0.0853249 best: 0.0739366 (104)
648: learn: 0.0078637 test: 0.0853543 best: 0.0739366 (104)
649: learn: 0.0078495 test: 0.0853621 best: 0.0739366 (104)
650: learn: 0.0078348 test: 0.0853941 best: 0.0739366 (104)
651: learn: 0.0078161 test: 0.0853953 best: 0.0739366 (104)
652: learn: 0.0078053 test: 0.0854189 best: 0.0739366 (104)
653: learn: 0.0077866 test: 0.0854228 best: 0.0739366 (104)
654: learn: 0.0077740 test: 0.0854525 best: 0.0739366 (104)
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654: learn: 0.0077749 test: 0.0854525 best: 0.0739366 (104)
655: learn: 0.0077444 test: 0.0854640 best: 0.0739366 (104)
656: learn: 0.0077259 test: 0.0854896 best: 0.0739366 (104)
657: learn: 0.0076959 test: 0.0855730 best: 0.0739366 (104)
658: learn: 0.0076686 test: 0.0855915 best: 0.0739366 (104)
659: learn: 0.0076486 test: 0.0855994 best: 0.0739366 (104)
660: learn: 0.0076391 test: 0.0856000 best: 0.0739366 (104)
661: learn: 0.0076243 test: 0.0855870 best: 0.0739366 (104)
662: learn: 0.0076125 test: 0.0856023 best: 0.0739366 (104)
663: learn: 0.0076017 test: 0.0856029 best: 0.0739366 (104) total: 11.8s remaining: 5.98s
664: learn: 0.0075934 test: 0.0856104 best: 0.0739366 (104)
665: learn: 0.0075880 test: 0.0856130 best: 0.0739366 (104)
666: learn: 0.0075730 test: 0.0856351 best: 0.0739366 (104)
667: learn: 0.0075591 test: 0.0856692 best: 0.0739366 (104)
668: learn: 0.0075486 test: 0.0857033 best: 0.0739366 (104)
669: learn: 0.0075332 test: 0.0857127 best: 0.0739366 (104)
670: learn: 0.0075189 test: 0.0857417 best: 0.0739366 (104)
671: learn: 0.0074926 test: 0.0857872 best: 0.0739366 (104)
672: learn: 0.0074671 test: 0.0858118 best: 0.0739366 (104)
673: learn: 0.0074429 test: 0.0858716 best: 0.0739366 (104)
674: learn: 0.0074220 test: 0.0858946 best: 0.0739366 (104)
675: learn: 0.0074078 test: 0.0859530 best: 0.0739366 (104)
676: learn: 0.0073830 test: 0.0859772 best: 0.0739366 (104)
677: learn: 0.0073741 test: 0.0860010 best: 0.0739366 (104)
678: learn: 0.0073657 test: 0.0860004 best: 0.0739366 (104)
679: learn: 0.0073514 test: 0.0860160 best: 0.0739366 (104)
680: learn: 0.0073406 test: 0.0860041 best: 0.0739366 (104)
681: learn: 0.0073239 test: 0.0860250 best: 0.0739366 (104)
682: learn: 0.0072947 test: 0.0860704 best: 0.0739366 (104)
683: learn: 0.0072721 test: 0.0861064 best: 0.0739366 (104)
684: learn: 0.0072596 test: 0.0861142 best: 0.0739366 (104)
685: learn: 0.0072382 test: 0.0861540 best: 0.0739366 (104)
686: learn: 0.0072296 test: 0.0861643 best: 0.0739366 (104)
687: learn: 0.0072137 test: 0.0862192 best: 0.0739366 (104)
688: learn: 0.0071909 test: 0.0862758 best: 0.0739366 (104)
689: learn: 0.0071672 test: 0.0862833 best: 0.0739366 (104)
690: learn: 0.0071509 test: 0.0863205 best: 0.0739366 (104)
691: learn: 0.0071373 test: 0.0863311 best: 0.0739366 (104)
692: learn: 0.0071280 test: 0.0863378 best: 0.0739366 (104)
693: learn: 0.0071126 test: 0.0863582 best: 0.0739366 (104)
694: learn: 0.0071038 test: 0.0863592 best: 0.0739366 (104)
695: learn: 0.0070839 test: 0.0863887 best: 0.0739366 (104)
696: learn: 0.0070729 test: 0.0864156 best: 0.0739366 (104)
697: learn: 0.0070573 test: 0.0864682 best: 0.0739366 (104)
698: learn: 0.0070443 test: 0.0864821 best: 0.0739366 (104)
699: learn: 0.0070276 test: 0.0865151 best: 0.0739366 (104)
700: learn: 0.0070208 test: 0.0865375 best: 0.0739366 (104)
701: learn: 0.0070006 test: 0.0865676 best: 0.0739366 (104)
702: learn: 0.0069854 test: 0.0866185 best: 0.0739366 (104)
703: learn: 0.0069614 test: 0.0866376 best: 0.0739366 (104)
704: learn: 0.0069507 test: 0.0866350 best: 0.0739366 (104)
705: learn: 0.0069425 test: 0.0866521 best: 0.0739366 (104)
706: learn: 0.0069325 test: 0.0866563 best: 0.0739366 (104)
707: learn: 0.0069263 test: 0.0866702 best: 0.0739366 (104)
708: learn: 0.0069053 test: 0.0866971 best: 0.0739366 (104)
709: learn: 0.0068881 test: 0.0866933 best: 0.0739366 (104)
710: learn: 0.0068827 test: 0.0867097 best: 0.0739366 (104)
711: learn: 0.0068722 test: 0.0867302 best: 0.0739366 (104)
712: learn: 0.0068619 test: 0.0867413 best: 0.0739366 (104)
713: learn: 0.0068517 test: 0.0867491 best: 0.0739366 (104)
714: learn: 0.0068465 test: 0.0867571 best: 0.0739366 (104)
715: learn: 0.0068397 test: 0.0867576 best: 0.0739366 (104)
716: learn: 0.0068221 test: 0.0868122 best: 0.0739366 (104)
717: learn: 0.0068171 test: 0.0868360 best: 0.0739366 (104)
718: learn: 0.0068068 test: 0.0868611 best: 0.0739366 (104)
719: learn: 0.0067868 test: 0.0868997 best: 0.0739366 (104)
720: learn: 0.0067837 test: 0.0869151 best: 0.0739366 (104)
721: learn: 0.0067706 test: 0.0869507 best: 0.0739366 (104)
722: learn: 0.0067546 test: 0.0869837 best: 0.0739366 (104)
723: learn: 0.0067367 test: 0.0870005 best: 0.0739366 (104)
724: learn: 0.0067311 test: 0.0870135 best: 0.0739366 (104)
725: learn: 0.0067209 test: 0.0870302 best: 0.0739366 (104)
726: learn: 0.0067052 test: 0.0870408 best: 0.0739366 (104)
727: learn: 0.0066948 test: 0.0870565 best: 0.0739366 (104)
728: learn: 0.0066739 test: 0.0870705 best: 0.0739366 (104)
729: learn: 0.0066561 test: 0.0870715 best: 0.0739366 (104)
730: learn: 0.0066393 test: 0.0871502 best: 0.0739366 (104)
731: learn: 0.0066212 test: 0.0871749 best: 0.0739366 (104)
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731: learn: 0.0066312 test: 0.0871749 best: 0.0739366 (104)
732: learn: 0.0066159 test: 0.0871971 best: 0.0739366 (104)
733: learn: 0.0066026 test: 0.0872118 best: 0.0739366 (104)
734: learn: 0.0065847 test: 0.0872495 best: 0.0739366 (104)
735: learn: 0.0065778 test: 0.0872814 best: 0.0739366 (104)
736: learn: 0.0065651 test: 0.0872956 best: 0.0739366 (104)
737: learn: 0.0065530 test: 0.0873090 best: 0.0739366 (104)
738: learn: 0.0065385 test: 0.0873054 best: 0.0739366 (104)
739: learn: 0.0065343 test: 0.0873111 best: 0.0739366 (104)
740: learn: 0.0065250 test: 0.0873278 best: 0.0739366 (104)
741: learn: 0.0065196 test: 0.0873472 best: 0.0739366 (104)
742: learn: 0.0065038 test: 0.0873667 best: 0.0739366 (104)
743: learn: 0.0064800 test: 0.0874300 best: 0.0739366 (104)
744: learn: 0.0064587 test: 0.0874574 best: 0.0739366 (104)
745: learn: 0.0064495 test: 0.0874869 best: 0.0739366 (104)
746: learn: 0.0064441 test: 0.0875122 best: 0.0739366 (104)
747: learn: 0.0064363 test: 0.0875310 best: 0.0739366 (104)
748: learn: 0.0064276 test: 0.0875554 best: 0.0739366 (104)
749: learn: 0.0064145 test: 0.0875628 best: 0.0739366 (104)
750: learn: 0.0063916 test: 0.0875329 best: 0.0739366 (104)   total: 13.3s remaining: 4.41s
751: learn: 0.0063746 test: 0.0875426 best: 0.0739366 (104)
752: learn: 0.0063675 test: 0.0875326 best: 0.0739366 (104)
753: learn: 0.0063572 test: 0.0875322 best: 0.0739366 (104)
754: learn: 0.0063544 test: 0.0875382 best: 0.0739366 (104)
755: learn: 0.0063403 test: 0.0875767 best: 0.0739366 (104)
756: learn: 0.0063306 test: 0.0875605 best: 0.0739366 (104)
757: learn: 0.0063164 test: 0.0875976 best: 0.0739366 (104)
758: learn: 0.0063042 test: 0.0876596 best: 0.0739366 (104)
759: learn: 0.0062796 test: 0.0877273 best: 0.0739366 (104)
760: learn: 0.0062702 test: 0.0877480 best: 0.0739366 (104)
761: learn: 0.0062595 test: 0.0877630 best: 0.0739366 (104)
762: learn: 0.0062454 test: 0.0877646 best: 0.0739366 (104)
763: learn: 0.0062420 test: 0.0877767 best: 0.0739366 (104)
764: learn: 0.0062384 test: 0.0877887 best: 0.0739366 (104)
765: learn: 0.0062257 test: 0.0877823 best: 0.0739366 (104)
766: learn: 0.0062073 test: 0.0878123 best: 0.0739366 (104)
767: learn: 0.0061980 test: 0.0878385 best: 0.0739366 (104)
768: learn: 0.0061847 test: 0.0878333 best: 0.0739366 (104)
769: learn: 0.0061798 test: 0.0878383 best: 0.0739366 (104)
770: learn: 0.0061733 test: 0.0878572 best: 0.0739366 (104)
771: learn: 0.0061604 test: 0.0878779 best: 0.0739366 (104)
772: learn: 0.0061510 test: 0.0878695 best: 0.0739366 (104)
773: learn: 0.0061349 test: 0.0879092 best: 0.0739366 (104)
774: learn: 0.0061275 test: 0.0879278 best: 0.0739366 (104)
775: learn: 0.0061144 test: 0.0879483 best: 0.0739366 (104)
776: learn: 0.0061007 test: 0.0879853 best: 0.0739366 (104)
777: learn: 0.0060949 test: 0.0879980 best: 0.0739366 (104)
778: learn: 0.0060841 test: 0.0880342 best: 0.0739366 (104)
779: learn: 0.0060706 test: 0.0880620 best: 0.0739366 (104)
780: learn: 0.0060542 test: 0.0880937 best: 0.0739366 (104)
781: learn: 0.0060434 test: 0.0881273 best: 0.0739366 (104)
782: learn: 0.0060318 test: 0.0881330 best: 0.0739366 (104)
783: learn: 0.0060218 test: 0.0881869 best: 0.0739366 (104)
784: learn: 0.0060155 test: 0.0882057 best: 0.0739366 (104)
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786: learn: 0.0059999 test: 0.0882605 best: 0.0739366 (104)
787: learn: 0.0059968 test: 0.0882673 best: 0.0739366 (104)
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790: learn: 0.0059752 test: 0.0883076 best: 0.0739366 (104)
791: learn: 0.0059708 test: 0.0883208 best: 0.0739366 (104)
792: learn: 0.0059605 test: 0.0883337 best: 0.0739366 (104)
793: learn: 0.0059514 test: 0.0883538 best: 0.0739366 (104)
794: learn: 0.0059420 test: 0.0883727 best: 0.0739366 (104)
795: learn: 0.0059297 test: 0.0883910 best: 0.0739366 (104)
796: learn: 0.0059181 test: 0.0884208 best: 0.0739366 (104)
797: learn: 0.0059120 test: 0.0884374 best: 0.0739366 (104)
798: learn: 0.0059053 test: 0.0884524 best: 0.0739366 (104)
799: learn: 0.0058965 test: 0.0884620 best: 0.0739366 (104)
800: learn: 0.0058876 test: 0.0884839 best: 0.0739366 (104)
801: learn: 0.0058800 test: 0.0884890 best: 0.0739366 (104)
802: learn: 0.0058660 test: 0.0885059 best: 0.0739366 (104)
803: learn: 0.0058591 test: 0.0884921 best: 0.0739366 (104)
804: learn: 0.0058457 test: 0.0885458 best: 0.0739366 (104)
805: learn: 0.0058372 test: 0.0885681 best: 0.0739366 (104)
806: learn: 0.0058311 test: 0.0885786 best: 0.0739366 (104)
807: learn: 0.0058165 test: 0.0886117 best: 0.0739366 (104)
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808: learn: 0.0058102 test: 0.0886162 best: 0.0739366 (104)
809: learn: 0.0057959 test: 0.0886681 best: 0.0739366 (104)
810: learn: 0.0057808 test: 0.0886483 best: 0.0739366 (104)
811: learn: 0.0057746 test: 0.0886711 best: 0.0739366 (104)
812: learn: 0.0057681 test: 0.0886987 best: 0.0739366 (104)
813: learn: 0.0057609 test: 0.0887021 best: 0.0739366 (104)
814: learn: 0.0057499 test: 0.0887257 best: 0.0739366 (104)
815: learn: 0.0057419 test: 0.0887471 best: 0.0739366 (104)
816: learn: 0.0057354 test: 0.0887660 best: 0.0739366 (104)
817: learn: 0.0057217 test: 0.0887676 best: 0.0739366 (104)
818: learn: 0.0057076 test: 0.0887864 best: 0.0739366 (104)
819: learn: 0.0056973 test: 0.0887929 best: 0.0739366 (104)
820: learn: 0.0056828 test: 0.0888112 best: 0.0739366 (104)
821: learn: 0.0056703 test: 0.0888588 best: 0.0739366 (104)
822: learn: 0.0056628 test: 0.0888840 best: 0.0739366 (104)
823: learn: 0.0056551 test: 0.0889142 best: 0.0739366 (104)
824: learn: 0.0056396 test: 0.0889338 best: 0.0739366 (104)
825: learn: 0.0056356 test: 0.0889336 best: 0.0739366 (104)
826: learn: 0.0056283 test: 0.0889524 best: 0.0739366 (104)
827: learn: 0.0056144 test: 0.0889785 best: 0.0739366 (104)
828: learn: 0.0056061 test: 0.0889922 best: 0.0739366 (104)
829: learn: 0.0055962 test: 0.0890079 best: 0.0739366 (104)
830: learn: 0.0055828 test: 0.0890150 best: 0.0739366 (104)
831: learn: 0.0055709 test: 0.0890435 best: 0.0739366 (104)
832: learn: 0.0055631 test: 0.0890727 best: 0.0739366 (104)
833: learn: 0.0055581 test: 0.0890920 best: 0.0739366 (104)
834: learn: 0.0055549 test: 0.0890961 best: 0.0739366 (104)
835: learn: 0.0055448 test: 0.0890944 best: 0.0739366 (104)
836: learn: 0.0055392 test: 0.0891076 best: 0.0739366 (104)
837: learn: 0.0055333 test: 0.0891233 best: 0.0739366 (104)    total: 14.8s remaining: 2.85s
838: learn: 0.0055255 test: 0.0891409 best: 0.0739366 (104)
839: learn: 0.0055163 test: 0.0891543 best: 0.0739366 (104)
840: learn: 0.0055100 test: 0.0891664 best: 0.0739366 (104)
841: learn: 0.0055006 test: 0.0891827 best: 0.0739366 (104)
842: learn: 0.0054965 test: 0.0891799 best: 0.0739366 (104)
843: learn: 0.0054900 test: 0.0892193 best: 0.0739366 (104)
844: learn: 0.0054856 test: 0.0892317 best: 0.0739366 (104)
845: learn: 0.0054754 test: 0.0892651 best: 0.0739366 (104)
846: learn: 0.0054695 test: 0.0892731 best: 0.0739366 (104)
847: learn: 0.0054609 test: 0.0892884 best: 0.0739366 (104)
848: learn: 0.0054511 test: 0.0893252 best: 0.0739366 (104)
849: learn: 0.0054441 test: 0.0893359 best: 0.0739366 (104)
850: learn: 0.0054314 test: 0.0893955 best: 0.0739366 (104)
851: learn: 0.0054216 test: 0.0894288 best: 0.0739366 (104)
852: learn: 0.0054163 test: 0.0894478 best: 0.0739366 (104)
853: learn: 0.0054089 test: 0.0894660 best: 0.0739366 (104)
854: learn: 0.0054051 test: 0.0894829 best: 0.0739366 (104)
855: learn: 0.0053994 test: 0.0894895 best: 0.0739366 (104)
856: learn: 0.0053938 test: 0.0895193 best: 0.0739366 (104)
857: learn: 0.0053850 test: 0.0895363 best: 0.0739366 (104)
858: learn: 0.0053756 test: 0.0895701 best: 0.0739366 (104)
859: learn: 0.0053697 test: 0.0895804 best: 0.0739366 (104)
860: learn: 0.0053662 test: 0.0895782 best: 0.0739366 (104)
861: learn: 0.0053597 test: 0.0895939 best: 0.0739366 (104)
862: learn: 0.0053560 test: 0.0896019 best: 0.0739366 (104)
863: learn: 0.0053450 test: 0.0896063 best: 0.0739366 (104)
864: learn: 0.0053376 test: 0.0896451 best: 0.0739366 (104)
865: learn: 0.0053337 test: 0.0896757 best: 0.0739366 (104)
866: learn: 0.0053293 test: 0.0896837 best: 0.0739366 (104)
867: learn: 0.0053241 test: 0.0896878 best: 0.0739366 (104)
868: learn: 0.0053154 test: 0.0896995 best: 0.0739366 (104)
869: learn: 0.0053105 test: 0.0896899 best: 0.0739366 (104)
870: learn: 0.0053024 test: 0.0896861 best: 0.0739366 (104)
871: learn: 0.0052983 test: 0.0897043 best: 0.0739366 (104)
872: learn: 0.0052904 test: 0.0897071 best: 0.0739366 (104)
873: learn: 0.0052825 test: 0.0897331 best: 0.0739366 (104)
874: learn: 0.0052781 test: 0.0897549 best: 0.0739366 (104)
875: learn: 0.0052690 test: 0.0898342 best: 0.0739366 (104)
876: learn: 0.0052619 test: 0.0898401 best: 0.0739366 (104)
877: learn: 0.0052551 test: 0.0898810 best: 0.0739366 (104)
878: learn: 0.0052478 test: 0.0898988 best: 0.0739366 (104)
879: learn: 0.0052397 test: 0.0899197 best: 0.0739366 (104)
880: learn: 0.0052310 test: 0.0899316 best: 0.0739366 (104)
881: learn: 0.0052283 test: 0.0899442 best: 0.0739366 (104)
882: learn: 0.0052195 test: 0.0899429 best: 0.0739366 (104)
883: learn: 0.0052114 test: 0.0899524 best: 0.0739366 (104)
884: learn: 0.0052005 test: 0.0900058 best: 0.0739366 (104)
```

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885: learn: 0.0051940 test: 0.0900357 best: 0.0739366 (104)
886: learn: 0.0051856 test: 0.0900614 best: 0.0739366 (104)
887: learn: 0.0051761 test: 0.0900890 best: 0.0739366 (104)
888: learn: 0.0051697 test: 0.0901173 best: 0.0739366 (104)
889: learn: 0.0051586 test: 0.0901358 best: 0.0739366 (104)
890: learn: 0.0051515 test: 0.0901476 best: 0.0739366 (104)
891: learn: 0.0051463 test: 0.0901559 best: 0.0739366 (104)
892: learn: 0.0051410 test: 0.0901438 best: 0.0739366 (104)
893: learn: 0.0051331 test: 0.0901664 best: 0.0739366 (104)
894: learn: 0.0051257 test: 0.0901852 best: 0.0739366 (104)
895: learn: 0.0051185 test: 0.0902158 best: 0.0739366 (104)
896: learn: 0.0051101 test: 0.0902255 best: 0.0739366 (104)
897: learn: 0.0051035 test: 0.0902295 best: 0.0739366 (104)
898: learn: 0.0050959 test: 0.0902657 best: 0.0739366 (104)
899: learn: 0.0050914 test: 0.0902772 best: 0.0739366 (104)
900: learn: 0.0050866 test: 0.0902733 best: 0.0739366 (104)
901: learn: 0.0050840 test: 0.0902966 best: 0.0739366 (104)
902: learn: 0.0050786 test: 0.0903366 best: 0.0739366 (104)
903: learn: 0.0050692 test: 0.0903489 best: 0.0739366 (104)
904: learn: 0.0050564 test: 0.0903727 best: 0.0739366 (104)
905: learn: 0.0050461 test: 0.0903754 best: 0.0739366 (104)
906: learn: 0.0050408 test: 0.0904013 best: 0.0739366 (104)
907: learn: 0.0050391 test: 0.0904101 best: 0.0739366 (104)
908: learn: 0.0050346 test: 0.0904200 best: 0.0739366 (104)
909: learn: 0.0050279 test: 0.0904412 best: 0.0739366 (104)
910: learn: 0.0050221 test: 0.0904856 best: 0.0739366 (104)
911: learn: 0.0050174 test: 0.0904715 best: 0.0739366 (104)
912: learn: 0.0050083 test: 0.0904668 best: 0.0739366 (104)
913: learn: 0.0050035 test: 0.0904861 best: 0.0739366 (104)
914: learn: 0.0049884 test: 0.0905412 best: 0.0739366 (104)
915: learn: 0.0049784 test: 0.0905579 best: 0.0739366 (104)
916: learn: 0.0049657 test: 0.0905633 best: 0.0739366 (104)
917: learn: 0.0049603 test: 0.0905857 best: 0.0739366 (104)
918: learn: 0.0049495 test: 0.0905839 best: 0.0739366 (104)
919: learn: 0.0049442 test: 0.0905904 best: 0.0739366 (104)
920: learn: 0.0049357 test: 0.0906194 best: 0.0739366 (104)
921: learn: 0.0049281 test: 0.0905979 best: 0.0739366 (104)
922: learn: 0.0049173 test: 0.0906148 best: 0.0739366 (104)
923: learn: 0.0049129 test: 0.0906231 best: 0.0739366 (104)
924: learn: 0.0049081 test: 0.0906385 best: 0.0739366 (104) total: 16.2s remaining: 1.31s
925: learn: 0.0049013 test: 0.0906511 best: 0.0739366 (104)
926: learn: 0.0048952 test: 0.0906766 best: 0.0739366 (104)
927: learn: 0.0048878 test: 0.0906952 best: 0.0739366 (104)
928: learn: 0.0048776 test: 0.0907227 best: 0.0739366 (104)
929: learn: 0.0048702 test: 0.0907760 best: 0.0739366 (104)
930: learn: 0.0048641 test: 0.0908055 best: 0.0739366 (104)
931: learn: 0.0048562 test: 0.0908376 best: 0.0739366 (104)
932: learn: 0.0048528 test: 0.0908454 best: 0.0739366 (104)
933: learn: 0.0048324 test: 0.0909167 best: 0.0739366 (104)
934: learn: 0.0048272 test: 0.0909323 best: 0.0739366 (104)
935: learn: 0.0048217 test: 0.0909439 best: 0.0739366 (104)
936: learn: 0.0048172 test: 0.0909627 best: 0.0739366 (104)
937: learn: 0.0048128 test: 0.0909437 best: 0.0739366 (104)
938: learn: 0.0048042 test: 0.0909935 best: 0.0739366 (104)
939: learn: 0.0048021 test: 0.0910120 best: 0.0739366 (104)
940: learn: 0.0047969 test: 0.0910280 best: 0.0739366 (104)
941: learn: 0.0047920 test: 0.0910246 best: 0.0739366 (104)
942: learn: 0.0047822 test: 0.0910431 best: 0.0739366 (104)
943: learn: 0.0047785 test: 0.0910588 best: 0.0739366 (104)
944: learn: 0.0047711 test: 0.0910888 best: 0.0739366 (104)
945: learn: 0.0047667 test: 0.0910891 best: 0.0739366 (104)
946: learn: 0.0047517 test: 0.0911232 best: 0.0739366 (104)
947: learn: 0.0047443 test: 0.0911423 best: 0.0739366 (104)
948: learn: 0.0047332 test: 0.0911620 best: 0.0739366 (104)
949: learn: 0.0047300 test: 0.0911622 best: 0.0739366 (104)
950: learn: 0.0047200 test: 0.0911755 best: 0.0739366 (104)
951: learn: 0.0047151 test: 0.0911761 best: 0.0739366 (104)
952: learn: 0.0047079 test: 0.0912241 best: 0.0739366 (104)
953: learn: 0.0047042 test: 0.0912124 best: 0.0739366 (104)
954: learn: 0.0046946 test: 0.0912240 best: 0.0739366 (104)
955: learn: 0.0046875 test: 0.0912539 best: 0.0739366 (104)
956: learn: 0.0046787 test: 0.0912657 best: 0.0739366 (104)
957: learn: 0.0046725 test: 0.0912907 best: 0.0739366 (104)
958: learn: 0.0046644 test: 0.0913133 best: 0.0739366 (104)
959: learn: 0.0046503 test: 0.0913289 best: 0.0739366 (104)
960: learn: 0.0046429 test: 0.0913333 best: 0.0739366 (104) total: 16.8s remaining: 683ms
961: learn: 0.0046336 test: 0.0913283 best: 0.0739366 (104)
```

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962: learn: 0.0046277 test: 0.0913434 best: 0.0739366 (104)
963: learn: 0.0046206 test: 0.0913848 best: 0.0739366 (104)
964: learn: 0.0046120 test: 0.0914037 best: 0.0739366 (104)
965: learn: 0.0046098 test: 0.0914135 best: 0.0739366 (104)
966: learn: 0.0046066 test: 0.0914430 best: 0.0739366 (104)
967: learn: 0.0046014 test: 0.0914565 best: 0.0739366 (104)
968: learn: 0.0045959 test: 0.0914579 best: 0.0739366 (104)
969: learn: 0.0045828 test: 0.0914801 best: 0.0739366 (104)
970: learn: 0.0045738 test: 0.0914850 best: 0.0739366 (104)
971: learn: 0.0045622 test: 0.0915400 best: 0.0739366 (104)
972: learn: 0.0045532 test: 0.0915555 best: 0.0739366 (104)
973: learn: 0.0045418 test: 0.0916062 best: 0.0739366 (104)
974: learn: 0.0045375 test: 0.0916141 best: 0.0739366 (104)
975: learn: 0.0045317 test: 0.0916128 best: 0.0739366 (104)
976: learn: 0.0045285 test: 0.0916372 best: 0.0739366 (104)
977: learn: 0.0045188 test: 0.0916707 best: 0.0739366 (104)
978: learn: 0.0045120 test: 0.0916999 best: 0.0739366 (104)
979: learn: 0.0045075 test: 0.0917085 best: 0.0739366 (104)
980: learn: 0.0044979 test: 0.0917057 best: 0.0739366 (104)
981: learn: 0.0044917 test: 0.0917281 best: 0.0739366 (104)
982: learn: 0.0044887 test: 0.0917480 best: 0.0739366 (104)
983: learn: 0.0044855 test: 0.0917586 best: 0.0739366 (104)
984: learn: 0.0044787 test: 0.0917823 best: 0.0739366 (104)
985: learn: 0.0044735 test: 0.0918154 best: 0.0739366 (104)
986: learn: 0.0044604 test: 0.0918343 best: 0.0739366 (104)
987: learn: 0.0044504 test: 0.0918542 best: 0.0739366 (104)
988: learn: 0.0044461 test: 0.0918590 best: 0.0739366 (104)
989: learn: 0.0044421 test: 0.0918666 best: 0.0739366 (104)
990: learn: 0.0044366 test: 0.0918941 best: 0.0739366 (104)
991: learn: 0.0044268 test: 0.0919378 best: 0.0739366 (104)
992: learn: 0.0044166 test: 0.0919611 best: 0.0739366 (104)
993: learn: 0.0044127 test: 0.0919615 best: 0.0739366 (104)
994: learn: 0.0044087 test: 0.0919850 best: 0.0739366 (104)
995: learn: 0.0044034 test: 0.0920020 best: 0.0739366 (104)
996: learn: 0.0044002 test: 0.0919991 best: 0.0739366 (104)
997: learn: 0.0043934 test: 0.0920124 best: 0.0739366 (104)
998: learn: 0.0043808 test: 0.0920185 best: 0.0739366 (104)
999: learn: 0.0043724 test: 0.0920253 best: 0.0739366 (104) total: 17.5s remaining: 0us
0: learn: 0.1049491 test: 0.1062783 best: 0.1062783 (0)
1: learn: 0.0828572 test: 0.0887466 best: 0.0887466 (1)
2: learn: 0.0769890 test: 0.0866978 best: 0.0866978 (2)
3: learn: 0.0730948 test: 0.0865752 best: 0.0865752 (3)
4: learn: 0.0689548 test: 0.0863082 best: 0.0863082 (4)
5: learn: 0.0659820 test: 0.0880509 best: 0.0863082 (4)
6: learn: 0.0630789 test: 0.0891952 best: 0.0863082 (4)
7: learn: 0.0605052 test: 0.0907884 best: 0.0863082 (4)
8: learn: 0.0584793 test: 0.0916947 best: 0.0863082 (4)
9: learn: 0.0551279 test: 0.0916854 best: 0.0863082 (4)
10: learn: 0.0521649 test: 0.0928119 best: 0.0863082 (4)
11: learn: 0.0497649 test: 0.0934317 best: 0.0863082 (4)
12: learn: 0.0485515 test: 0.0930221 best: 0.0863082 (4)
13: learn: 0.0475552 test: 0.0938527 best: 0.0863082 (4)
14: learn: 0.0457306 test: 0.0944432 best: 0.0863082 (4)
15: learn: 0.0441911 test: 0.0952367 best: 0.0863082 (4)
16: learn: 0.0427621 test: 0.0953607 best: 0.0863082 (4)
17: learn: 0.0405611 test: 0.0967144 best: 0.0863082 (4)
18: learn: 0.0393220 test: 0.0965158 best: 0.0863082 (4)
19: learn: 0.0380549 test: 0.0971707 best: 0.0863082 (4)
20: learn: 0.0357243 test: 0.0975837 best: 0.0863082 (4)
21: learn: 0.0344348 test: 0.0972633 best: 0.0863082 (4)
22: learn: 0.0322752 test: 0.0984169 best: 0.0863082 (4)
23: learn: 0.0311687 test: 0.0989467 best: 0.0863082 (4)
24: learn: 0.0298329 test: 0.0990925 best: 0.0863082 (4)
25: learn: 0.0283805 test: 0.0984519 best: 0.0863082 (4)
26: learn: 0.0273937 test: 0.0987986 best: 0.0863082 (4)
27: learn: 0.0258165 test: 0.0993501 best: 0.0863082 (4)
28: learn: 0.0252330 test: 0.0994846 best: 0.0863082 (4)
29: learn: 0.0247091 test: 0.1000404 best: 0.0863082 (4)
30: learn: 0.0237972 test: 0.1011312 best: 0.0863082 (4)
31: learn: 0.0223270 test: 0.1021318 best: 0.0863082 (4)
32: learn: 0.0214494 test: 0.1033549 best: 0.0863082 (4)
33: learn: 0.0205202 test: 0.1030373 best: 0.0863082 (4)
34: learn: 0.0197712 test: 0.1030693 best: 0.0863082 (4)
35: learn: 0.0187044 test: 0.1038626 best: 0.0863082 (4)
36: learn: 0.0177801 test: 0.1041206 best: 0.0863082 (4)
37: learn: 0.0171329 test: 0.1043605 best: 0.0863082 (4)
38: learn: 0.0163502 test: 0.1046773 best: 0.0863082 (4)
```

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39:	learn: 0.0159438	test: 0.1048923	best: 0.0863082 (4)
40:	learn: 0.0152806	test: 0.1056154	best: 0.0863082 (4)
41:	learn: 0.0149815	test: 0.1055180	best: 0.0863082 (4)
42:	learn: 0.0147921	test: 0.1063730	best: 0.0863082 (4)
43:	learn: 0.0142523	test: 0.1071147	best: 0.0863082 (4)
44:	learn: 0.0137631	test: 0.1074264	best: 0.0863082 (4)	total: 797ms	remaining: 16.9s
45:	learn: 0.0129264	test: 0.1087167	best: 0.0863082 (4)
46:	learn: 0.0124940	test: 0.1085298	best: 0.0863082 (4)
47:	learn: 0.0122702	test: 0.1088686	best: 0.0863082 (4)
48:	learn: 0.0119657	test: 0.1092028	best: 0.0863082 (4)
49:	learn: 0.0114804	test: 0.1097190	best: 0.0863082 (4)
50:	learn: 0.0110766	test: 0.1099033	best: 0.0863082 (4)
51:	learn: 0.0109127	test: 0.1100700	best: 0.0863082 (4)
52:	learn: 0.0105208	test: 0.1105021	best: 0.0863082 (4)
53:	learn: 0.0101492	test: 0.1102072	best: 0.0863082 (4)
54:	learn: 0.0096054	test: 0.1102953	best: 0.0863082 (4)
55:	learn: 0.0092137	test: 0.1103377	best: 0.0863082 (4)
56:	learn: 0.0089640	test: 0.1103073	best: 0.0863082 (4)
57:	learn: 0.0087983	test: 0.1108181	best: 0.0863082 (4)
58:	learn: 0.0085103	test: 0.1108892	best: 0.0863082 (4)
59:	learn: 0.0082157	test: 0.1117093	best: 0.0863082 (4)
60:	learn: 0.0080814	test: 0.1119724	best: 0.0863082 (4)
61:	learn: 0.0078198	test: 0.1119419	best: 0.0863082 (4)
62:	learn: 0.0076032	test: 0.1119721	best: 0.0863082 (4)
63:	learn: 0.0073979	test: 0.1118390	best: 0.0863082 (4)
64:	learn: 0.0072165	test: 0.1122501	best: 0.0863082 (4)
65:	learn: 0.0070276	test: 0.1126554	best: 0.0863082 (4)
66:	learn: 0.0068936	test: 0.1126698	best: 0.0863082 (4)
67:	learn: 0.0067392	test: 0.1130876	best: 0.0863082 (4)
68:	learn: 0.0066195	test: 0.1132476	best: 0.0863082 (4)
69:	learn: 0.0064026	test: 0.1134399	best: 0.0863082 (4)
70:	learn: 0.0062905	test: 0.1137070	best: 0.0863082 (4)
71:	learn: 0.0062061	test: 0.1136561	best: 0.0863082 (4)
72:	learn: 0.0060433	test: 0.1138153	best: 0.0863082 (4)
73:	learn: 0.0060033	test: 0.1138722	best: 0.0863082 (4)
74:	learn: 0.0059172	test: 0.1139580	best: 0.0863082 (4)
75:	learn: 0.0057249	test: 0.1137265	best: 0.0863082 (4)
76:	learn: 0.0055838	test: 0.1137815	best: 0.0863082 (4)
77:	learn: 0.0054403	test: 0.1145663	best: 0.0863082 (4)
78:	learn: 0.0052485	test: 0.1147217	best: 0.0863082 (4)
79:	learn: 0.0051342	test: 0.1146567	best: 0.0863082 (4)
80:	learn: 0.0050255	test: 0.1150169	best: 0.0863082 (4)
81:	learn: 0.0049543	test: 0.1151090	best: 0.0863082 (4)
82:	learn: 0.0048234	test: 0.1157450	best: 0.0863082 (4)
83:	learn: 0.0047267	test: 0.1165158	best: 0.0863082 (4)
84:	learn: 0.0045723	test: 0.1168413	best: 0.0863082 (4)
85:	learn: 0.0044588	test: 0.1167633	best: 0.0863082 (4)
86:	learn: 0.0043974	test: 0.1168946	best: 0.0863082 (4)
87:	learn: 0.0043088	test: 0.1174267	best: 0.0863082 (4)
88:	learn: 0.0042584	test: 0.1175109	best: 0.0863082 (4)
89:	learn: 0.0041604	test: 0.1175111	best: 0.0863082 (4)
90:	learn: 0.0040799	test: 0.1178794	best: 0.0863082 (4)
91:	learn: 0.0040054	test: 0.1186610	best: 0.0863082 (4)
92:	learn: 0.0039343	test: 0.1189540	best: 0.0863082 (4)
93:	learn: 0.0038790	test: 0.1190744	best: 0.0863082 (4)
94:	learn: 0.0038148	test: 0.1185168	best: 0.0863082 (4)
95:	learn: 0.0037759	test: 0.1188290	best: 0.0863082 (4)
96:	learn: 0.0036931	test: 0.1190462	best: 0.0863082 (4)
97:	learn: 0.0036525	test: 0.1191613	best: 0.0863082 (4)
98:	learn: 0.0035955	test: 0.1193848	best: 0.0863082 (4)
99:	learn: 0.0035604	test: 0.1195361	best: 0.0863082 (4)
100:	learn: 0.0034765	test: 0.1196399	best: 0.0863082 (4)
101:	learn: 0.0034330	test: 0.1199716	best: 0.0863082 (4)
102:	learn: 0.0033876	test: 0.1201190	best: 0.0863082 (4)
103:	learn: 0.0033324	test: 0.1203206	best: 0.0863082 (4)
104:	learn: 0.0032628	test: 0.1205681	best: 0.0863082 (4)
105:	learn: 0.0032146	test: 0.1207100	best: 0.0863082 (4)
106:	learn: 0.0031853	test: 0.1205278	best: 0.0863082 (4)
107:	learn: 0.0031156	test: 0.1206345	best: 0.0863082 (4)
108:	learn: 0.0030493	test: 0.1209485	best: 0.0863082 (4)
109:	learn: 0.0030088	test: 0.1210040	best: 0.0863082 (4)
110:	learn: 0.0029361	test: 0.1213737	best: 0.0863082 (4)
111:	learn: 0.0028974	test: 0.1215421	best: 0.0863082 (4)
112:	learn: 0.0028604	test: 0.1216187	best: 0.0863082 (4)
113:	learn: 0.0028343	test: 0.1219706	best: 0.0863082 (4)
114:	learn: 0.0028065	test: 0.1221639	best: 0.0863082 (4)
115:	learn: 0.0027385	test: 0.1221255	best: 0.0863082 (4)
```

```
116: learn: 0.0026822 test: 0.1224931 best: 0.0863082 (4)
117: learn: 0.0026527 test: 0.1227740 best: 0.0863082 (4)
118: learn: 0.0026132 test: 0.1228493 best: 0.0863082 (4)
119: learn: 0.0025580 test: 0.1230748 best: 0.0863082 (4)
120: learn: 0.0025285 test: 0.1232207 best: 0.0863082 (4)
121: learn: 0.0024964 test: 0.1233430 best: 0.0863082 (4)
122: learn: 0.0024814 test: 0.1233904 best: 0.0863082 (4)
123: learn: 0.0024396 test: 0.1236403 best: 0.0863082 (4)
124: learn: 0.0024270 test: 0.1237928 best: 0.0863082 (4)
125: learn: 0.0024194 test: 0.1237662 best: 0.0863082 (4)
126: learn: 0.0024069 test: 0.1238058 best: 0.0863082 (4)
127: learn: 0.0024059 test: 0.1237534 best: 0.0863082 (4)
128: learn: 0.0023948 test: 0.1237156 best: 0.0863082 (4)
129: learn: 0.0023903 test: 0.1237472 best: 0.0863082 (4)  total: 2.25s remaining: 15.1s
130: learn: 0.0023828 test: 0.1236865 best: 0.0863082 (4)
131: learn: 0.0023667 test: 0.1237643 best: 0.0863082 (4)
132: learn: 0.0023494 test: 0.1238383 best: 0.0863082 (4)
133: learn: 0.0023401 test: 0.1239970 best: 0.0863082 (4)
134: learn: 0.0023167 test: 0.1238584 best: 0.0863082 (4)
135: learn: 0.0022990 test: 0.1240697 best: 0.0863082 (4)
136: learn: 0.0022765 test: 0.1241056 best: 0.0863082 (4)
137: learn: 0.0022369 test: 0.1244437 best: 0.0863082 (4)
138: learn: 0.0022232 test: 0.1247030 best: 0.0863082 (4)
139: learn: 0.0022148 test: 0.1247326 best: 0.0863082 (4)
140: learn: 0.0022051 test: 0.1247509 best: 0.0863082 (4)
141: learn: 0.0022043 test: 0.1247009 best: 0.0863082 (4)
142: learn: 0.0021885 test: 0.1246788 best: 0.0863082 (4)
143: learn: 0.0021624 test: 0.1246886 best: 0.0863082 (4)
144: learn: 0.0021262 test: 0.1250350 best: 0.0863082 (4)
145: learn: 0.0021094 test: 0.1252561 best: 0.0863082 (4)
146: learn: 0.0020953 test: 0.1254559 best: 0.0863082 (4)
147: learn: 0.0020764 test: 0.1254093 best: 0.0863082 (4)
148: learn: 0.0020755 test: 0.1254086 best: 0.0863082 (4)
149: learn: 0.0020699 test: 0.1254869 best: 0.0863082 (4)
150: learn: 0.0020643 test: 0.1254830 best: 0.0863082 (4)
151: learn: 0.0020599 test: 0.1254003 best: 0.0863082 (4)
152: learn: 0.0020471 test: 0.1255185 best: 0.0863082 (4)
153: learn: 0.0020357 test: 0.1255155 best: 0.0863082 (4)
154: learn: 0.0020320 test: 0.1254273 best: 0.0863082 (4)
155: learn: 0.0020235 test: 0.1254404 best: 0.0863082 (4)
156: learn: 0.0020182 test: 0.1255036 best: 0.0863082 (4)
157: learn: 0.0020097 test: 0.1255083 best: 0.0863082 (4)
158: learn: 0.0020011 test: 0.1256537 best: 0.0863082 (4)
159: learn: 0.0020010 test: 0.1256568 best: 0.0863082 (4)
160: learn: 0.0019892 test: 0.1257249 best: 0.0863082 (4)
161: learn: 0.0019876 test: 0.1257368 best: 0.0863082 (4)
162: learn: 0.0019694 test: 0.1259336 best: 0.0863082 (4)
163: learn: 0.0019466 test: 0.1260926 best: 0.0863082 (4)
164: learn: 0.0019219 test: 0.1261591 best: 0.0863082 (4)
165: learn: 0.0018995 test: 0.1265683 best: 0.0863082 (4)
166: learn: 0.0018955 test: 0.1266995 best: 0.0863082 (4)
167: learn: 0.0018821 test: 0.1266714 best: 0.0863082 (4)
168: learn: 0.0018592 test: 0.1268058 best: 0.0863082 (4)
169: learn: 0.0018539 test: 0.1268098 best: 0.0863082 (4)
170: learn: 0.0018473 test: 0.1266204 best: 0.0863082 (4)
171: learn: 0.0018428 test: 0.1266049 best: 0.0863082 (4)
172: learn: 0.0018428 test: 0.1266062 best: 0.0863082 (4)
173: learn: 0.0018388 test: 0.1265884 best: 0.0863082 (4)
174: learn: 0.0018346 test: 0.1266463 best: 0.0863082 (4)
175: learn: 0.0018249 test: 0.1267175 best: 0.0863082 (4)
176: learn: 0.0018134 test: 0.1267032 best: 0.0863082 (4)
177: learn: 0.0017995 test: 0.1267194 best: 0.0863082 (4)
178: learn: 0.0017919 test: 0.1267967 best: 0.0863082 (4)
179: learn: 0.0017787 test: 0.1268569 best: 0.0863082 (4)
180: learn: 0.0017704 test: 0.1269764 best: 0.0863082 (4)
181: learn: 0.0017587 test: 0.1270398 best: 0.0863082 (4)
182: learn: 0.0017473 test: 0.1269455 best: 0.0863082 (4)
183: learn: 0.0017316 test: 0.1271895 best: 0.0863082 (4)
184: learn: 0.0017128 test: 0.1274075 best: 0.0863082 (4)
185: learn: 0.0017016 test: 0.1274711 best: 0.0863082 (4)
186: learn: 0.0016914 test: 0.1275851 best: 0.0863082 (4)
187: learn: 0.0016712 test: 0.1277041 best: 0.0863082 (4)
188: learn: 0.0016550 test: 0.1277195 best: 0.0863082 (4)
189: learn: 0.0016549 test: 0.1277194 best: 0.0863082 (4)
190: learn: 0.0016487 test: 0.1277242 best: 0.0863082 (4)
191: learn: 0.0016487 test: 0.1277245 best: 0.0863082 (4)
192: learn: 0.0016487 test: 0.1277248 best: 0.0863082 (4)
```

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193: learn: 0.0016475 test: 0.1277294 best: 0.0863082 (4)
194: learn: 0.0016377 test: 0.1278022 best: 0.0863082 (4) total: 3.23s remaining: 13.3s
195: learn: 0.0016313 test: 0.1277803 best: 0.0863082 (4)
196: learn: 0.0016313 test: 0.1277811 best: 0.0863082 (4)
197: learn: 0.0016313 test: 0.1277815 best: 0.0863082 (4)
198: learn: 0.0016313 test: 0.1277820 best: 0.0863082 (4)
199: learn: 0.0016312 test: 0.1277846 best: 0.0863082 (4)
200: learn: 0.0016312 test: 0.1277858 best: 0.0863082 (4)
201: learn: 0.0016311 test: 0.1277893 best: 0.0863082 (4)
202: learn: 0.0016311 test: 0.1277912 best: 0.0863082 (4)
203: learn: 0.0016310 test: 0.1277919 best: 0.0863082 (4)
204: learn: 0.0016310 test: 0.1277926 best: 0.0863082 (4)
205: learn: 0.0016310 test: 0.1277920 best: 0.0863082 (4)
206: learn: 0.0016310 test: 0.1277919 best: 0.0863082 (4)
207: learn: 0.0016309 test: 0.1277951 best: 0.0863082 (4)
208: learn: 0.0016309 test: 0.1277954 best: 0.0863082 (4)
209: learn: 0.0016309 test: 0.1277959 best: 0.0863082 (4)
210: learn: 0.0016308 test: 0.1277968 best: 0.0863082 (4)
211: learn: 0.0016308 test: 0.1277975 best: 0.0863082 (4)
212: learn: 0.0016308 test: 0.1277986 best: 0.0863082 (4)
213: learn: 0.0016307 test: 0.1277998 best: 0.0863082 (4)
214: learn: 0.0016307 test: 0.1277995 best: 0.0863082 (4)
215: learn: 0.0016307 test: 0.1277996 best: 0.0863082 (4)
216: learn: 0.0016306 test: 0.1278014 best: 0.0863082 (4)
217: learn: 0.0016306 test: 0.1278019 best: 0.0863082 (4)
218: learn: 0.0016306 test: 0.1278023 best: 0.0863082 (4)
219: learn: 0.0016293 test: 0.1278072 best: 0.0863082 (4)
220: learn: 0.0016292 test: 0.1278075 best: 0.0863082 (4)
221: learn: 0.0016292 test: 0.1278084 best: 0.0863082 (4)
222: learn: 0.0016291 test: 0.1278094 best: 0.0863082 (4)
223: learn: 0.0016291 test: 0.1278104 best: 0.0863082 (4)
224: learn: 0.0016291 test: 0.1278120 best: 0.0863082 (4)
225: learn: 0.0016277 test: 0.1278172 best: 0.0863082 (4)
226: learn: 0.0016212 test: 0.1279241 best: 0.0863082 (4)
227: learn: 0.0016211 test: 0.1279258 best: 0.0863082 (4)
228: learn: 0.0016211 test: 0.1279265 best: 0.0863082 (4)
229: learn: 0.0016136 test: 0.1279261 best: 0.0863082 (4)
230: learn: 0.0016136 test: 0.1279263 best: 0.0863082 (4)
231: learn: 0.0016133 test: 0.1279352 best: 0.0863082 (4)
232: learn: 0.0016133 test: 0.1279366 best: 0.0863082 (4)
233: learn: 0.0016113 test: 0.1280054 best: 0.0863082 (4)
234: learn: 0.0016060 test: 0.1279979 best: 0.0863082 (4)
235: learn: 0.0016029 test: 0.1280373 best: 0.0863082 (4)
236: learn: 0.0016015 test: 0.1280454 best: 0.0863082 (4)
237: learn: 0.0015980 test: 0.1280144 best: 0.0863082 (4)
238: learn: 0.0015975 test: 0.1280393 best: 0.0863082 (4)
239: learn: 0.0015974 test: 0.1280445 best: 0.0863082 (4)
240: learn: 0.0015974 test: 0.1280486 best: 0.0863082 (4)
241: learn: 0.0015973 test: 0.1280506 best: 0.0863082 (4)
242: learn: 0.0015973 test: 0.1280518 best: 0.0863082 (4)
243: learn: 0.0015973 test: 0.1280539 best: 0.0863082 (4)
244: learn: 0.0015973 test: 0.1280549 best: 0.0863082 (4)
245: learn: 0.0015972 test: 0.1280579 best: 0.0863082 (4)
246: learn: 0.0015948 test: 0.1280907 best: 0.0863082 (4)
247: learn: 0.0015926 test: 0.1281384 best: 0.0863082 (4)
248: learn: 0.0015909 test: 0.1281517 best: 0.0863082 (4)
249: learn: 0.0015909 test: 0.1281552 best: 0.0863082 (4)
250: learn: 0.0015908 test: 0.1281571 best: 0.0863082 (4)
251: learn: 0.0015899 test: 0.1281552 best: 0.0863082 (4)
252: learn: 0.0015890 test: 0.1281654 best: 0.0863082 (4)
253: learn: 0.0015890 test: 0.1281658 best: 0.0863082 (4)
254: learn: 0.0015889 test: 0.1281677 best: 0.0863082 (4)
255: learn: 0.0015837 test: 0.1282483 best: 0.0863082 (4)
256: learn: 0.0015837 test: 0.1282465 best: 0.0863082 (4)
257: learn: 0.0015822 test: 0.1282279 best: 0.0863082 (4)
258: learn: 0.0015821 test: 0.1282276 best: 0.0863082 (4)
259: learn: 0.0015813 test: 0.1282423 best: 0.0863082 (4)
260: learn: 0.0015803 test: 0.1282329 best: 0.0863082 (4)
261: learn: 0.0015742 test: 0.1282399 best: 0.0863082 (4)
262: learn: 0.0015706 test: 0.1283083 best: 0.0863082 (4)
263: learn: 0.0015663 test: 0.1283451 best: 0.0863082 (4)
264: learn: 0.0015663 test: 0.1283455 best: 0.0863082 (4)
265: learn: 0.0015663 test: 0.1283459 best: 0.0863082 (4)
266: learn: 0.0015623 test: 0.1283828 best: 0.0863082 (4)
267: learn: 0.0015623 test: 0.1283839 best: 0.0863082 (4)
268: learn: 0.0015623 test: 0.1283854 best: 0.0863082 (4)
269: learn: 0.0015622 test: 0.1283882 best: 0.0863082 (4)
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270: learn: 0.0015622 test: 0.1283866 best: 0.0863082 (4)
271: learn: 0.0015621 test: 0.1283872 best: 0.0863082 (4)
272: learn: 0.0015571 test: 0.1283358 best: 0.0863082 (4)
273: learn: 0.0015546 test: 0.1283690 best: 0.0863082 (4)
274: learn: 0.0015493 test: 0.1283840 best: 0.0863082 (4)
275: learn: 0.0015493 test: 0.1283848 best: 0.0863082 (4)
276: learn: 0.0015492 test: 0.1283845 best: 0.0863082 (4)
277: learn: 0.0015492 test: 0.1283847 best: 0.0863082 (4)
278: learn: 0.0015492 test: 0.1283849 best: 0.0863082 (4)
279: learn: 0.0015491 test: 0.1283851 best: 0.0863082 (4)
280: learn: 0.0015491 test: 0.1283844 best: 0.0863082 (4)
281: learn: 0.0015491 test: 0.1283840 best: 0.0863082 (4)
282: learn: 0.0015491 test: 0.1283845 best: 0.0863082 (4)
283: learn: 0.0015490 test: 0.1283845 best: 0.0863082 (4)
284: learn: 0.0015490 test: 0.1283849 best: 0.0863082 (4)
285: learn: 0.0015490 test: 0.1283847 best: 0.0863082 (4)
286: learn: 0.0015486 test: 0.1283949 best: 0.0863082 (4)
287: learn: 0.0015485 test: 0.1283975 best: 0.0863082 (4)
288: learn: 0.0015480 test: 0.1284061 best: 0.0863082 (4)
289: learn: 0.0015324 test: 0.1284000 best: 0.0863082 (4)
290: learn: 0.0015215 test: 0.1287139 best: 0.0863082 (4)
291: learn: 0.0015154 test: 0.1288129 best: 0.0863082 (4)
292: learn: 0.0015152 test: 0.1288099 best: 0.0863082 (4)
293: learn: 0.0015141 test: 0.1287702 best: 0.0863082 (4)
294: learn: 0.0015050 test: 0.1288123 best: 0.0863082 (4)
295: learn: 0.0015046 test: 0.1288282 best: 0.0863082 (4)
296: learn: 0.0015046 test: 0.1288264 best: 0.0863082 (4)
297: learn: 0.0015045 test: 0.1288248 best: 0.0863082 (4)
298: learn: 0.0015033 test: 0.1288357 best: 0.0863082 (4)
299: learn: 0.0015023 test: 0.1288742 best: 0.0863082 (4)
300: learn: 0.0015022 test: 0.1288742 best: 0.0863082 (4)
301: learn: 0.0015002 test: 0.1288800 best: 0.0863082 (4)
302: learn: 0.0015001 test: 0.1288866 best: 0.0863082 (4)
303: learn: 0.0015001 test: 0.1288874 best: 0.0863082 (4)
304: learn: 0.0015000 test: 0.1288894 best: 0.0863082 (4) total: 4.88s remaining: 11.1s
305: learn: 0.0014999 test: 0.1288900 best: 0.0863082 (4)
306: learn: 0.0014971 test: 0.1289641 best: 0.0863082 (4)
307: learn: 0.0014971 test: 0.1289632 best: 0.0863082 (4)
308: learn: 0.0014970 test: 0.1289626 best: 0.0863082 (4)
309: learn: 0.0014970 test: 0.1289631 best: 0.0863082 (4)
310: learn: 0.0014969 test: 0.1289620 best: 0.0863082 (4)
311: learn: 0.0014968 test: 0.1289598 best: 0.0863082 (4)
312: learn: 0.0014963 test: 0.1289390 best: 0.0863082 (4)
313: learn: 0.0014963 test: 0.1289391 best: 0.0863082 (4)
314: learn: 0.0014963 test: 0.1289389 best: 0.0863082 (4)
315: learn: 0.0014957 test: 0.1289481 best: 0.0863082 (4)
316: learn: 0.0014950 test: 0.1289428 best: 0.0863082 (4)
317: learn: 0.0014949 test: 0.1289428 best: 0.0863082 (4)
318: learn: 0.0014949 test: 0.1289430 best: 0.0863082 (4)
319: learn: 0.0014949 test: 0.1289420 best: 0.0863082 (4)
320: learn: 0.0014939 test: 0.1289442 best: 0.0863082 (4)
321: learn: 0.0014893 test: 0.1289724 best: 0.0863082 (4)
322: learn: 0.0014844 test: 0.1289697 best: 0.0863082 (4)
323: learn: 0.0014842 test: 0.1289683 best: 0.0863082 (4)
324: learn: 0.0014824 test: 0.1290283 best: 0.0863082 (4)
325: learn: 0.0014819 test: 0.1290062 best: 0.0863082 (4)
326: learn: 0.0014819 test: 0.1290035 best: 0.0863082 (4)
327: learn: 0.0014818 test: 0.1290008 best: 0.0863082 (4)
328: learn: 0.0014816 test: 0.1289966 best: 0.0863082 (4)
329: learn: 0.0014764 test: 0.1290051 best: 0.0863082 (4)
330: learn: 0.0014723 test: 0.1292093 best: 0.0863082 (4)
331: learn: 0.0014721 test: 0.1292123 best: 0.0863082 (4)
332: learn: 0.0014721 test: 0.1292125 best: 0.0863082 (4)
333: learn: 0.0014720 test: 0.1292160 best: 0.0863082 (4)
334: learn: 0.0014716 test: 0.1292145 best: 0.0863082 (4)
335: learn: 0.0014715 test: 0.1292117 best: 0.0863082 (4)
336: learn: 0.0014715 test: 0.1292117 best: 0.0863082 (4)
337: learn: 0.0014715 test: 0.1292116 best: 0.0863082 (4)
338: learn: 0.0014715 test: 0.1292112 best: 0.0863082 (4)
339: learn: 0.0014715 test: 0.1292111 best: 0.0863082 (4)
340: learn: 0.0014713 test: 0.1292103 best: 0.0863082 (4)
341: learn: 0.0014713 test: 0.1292094 best: 0.0863082 (4)
342: learn: 0.0014713 test: 0.1292081 best: 0.0863082 (4)
343: learn: 0.0014712 test: 0.1292121 best: 0.0863082 (4)
344: learn: 0.0014712 test: 0.1292123 best: 0.0863082 (4)
345: learn: 0.0014668 test: 0.1292654 best: 0.0863082 (4)
346: learn: 0.0014667 test: 0.1292631 best: 0.0863082 (4)
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347: learn: 0.0014550 test: 0.1294807 best: 0.0863082 (4)
348: learn: 0.0014548 test: 0.1294685 best: 0.0863082 (4)
349: learn: 0.0014498 test: 0.1295128 best: 0.0863082 (4)
350: learn: 0.0014443 test: 0.1294958 best: 0.0863082 (4)
351: learn: 0.0014385 test: 0.1294708 best: 0.0863082 (4)
352: learn: 0.0014385 test: 0.1294697 best: 0.0863082 (4)
353: learn: 0.0014240 test: 0.1295065 best: 0.0863082 (4)
354: learn: 0.0014240 test: 0.1295048 best: 0.0863082 (4)
355: learn: 0.0014197 test: 0.1296148 best: 0.0863082 (4)
356: learn: 0.0014197 test: 0.1296159 best: 0.0863082 (4)
357: learn: 0.0014194 test: 0.1296173 best: 0.0863082 (4)
358: learn: 0.0014193 test: 0.1296221 best: 0.0863082 (4)
359: learn: 0.0014193 test: 0.1296213 best: 0.0863082 (4)
360: learn: 0.0014193 test: 0.1296216 best: 0.0863082 (4)
361: learn: 0.0014192 test: 0.1296222 best: 0.0863082 (4)
362: learn: 0.0014158 test: 0.1295619 best: 0.0863082 (4)
363: learn: 0.0014136 test: 0.1297045 best: 0.0863082 (4)
364: learn: 0.0014043 test: 0.1297027 best: 0.0863082 (4)
365: learn: 0.0014043 test: 0.1297032 best: 0.0863082 (4)
366: learn: 0.0014043 test: 0.1297037 best: 0.0863082 (4)
367: learn: 0.0014042 test: 0.1297042 best: 0.0863082 (4)
368: learn: 0.0014042 test: 0.1297028 best: 0.0863082 (4)
369: learn: 0.0014042 test: 0.1297044 best: 0.0863082 (4)
370: learn: 0.0014042 test: 0.1297044 best: 0.0863082 (4)
371: learn: 0.0014042 test: 0.1297046 best: 0.0863082 (4)
372: learn: 0.0014042 test: 0.1297049 best: 0.0863082 (4)
373: learn: 0.0014037 test: 0.1297196 best: 0.0863082 (4)
374: learn: 0.0013939 test: 0.1298255 best: 0.0863082 (4)
375: learn: 0.0013939 test: 0.1298263 best: 0.0863082 (4)
376: learn: 0.0013851 test: 0.1297723 best: 0.0863082 (4)
377: learn: 0.0013850 test: 0.1297728 best: 0.0863082 (4)
378: learn: 0.0013850 test: 0.1297738 best: 0.0863082 (4)
379: learn: 0.0013850 test: 0.1297743 best: 0.0863082 (4)
380: learn: 0.0013850 test: 0.1297740 best: 0.0863082 (4)
381: learn: 0.0013849 test: 0.1297768 best: 0.0863082 (4)
382: learn: 0.0013849 test: 0.1297764 best: 0.0863082 (4)
383: learn: 0.0013849 test: 0.1297765 best: 0.0863082 (4)
384: learn: 0.0013848 test: 0.1297793 best: 0.0863082 (4)
385: learn: 0.0013848 test: 0.1297811 best: 0.0863082 (4)
386: learn: 0.0013848 test: 0.1297808 best: 0.0863082 (4)
387: learn: 0.0013848 test: 0.1297798 best: 0.0863082 (4)
388: learn: 0.0013818 test: 0.1297911 best: 0.0863082 (4)
389: learn: 0.0013788 test: 0.1297004 best: 0.0863082 (4)
390: learn: 0.0013786 test: 0.1297115 best: 0.0863082 (4)
391: learn: 0.0013785 test: 0.1297132 best: 0.0863082 (4)
392: learn: 0.0013785 test: 0.1297129 best: 0.0863082 (4)
393: learn: 0.0013785 test: 0.1297132 best: 0.0863082 (4)
394: learn: 0.0013785 test: 0.1297147 best: 0.0863082 (4)
395: learn: 0.0013757 test: 0.1297771 best: 0.0863082 (4)
396: learn: 0.0013756 test: 0.1297827 best: 0.0863082 (4)
397: learn: 0.0013756 test: 0.1297837 best: 0.0863082 (4)
398: learn: 0.0013717 test: 0.1299484 best: 0.0863082 (4)
399: learn: 0.0013717 test: 0.1299509 best: 0.0863082 (4)
400: learn: 0.0013717 test: 0.1299527 best: 0.0863082 (4)
401: learn: 0.0013698 test: 0.1299575 best: 0.0863082 (4)
402: learn: 0.0013697 test: 0.1299560 best: 0.0863082 (4)
403: learn: 0.0013697 test: 0.1299566 best: 0.0863082 (4)
404: learn: 0.0013697 test: 0.1299578 best: 0.0863082 (4)
405: learn: 0.0013697 test: 0.1299574 best: 0.0863082 (4)
406: learn: 0.0013696 test: 0.1299563 best: 0.0863082 (4)
407: learn: 0.0013684 test: 0.1299559 best: 0.0863082 (4)
408: learn: 0.0013684 test: 0.1299563 best: 0.0863082 (4)
409: learn: 0.0013659 test: 0.1299500 best: 0.0863082 (4)
410: learn: 0.0013658 test: 0.1299521 best: 0.0863082 (4)
411: learn: 0.0013658 test: 0.1299523 best: 0.0863082 (4)
412: learn: 0.0013658 test: 0.1299528 best: 0.0863082 (4)
413: learn: 0.0013656 test: 0.1299552 best: 0.0863082 (4)
414: learn: 0.0013656 test: 0.1299537 best: 0.0863082 (4) total: 6.35s remaining: 8.95s
415: learn: 0.0013655 test: 0.1299561 best: 0.0863082 (4)
416: learn: 0.0013655 test: 0.1299620 best: 0.0863082 (4)
417: learn: 0.0013654 test: 0.1299628 best: 0.0863082 (4)
418: learn: 0.0013628 test: 0.1301234 best: 0.0863082 (4)
419: learn: 0.0013628 test: 0.1301184 best: 0.0863082 (4)
420: learn: 0.0013628 test: 0.1301192 best: 0.0863082 (4)
421: learn: 0.0013628 test: 0.1301182 best: 0.0863082 (4)
422: learn: 0.0013628 test: 0.1301180 best: 0.0863082 (4)
423: learn: 0.0013627 test: 0.1301193 best: 0.0863082 (4)
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424: learn: 0.0013627 test: 0.1301212 best: 0.0863082 (4)
425: learn: 0.0013627 test: 0.1301214 best: 0.0863082 (4)
426: learn: 0.0013627 test: 0.1301154 best: 0.0863082 (4)
427: learn: 0.0013626 test: 0.1301169 best: 0.0863082 (4)
428: learn: 0.0013626 test: 0.1301161 best: 0.0863082 (4)
429: learn: 0.0013626 test: 0.1301171 best: 0.0863082 (4)
430: learn: 0.0013626 test: 0.1301163 best: 0.0863082 (4)
431: learn: 0.0013626 test: 0.1301161 best: 0.0863082 (4)
432: learn: 0.0013625 test: 0.1301102 best: 0.0863082 (4)
433: learn: 0.0013625 test: 0.1301131 best: 0.0863082 (4)
434: learn: 0.0013625 test: 0.1301137 best: 0.0863082 (4)
435: learn: 0.0013625 test: 0.1301133 best: 0.0863082 (4)
436: learn: 0.0013624 test: 0.1301116 best: 0.0863082 (4)
437: learn: 0.0013623 test: 0.1301135 best: 0.0863082 (4)
438: learn: 0.0013623 test: 0.1301129 best: 0.0863082 (4)
439: learn: 0.0013623 test: 0.1301116 best: 0.0863082 (4)
440: learn: 0.0013622 test: 0.1301123 best: 0.0863082 (4)
441: learn: 0.0013622 test: 0.1301108 best: 0.0863082 (4)
442: learn: 0.0013622 test: 0.1301105 best: 0.0863082 (4)
443: learn: 0.0013610 test: 0.1301113 best: 0.0863082 (4)
444: learn: 0.0013610 test: 0.1301115 best: 0.0863082 (4)
445: learn: 0.0013610 test: 0.1301062 best: 0.0863082 (4)
446: learn: 0.0013571 test: 0.1300633 best: 0.0863082 (4)
447: learn: 0.0013570 test: 0.1300603 best: 0.0863082 (4)
448: learn: 0.0013570 test: 0.1300583 best: 0.0863082 (4)
449: learn: 0.0013570 test: 0.1300575 best: 0.0863082 (4)
450: learn: 0.0013570 test: 0.1300532 best: 0.0863082 (4)
451: learn: 0.0013569 test: 0.1300521 best: 0.0863082 (4)
452: learn: 0.0013569 test: 0.1300504 best: 0.0863082 (4)
453: learn: 0.0013568 test: 0.1300508 best: 0.0863082 (4)
454: learn: 0.0013568 test: 0.1300488 best: 0.0863082 (4)
455: learn: 0.0013568 test: 0.1300477 best: 0.0863082 (4)
456: learn: 0.0013568 test: 0.1300466 best: 0.0863082 (4)
457: learn: 0.0013568 test: 0.1300484 best: 0.0863082 (4)
458: learn: 0.0013567 test: 0.1300513 best: 0.0863082 (4)
459: learn: 0.0013567 test: 0.1300491 best: 0.0863082 (4)
460: learn: 0.0013567 test: 0.1300449 best: 0.0863082 (4)
461: learn: 0.0013567 test: 0.1300450 best: 0.0863082 (4)
462: learn: 0.0013567 test: 0.1300448 best: 0.0863082 (4)
463: learn: 0.0013565 test: 0.1300334 best: 0.0863082 (4)
464: learn: 0.0013524 test: 0.1301207 best: 0.0863082 (4)
465: learn: 0.0013522 test: 0.1301131 best: 0.0863082 (4)
466: learn: 0.0013522 test: 0.1301121 best: 0.0863082 (4)
467: learn: 0.0013522 test: 0.1301113 best: 0.0863082 (4)
468: learn: 0.0013522 test: 0.1301094 best: 0.0863082 (4)
469: learn: 0.0013521 test: 0.1301064 best: 0.0863082 (4)
470: learn: 0.0013490 test: 0.1302099 best: 0.0863082 (4)
471: learn: 0.0013486 test: 0.1302011 best: 0.0863082 (4)
472: learn: 0.0013485 test: 0.1302079 best: 0.0863082 (4)
473: learn: 0.0013475 test: 0.1302098 best: 0.0863082 (4)
474: learn: 0.0013474 test: 0.1302107 best: 0.0863082 (4)
475: learn: 0.0013474 test: 0.1302101 best: 0.0863082 (4)
476: learn: 0.0013474 test: 0.1302103 best: 0.0863082 (4)
477: learn: 0.0013474 test: 0.1302055 best: 0.0863082 (4)
478: learn: 0.0013474 test: 0.1302044 best: 0.0863082 (4)
479: learn: 0.0013473 test: 0.1302019 best: 0.0863082 (4)
480: learn: 0.0013473 test: 0.1302029 best: 0.0863082 (4)
481: learn: 0.0013472 test: 0.1302011 best: 0.0863082 (4)
482: learn: 0.0013471 test: 0.1302077 best: 0.0863082 (4)
483: learn: 0.0013439 test: 0.1302099 best: 0.0863082 (4)
484: learn: 0.0013439 test: 0.1302090 best: 0.0863082 (4)
485: learn: 0.0013394 test: 0.1302779 best: 0.0863082 (4)
486: learn: 0.0013392 test: 0.1302798 best: 0.0863082 (4)
487: learn: 0.0013373 test: 0.1304093 best: 0.0863082 (4)
488: learn: 0.0013372 test: 0.1304118 best: 0.0863082 (4)
489: learn: 0.0013372 test: 0.1304114 best: 0.0863082 (4)
490: learn: 0.0013321 test: 0.1305083 best: 0.0863082 (4)
491: learn: 0.0013321 test: 0.1305069 best: 0.0863082 (4)
492: learn: 0.0013320 test: 0.1305068 best: 0.0863082 (4)
493: learn: 0.0013304 test: 0.1304505 best: 0.0863082 (4)
494: learn: 0.0013303 test: 0.1304508 best: 0.0863082 (4)
495: learn: 0.0013303 test: 0.1304511 best: 0.0863082 (4)
496: learn: 0.0013225 test: 0.1305353 best: 0.0863082 (4)
497: learn: 0.0013145 test: 0.1304787 best: 0.0863082 (4)
498: learn: 0.0013145 test: 0.1304724 best: 0.0863082 (4)
499: learn: 0.0013145 test: 0.1304722 best: 0.0863082 (4)
500: learn: 0.0013083 test: 0.1305429 best: 0.0863082 (4)
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501: learn: 0.0013023 test: 0.1305953 best: 0.0863082 (4)
502: learn: 0.0013022 test: 0.1306031 best: 0.0863082 (4)
503: learn: 0.0013022 test: 0.1306051 best: 0.0863082 (4)
504: learn: 0.0013020 test: 0.1306027 best: 0.0863082 (4)
505: learn: 0.0013020 test: 0.1306032 best: 0.0863082 (4)
506: learn: 0.0013007 test: 0.1306426 best: 0.0863082 (4)
507: learn: 0.0013007 test: 0.1306416 best: 0.0863082 (4)
508: learn: 0.0012990 test: 0.1306819 best: 0.0863082 (4)
509: learn: 0.0012933 test: 0.1307549 best: 0.0863082 (4)
510: learn: 0.0012854 test: 0.1306924 best: 0.0863082 (4)
511: learn: 0.0012854 test: 0.1306927 best: 0.0863082 (4)
512: learn: 0.0012799 test: 0.1308133 best: 0.0863082 (4)
513: learn: 0.0012696 test: 0.1310235 best: 0.0863082 (4)
514: learn: 0.0012657 test: 0.1311315 best: 0.0863082 (4)
515: learn: 0.0012630 test: 0.1311820 best: 0.0863082 (4)
516: learn: 0.0012612 test: 0.1311836 best: 0.0863082 (4)
517: learn: 0.0012599 test: 0.1311538 best: 0.0863082 (4)
518: learn: 0.0012581 test: 0.1311760 best: 0.0863082 (4)
519: learn: 0.0012578 test: 0.1311650 best: 0.0863082 (4)
520: learn: 0.0012572 test: 0.1312062 best: 0.0863082 (4)
521: learn: 0.0012572 test: 0.1312069 best: 0.0863082 (4)
522: learn: 0.0012571 test: 0.1312041 best: 0.0863082 (4)
523: learn: 0.0012560 test: 0.1312241 best: 0.0863082 (4)
524: learn: 0.0012558 test: 0.1312243 best: 0.0863082 (4) total: 7.8s remaining: 7.06s
525: learn: 0.0012558 test: 0.1312264 best: 0.0863082 (4)
526: learn: 0.0012558 test: 0.1312264 best: 0.0863082 (4)
527: learn: 0.0012558 test: 0.1312271 best: 0.0863082 (4)
528: learn: 0.0012549 test: 0.1312355 best: 0.0863082 (4)
529: learn: 0.0012481 test: 0.1311887 best: 0.0863082 (4)
530: learn: 0.0012445 test: 0.1312250 best: 0.0863082 (4)
531: learn: 0.0012444 test: 0.1312250 best: 0.0863082 (4)
532: learn: 0.0012440 test: 0.1312382 best: 0.0863082 (4)
533: learn: 0.0012440 test: 0.1312383 best: 0.0863082 (4)
534: learn: 0.0012440 test: 0.1312391 best: 0.0863082 (4)
535: learn: 0.0012440 test: 0.1312387 best: 0.0863082 (4)
536: learn: 0.0012439 test: 0.1312282 best: 0.0863082 (4)
537: learn: 0.0012432 test: 0.1311864 best: 0.0863082 (4)
538: learn: 0.0012381 test: 0.1312426 best: 0.0863082 (4)
539: learn: 0.0012319 test: 0.1314135 best: 0.0863082 (4)
540: learn: 0.0012319 test: 0.1314142 best: 0.0863082 (4)
541: learn: 0.0012319 test: 0.1314163 best: 0.0863082 (4)
542: learn: 0.0012318 test: 0.1314178 best: 0.0863082 (4)
543: learn: 0.0012318 test: 0.1314223 best: 0.0863082 (4)
544: learn: 0.0012318 test: 0.1314217 best: 0.0863082 (4)
545: learn: 0.0012317 test: 0.1314222 best: 0.0863082 (4)
546: learn: 0.0012317 test: 0.1314255 best: 0.0863082 (4)
547: learn: 0.0012317 test: 0.1314287 best: 0.0863082 (4)
548: learn: 0.0012317 test: 0.1314290 best: 0.0863082 (4)
549: learn: 0.0012305 test: 0.1314402 best: 0.0863082 (4)
550: learn: 0.0012304 test: 0.1314486 best: 0.0863082 (4) total: 8.24s remaining: 6.71s
551: learn: 0.0012302 test: 0.1314504 best: 0.0863082 (4)
552: learn: 0.0012301 test: 0.1314563 best: 0.0863082 (4)
553: learn: 0.0012300 test: 0.1314571 best: 0.0863082 (4)
554: learn: 0.0012298 test: 0.1314499 best: 0.0863082 (4)
555: learn: 0.0012298 test: 0.1314507 best: 0.0863082 (4)
556: learn: 0.0012297 test: 0.1314546 best: 0.0863082 (4)
557: learn: 0.0012297 test: 0.1314561 best: 0.0863082 (4)
558: learn: 0.0012297 test: 0.1314666 best: 0.0863082 (4)
559: learn: 0.0012296 test: 0.1314691 best: 0.0863082 (4)
560: learn: 0.0012277 test: 0.1315257 best: 0.0863082 (4)
561: learn: 0.0012277 test: 0.1315253 best: 0.0863082 (4)
562: learn: 0.0012277 test: 0.1315213 best: 0.0863082 (4)
563: learn: 0.0012276 test: 0.1315213 best: 0.0863082 (4)
564: learn: 0.0012275 test: 0.1315238 best: 0.0863082 (4)
565: learn: 0.0012255 test: 0.1315561 best: 0.0863082 (4)
566: learn: 0.0012202 test: 0.1315700 best: 0.0863082 (4)
567: learn: 0.0012202 test: 0.1315712 best: 0.0863082 (4)
568: learn: 0.0012153 test: 0.1316358 best: 0.0863082 (4)
569: learn: 0.0012153 test: 0.1316355 best: 0.0863082 (4)
570: learn: 0.0012153 test: 0.1316360 best: 0.0863082 (4)
571: learn: 0.0012123 test: 0.1316747 best: 0.0863082 (4)
572: learn: 0.0012121 test: 0.1316818 best: 0.0863082 (4)
573: learn: 0.0012083 test: 0.1316695 best: 0.0863082 (4)
574: learn: 0.0012083 test: 0.1316696 best: 0.0863082 (4)
575: learn: 0.0012082 test: 0.1316681 best: 0.0863082 (4)
576: learn: 0.0012082 test: 0.1316679 best: 0.0863082 (4) total: 8.65s remaining: 6.34s
577: learn: 0.0012062 test: 0.1317068 best: 0.0863082 (4)
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5//: learn: 0.0012001 test: 0.131/005 best: 0.0005002 (4)
578: learn: 0.0012055 test: 0.1316575 best: 0.0863082 (4)
579: learn: 0.0012003 test: 0.1316917 best: 0.0863082 (4)
580: learn: 0.0012002 test: 0.1316922 best: 0.0863082 (4)
581: learn: 0.0012002 test: 0.1316927 best: 0.0863082 (4)
582: learn: 0.0012002 test: 0.1316956 best: 0.0863082 (4)
583: learn: 0.0012002 test: 0.1316960 best: 0.0863082 (4)
584: learn: 0.0012001 test: 0.1316983 best: 0.0863082 (4)
585: learn: 0.0012001 test: 0.1317003 best: 0.0863082 (4)
586: learn: 0.0012001 test: 0.1317017 best: 0.0863082 (4)
587: learn: 0.0012001 test: 0.1317020 best: 0.0863082 (4)
588: learn: 0.0012001 test: 0.1317026 best: 0.0863082 (4)
589: learn: 0.0012000 test: 0.1317047 best: 0.0863082 (4)
590: learn: 0.0012000 test: 0.1317057 best: 0.0863082 (4)
591: learn: 0.0011982 test: 0.1317800 best: 0.0863082 (4)
592: learn: 0.0011982 test: 0.1317812 best: 0.0863082 (4)
593: learn: 0.0011982 test: 0.1317799 best: 0.0863082 (4)
594: learn: 0.0011981 test: 0.1317826 best: 0.0863082 (4)
595: learn: 0.0011981 test: 0.1317826 best: 0.0863082 (4)
596: learn: 0.0011981 test: 0.1317835 best: 0.0863082 (4)
597: learn: 0.0011946 test: 0.1317973 best: 0.0863082 (4)
598: learn: 0.0011946 test: 0.1317991 best: 0.0863082 (4)
599: learn: 0.0011906 test: 0.1317903 best: 0.0863082 (4)
600: learn: 0.0011906 test: 0.1317928 best: 0.0863082 (4)
601: learn: 0.0011897 test: 0.1318246 best: 0.0863082 (4)
602: learn: 0.0011868 test: 0.1319129 best: 0.0863082 (4)
603: learn: 0.0011868 test: 0.1319104 best: 0.0863082 (4)
604: learn: 0.0011857 test: 0.1319635 best: 0.0863082 (4)
605: learn: 0.0011857 test: 0.1319604 best: 0.0863082 (4)
606: learn: 0.0011856 test: 0.1319606 best: 0.0863082 (4)
607: learn: 0.0011856 test: 0.1319617 best: 0.0863082 (4)
608: learn: 0.0011856 test: 0.1319600 best: 0.0863082 (4)
609: learn: 0.0011856 test: 0.1319621 best: 0.0863082 (4)
610: learn: 0.0011855 test: 0.1319632 best: 0.0863082 (4)
611: learn: 0.0011854 test: 0.1319651 best: 0.0863082 (4)
612: learn: 0.0011854 test: 0.1319653 best: 0.0863082 (4)
613: learn: 0.0011854 test: 0.1319656 best: 0.0863082 (4) total: 9.25s remaining: 5.81s
614: learn: 0.0011854 test: 0.1319655 best: 0.0863082 (4)
615: learn: 0.0011854 test: 0.1319695 best: 0.0863082 (4)
616: learn: 0.0011854 test: 0.1319690 best: 0.0863082 (4)
617: learn: 0.0011828 test: 0.1319083 best: 0.0863082 (4)
618: learn: 0.0011772 test: 0.1318500 best: 0.0863082 (4)
619: learn: 0.0011668 test: 0.1321710 best: 0.0863082 (4)
620: learn: 0.0011667 test: 0.1321708 best: 0.0863082 (4)
621: learn: 0.0011666 test: 0.1321758 best: 0.0863082 (4)
622: learn: 0.0011666 test: 0.1321783 best: 0.0863082 (4)
623: learn: 0.0011666 test: 0.1321789 best: 0.0863082 (4)
624: learn: 0.0011665 test: 0.1321804 best: 0.0863082 (4)
625: learn: 0.0011665 test: 0.1321810 best: 0.0863082 (4)
626: learn: 0.0011664 test: 0.1321832 best: 0.0863082 (4)
627: learn: 0.0011610 test: 0.1323012 best: 0.0863082 (4)
628: learn: 0.0011609 test: 0.1322993 best: 0.0863082 (4)
629: learn: 0.0011607 test: 0.1322729 best: 0.0863082 (4)
630: learn: 0.0011606 test: 0.1322735 best: 0.0863082 (4)
631: learn: 0.0011606 test: 0.1322731 best: 0.0863082 (4)
632: learn: 0.0011603 test: 0.1322583 best: 0.0863082 (4)
633: learn: 0.0011603 test: 0.1322582 best: 0.0863082 (4)
634: learn: 0.0011602 test: 0.1322664 best: 0.0863082 (4)
635: learn: 0.0011600 test: 0.1322713 best: 0.0863082 (4)
636: learn: 0.0011600 test: 0.1322687 best: 0.0863082 (4)
637: learn: 0.0011599 test: 0.1322673 best: 0.0863082 (4)
638: learn: 0.0011598 test: 0.1322683 best: 0.0863082 (4)
639: learn: 0.0011598 test: 0.1322699 best: 0.0863082 (4)
640: learn: 0.0011598 test: 0.1322703 best: 0.0863082 (4)
641: learn: 0.0011598 test: 0.1322711 best: 0.0863082 (4)
642: learn: 0.0011597 test: 0.1322707 best: 0.0863082 (4)
643: learn: 0.0011597 test: 0.1322731 best: 0.0863082 (4)
644: learn: 0.0011596 test: 0.1322730 best: 0.0863082 (4)
645: learn: 0.0011596 test: 0.1322733 best: 0.0863082 (4)
646: learn: 0.0011596 test: 0.1322748 best: 0.0863082 (4)
647: learn: 0.0011576 test: 0.1323276 best: 0.0863082 (4)
648: learn: 0.0011576 test: 0.1323284 best: 0.0863082 (4) total: 9.91s remaining: 5.36s
649: learn: 0.0011576 test: 0.1323298 best: 0.0863082 (4)
650: learn: 0.0011576 test: 0.1323311 best: 0.0863082 (4)
651: learn: 0.0011575 test: 0.1323361 best: 0.0863082 (4)
652: learn: 0.0011575 test: 0.1323380 best: 0.0863082 (4)
653: learn: 0.0011574 test: 0.1323440 best: 0.0863082 (4)
654: learn: 0.0011574 test: 0.1323414 best: 0.0863082 (4)
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651: learn: 0.0011571 test: 0.1323417 best: 0.0863082 (4)
655: learn: 0.0011574 test: 0.1323431 best: 0.0863082 (4)
656: learn: 0.0011526 test: 0.1323004 best: 0.0863082 (4)
657: learn: 0.0011521 test: 0.1323253 best: 0.0863082 (4)
658: learn: 0.0011520 test: 0.1323285 best: 0.0863082 (4)
659: learn: 0.0011509 test: 0.1323023 best: 0.0863082 (4)
660: learn: 0.0011504 test: 0.1323117 best: 0.0863082 (4)
661: learn: 0.0011504 test: 0.1323133 best: 0.0863082 (4)
662: learn: 0.0011504 test: 0.1323140 best: 0.0863082 (4)
663: learn: 0.0011504 test: 0.1323144 best: 0.0863082 (4)
664: learn: 0.0011504 test: 0.1323147 best: 0.0863082 (4)
665: learn: 0.0011503 test: 0.1323163 best: 0.0863082 (4)
666: learn: 0.0011503 test: 0.1323177 best: 0.0863082 (4)
667: learn: 0.0011503 test: 0.1323178 best: 0.0863082 (4)
668: learn: 0.0011503 test: 0.1323184 best: 0.0863082 (4)
669: learn: 0.0011503 test: 0.1323198 best: 0.0863082 (4)
670: learn: 0.0011501 test: 0.1323289 best: 0.0863082 (4)
671: learn: 0.0011500 test: 0.1323315 best: 0.0863082 (4)
672: learn: 0.0011500 test: 0.1323345 best: 0.0863082 (4)
673: learn: 0.0011500 test: 0.1323352 best: 0.0863082 (4)
674: learn: 0.0011500 test: 0.1323360 best: 0.0863082 (4)
675: learn: 0.0011500 test: 0.1323352 best: 0.0863082 (4) total: 10.4s remaining: 4.98s
676: learn: 0.0011484 test: 0.1323728 best: 0.0863082 (4)
677: learn: 0.0011470 test: 0.1324162 best: 0.0863082 (4)
678: learn: 0.0011445 test: 0.1324448 best: 0.0863082 (4)
679: learn: 0.0011445 test: 0.1324505 best: 0.0863082 (4)
680: learn: 0.0011445 test: 0.1324518 best: 0.0863082 (4)
681: learn: 0.0011444 test: 0.1324563 best: 0.0863082 (4)
682: learn: 0.0011443 test: 0.1324610 best: 0.0863082 (4)
683: learn: 0.0011416 test: 0.1325546 best: 0.0863082 (4)
684: learn: 0.0011416 test: 0.1325558 best: 0.0863082 (4)
685: learn: 0.0011415 test: 0.1325585 best: 0.0863082 (4)
686: learn: 0.0011415 test: 0.1325604 best: 0.0863082 (4)
687: learn: 0.0011414 test: 0.1325649 best: 0.0863082 (4)
688: learn: 0.0011364 test: 0.1326025 best: 0.0863082 (4)
689: learn: 0.0011363 test: 0.1326037 best: 0.0863082 (4)
690: learn: 0.0011350 test: 0.1326663 best: 0.0863082 (4)
691: learn: 0.0011350 test: 0.1326665 best: 0.0863082 (4)
692: learn: 0.0011350 test: 0.1326674 best: 0.0863082 (4)
693: learn: 0.0011349 test: 0.1326758 best: 0.0863082 (4)
694: learn: 0.0011348 test: 0.1326794 best: 0.0863082 (4)
695: learn: 0.0011348 test: 0.1326834 best: 0.0863082 (4)
696: learn: 0.0011345 test: 0.1326929 best: 0.0863082 (4)
697: learn: 0.0011283 test: 0.1327527 best: 0.0863082 (4)
698: learn: 0.0011229 test: 0.1329373 best: 0.0863082 (4)
699: learn: 0.0011229 test: 0.1329367 best: 0.0863082 (4)
700: learn: 0.0011229 test: 0.1329340 best: 0.0863082 (4)
701: learn: 0.0011227 test: 0.1329275 best: 0.0863082 (4)
702: learn: 0.0011198 test: 0.1330010 best: 0.0863082 (4)
703: learn: 0.0011141 test: 0.1330027 best: 0.0863082 (4)
704: learn: 0.0011130 test: 0.1330417 best: 0.0863082 (4)
705: learn: 0.0011130 test: 0.1330410 best: 0.0863082 (4)
706: learn: 0.0011129 test: 0.1330428 best: 0.0863082 (4)
707: learn: 0.0011129 test: 0.1330423 best: 0.0863082 (4) total: 10.9s remaining: 4.52s
708: learn: 0.0011128 test: 0.1330402 best: 0.0863082 (4)
709: learn: 0.0011128 test: 0.1330342 best: 0.0863082 (4)
710: learn: 0.0011128 test: 0.1330334 best: 0.0863082 (4)
711: learn: 0.0011127 test: 0.1330336 best: 0.0863082 (4)
712: learn: 0.0011127 test: 0.1330325 best: 0.0863082 (4)
713: learn: 0.0011127 test: 0.1330321 best: 0.0863082 (4)
714: learn: 0.0011109 test: 0.1330430 best: 0.0863082 (4)
715: learn: 0.0011069 test: 0.1330439 best: 0.0863082 (4)
716: learn: 0.0011068 test: 0.1330442 best: 0.0863082 (4)
717: learn: 0.0011007 test: 0.1331715 best: 0.0863082 (4)
718: learn: 0.0011007 test: 0.1331711 best: 0.0863082 (4)
719: learn: 0.0011007 test: 0.1331709 best: 0.0863082 (4)
720: learn: 0.0011007 test: 0.1331677 best: 0.0863082 (4)
721: learn: 0.0010959 test: 0.1332863 best: 0.0863082 (4)
722: learn: 0.0010958 test: 0.1332837 best: 0.0863082 (4)
723: learn: 0.0010958 test: 0.1332838 best: 0.0863082 (4)
724: learn: 0.0010957 test: 0.1332836 best: 0.0863082 (4)
725: learn: 0.0010957 test: 0.1332848 best: 0.0863082 (4)
726: learn: 0.0010957 test: 0.1332825 best: 0.0863082 (4)
727: learn: 0.0010957 test: 0.1332773 best: 0.0863082 (4)
728: learn: 0.0010957 test: 0.1332775 best: 0.0863082 (4)
729: learn: 0.0010956 test: 0.1332774 best: 0.0863082 (4)
730: learn: 0.0010905 test: 0.1334547 best: 0.0863082 (4)
731: learn: 0.0010872 test: 0.1335697 best: 0.0863082 (4)
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731: learn: 0.0010872 test: 0.1335097 best: 0.0863082 (4)
732: learn: 0.0010871 test: 0.1335657 best: 0.0863082 (4)
733: learn: 0.0010853 test: 0.1335431 best: 0.0863082 (4)
734: learn: 0.0010853 test: 0.1335430 best: 0.0863082 (4)
735: learn: 0.0010815 test: 0.1335205 best: 0.0863082 (4)
736: learn: 0.0010814 test: 0.1335140 best: 0.0863082 (4)
737: learn: 0.0010813 test: 0.1335221 best: 0.0863082 (4)
738: learn: 0.0010813 test: 0.1335284 best: 0.0863082 (4)
739: learn: 0.0010812 test: 0.1335287 best: 0.0863082 (4)
740: learn: 0.0010812 test: 0.1335321 best: 0.0863082 (4)
741: learn: 0.0010812 test: 0.1335331 best: 0.0863082 (4)
742: learn: 0.0010810 test: 0.1335432 best: 0.0863082 (4)
743: learn: 0.0010805 test: 0.1335633 best: 0.0863082 (4)
744: learn: 0.0010805 test: 0.1335635 best: 0.0863082 (4)
745: learn: 0.0010804 test: 0.1335691 best: 0.0863082 (4)
746: learn: 0.0010796 test: 0.1336187 best: 0.0863082 (4)
747: learn: 0.0010796 test: 0.1336167 best: 0.0863082 (4)
748: learn: 0.0010794 test: 0.1336060 best: 0.0863082 (4)
749: learn: 0.0010794 test: 0.1336061 best: 0.0863082 (4)
750: learn: 0.0010793 test: 0.1336084 best: 0.0863082 (4)
751: learn: 0.0010774 test: 0.1335536 best: 0.0863082 (4)
752: learn: 0.0010773 test: 0.1335488 best: 0.0863082 (4)
753: learn: 0.0010771 test: 0.1335621 best: 0.0863082 (4)
754: learn: 0.0010771 test: 0.1335641 best: 0.0863082 (4)
755: learn: 0.0010770 test: 0.1335698 best: 0.0863082 (4)
756: learn: 0.0010770 test: 0.1335712 best: 0.0863082 (4)
757: learn: 0.0010770 test: 0.1335696 best: 0.0863082 (4)
758: learn: 0.0010770 test: 0.1335695 best: 0.0863082 (4)
759: learn: 0.0010769 test: 0.1335707 best: 0.0863082 (4)
760: learn: 0.0010769 test: 0.1335698 best: 0.0863082 (4)
761: learn: 0.0010767 test: 0.1335859 best: 0.0863082 (4)
762: learn: 0.0010766 test: 0.1335865 best: 0.0863082 (4)
763: learn: 0.0010766 test: 0.1335861 best: 0.0863082 (4)
764: learn: 0.0010755 test: 0.1336071 best: 0.0863082 (4)
765: learn: 0.0010755 test: 0.1336071 best: 0.0863082 (4) total: 11.9s remaining: 3.64s
766: learn: 0.0010752 test: 0.1336054 best: 0.0863082 (4)
767: learn: 0.0010750 test: 0.1336103 best: 0.0863082 (4)
768: learn: 0.0010750 test: 0.1336060 best: 0.0863082 (4)
769: learn: 0.0010750 test: 0.1336056 best: 0.0863082 (4)
770: learn: 0.0010749 test: 0.1336061 best: 0.0863082 (4)
771: learn: 0.0010742 test: 0.1336112 best: 0.0863082 (4)
772: learn: 0.0010742 test: 0.1336106 best: 0.0863082 (4)
773: learn: 0.0010741 test: 0.1336128 best: 0.0863082 (4)
774: learn: 0.0010741 test: 0.1336120 best: 0.0863082 (4)
775: learn: 0.0010740 test: 0.1336142 best: 0.0863082 (4)
776: learn: 0.0010740 test: 0.1336146 best: 0.0863082 (4)
777: learn: 0.0010740 test: 0.1336150 best: 0.0863082 (4)
778: learn: 0.0010740 test: 0.1336209 best: 0.0863082 (4)
779: learn: 0.0010740 test: 0.1336206 best: 0.0863082 (4)
780: learn: 0.0010739 test: 0.1336213 best: 0.0863082 (4)
781: learn: 0.0010739 test: 0.1336214 best: 0.0863082 (4)
782: learn: 0.0010739 test: 0.1336211 best: 0.0863082 (4)
783: learn: 0.0010739 test: 0.1336207 best: 0.0863082 (4)
784: learn: 0.0010728 test: 0.1336122 best: 0.0863082 (4)
785: learn: 0.0010644 test: 0.1335798 best: 0.0863082 (4)
786: learn: 0.0010643 test: 0.1335834 best: 0.0863082 (4)
787: learn: 0.0010643 test: 0.1335829 best: 0.0863082 (4)
788: learn: 0.0010642 test: 0.1335860 best: 0.0863082 (4)
789: learn: 0.0010642 test: 0.1335860 best: 0.0863082 (4)
790: learn: 0.0010642 test: 0.1335889 best: 0.0863082 (4)
791: learn: 0.0010642 test: 0.1335878 best: 0.0863082 (4)
792: learn: 0.0010639 test: 0.1335988 best: 0.0863082 (4)
793: learn: 0.0010639 test: 0.1335973 best: 0.0863082 (4)
794: learn: 0.0010639 test: 0.1335984 best: 0.0863082 (4)
795: learn: 0.0010638 test: 0.1335929 best: 0.0863082 (4)
796: learn: 0.0010638 test: 0.1335896 best: 0.0863082 (4)
797: learn: 0.0010638 test: 0.1335887 best: 0.0863082 (4)
798: learn: 0.0010637 test: 0.1335891 best: 0.0863082 (4)
799: learn: 0.0010637 test: 0.1335907 best: 0.0863082 (4)
800: learn: 0.0010637 test: 0.1335894 best: 0.0863082 (4)
801: learn: 0.0010636 test: 0.1335908 best: 0.0863082 (4)
802: learn: 0.0010602 test: 0.1336622 best: 0.0863082 (4)
803: learn: 0.0010532 test: 0.1336502 best: 0.0863082 (4)
804: learn: 0.0010532 test: 0.1336551 best: 0.0863082 (4)
805: learn: 0.0010518 test: 0.1336856 best: 0.0863082 (4)
806: learn: 0.0010476 test: 0.1337036 best: 0.0863082 (4)
807: learn: 0.0010476 test: 0.1337000 best: 0.0863082 (4)
808: learn: 0.0010476 test: 0.1336980 best: 0.0863082 (4)
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808: learn: 0.0010476 test: 0.1336980 best: 0.0863082 (4)
809: learn: 0.0010472 test: 0.1336700 best: 0.0863082 (4)
810: learn: 0.0010471 test: 0.1336700 best: 0.0863082 (4)
811: learn: 0.0010471 test: 0.1336717 best: 0.0863082 (4)
812: learn: 0.0010468 test: 0.1336642 best: 0.0863082 (4)
813: learn: 0.0010431 test: 0.1337032 best: 0.0863082 (4)
814: learn: 0.0010421 test: 0.1337537 best: 0.0863082 (4)
815: learn: 0.0010408 test: 0.1338166 best: 0.0863082 (4)
816: learn: 0.0010390 test: 0.1338161 best: 0.0863082 (4)
817: learn: 0.0010381 test: 0.1337947 best: 0.0863082 (4)
818: learn: 0.0010353 test: 0.1338127 best: 0.0863082 (4)
819: learn: 0.0010352 test: 0.1338137 best: 0.0863082 (4)
820: learn: 0.0010328 test: 0.1337988 best: 0.0863082 (4)
821: learn: 0.0010327 test: 0.1337986 best: 0.0863082 (4)
822: learn: 0.0010327 test: 0.1337984 best: 0.0863082 (4)
823: learn: 0.0010327 test: 0.1338022 best: 0.0863082 (4)
824: learn: 0.0010306 test: 0.1338880 best: 0.0863082 (4)
825: learn: 0.0010305 test: 0.1338862 best: 0.0863082 (4)
826: learn: 0.0010305 test: 0.1338862 best: 0.0863082 (4)
827: learn: 0.0010305 test: 0.1338827 best: 0.0863082 (4)
828: learn: 0.0010304 test: 0.1338791 best: 0.0863082 (4)
829: learn: 0.0010293 test: 0.1338480 best: 0.0863082 (4)
830: learn: 0.0010293 test: 0.1338490 best: 0.0863082 (4)
831: learn: 0.0010292 test: 0.1338502 best: 0.0863082 (4)
832: learn: 0.0010277 test: 0.1338517 best: 0.0863082 (4)
833: learn: 0.0010277 test: 0.1338502 best: 0.0863082 (4) total: 12.9s remaining: 2.58s
834: learn: 0.0010277 test: 0.1338511 best: 0.0863082 (4)
835: learn: 0.0010277 test: 0.1338502 best: 0.0863082 (4)
836: learn: 0.0010261 test: 0.1339375 best: 0.0863082 (4)
837: learn: 0.0010247 test: 0.1339181 best: 0.0863082 (4)
838: learn: 0.0010247 test: 0.1339102 best: 0.0863082 (4)
839: learn: 0.0010246 test: 0.1339022 best: 0.0863082 (4)
840: learn: 0.0010246 test: 0.1339022 best: 0.0863082 (4)
841: learn: 0.0010246 test: 0.1338997 best: 0.0863082 (4)
842: learn: 0.0010246 test: 0.1338996 best: 0.0863082 (4)
843: learn: 0.0010245 test: 0.1338975 best: 0.0863082 (4)
844: learn: 0.0010245 test: 0.1338978 best: 0.0863082 (4) total: 13.2s remaining: 2.42s
845: learn: 0.0010245 test: 0.1339029 best: 0.0863082 (4)
846: learn: 0.0010244 test: 0.1339034 best: 0.0863082 (4)
847: learn: 0.0010244 test: 0.1339037 best: 0.0863082 (4)
848: learn: 0.0010244 test: 0.1339037 best: 0.0863082 (4)
849: learn: 0.0010244 test: 0.1339034 best: 0.0863082 (4)
850: learn: 0.0010244 test: 0.1339038 best: 0.0863082 (4)
851: learn: 0.0010212 test: 0.1340753 best: 0.0863082 (4)
852: learn: 0.0010201 test: 0.1340309 best: 0.0863082 (4)
853: learn: 0.0010174 test: 0.1340853 best: 0.0863082 (4)
854: learn: 0.0010173 test: 0.1340869 best: 0.0863082 (4)
855: learn: 0.0010173 test: 0.1340865 best: 0.0863082 (4)
856: learn: 0.0010173 test: 0.1340868 best: 0.0863082 (4)
857: learn: 0.0010163 test: 0.1341190 best: 0.0863082 (4)
858: learn: 0.0010162 test: 0.1341189 best: 0.0863082 (4)
859: learn: 0.0010162 test: 0.1341245 best: 0.0863082 (4)
860: learn: 0.0010162 test: 0.1341263 best: 0.0863082 (4)
861: learn: 0.0010162 test: 0.1341311 best: 0.0863082 (4)
862: learn: 0.0010162 test: 0.1341332 best: 0.0863082 (4)
863: learn: 0.0010161 test: 0.1341368 best: 0.0863082 (4)
864: learn: 0.0010160 test: 0.1341694 best: 0.0863082 (4)
865: learn: 0.0010159 test: 0.1341716 best: 0.0863082 (4)
866: learn: 0.0010158 test: 0.1341639 best: 0.0863082 (4)
867: learn: 0.0010158 test: 0.1341647 best: 0.0863082 (4)
868: learn: 0.0010158 test: 0.1341658 best: 0.0863082 (4)
869: learn: 0.0010158 test: 0.1341708 best: 0.0863082 (4)
870: learn: 0.0010157 test: 0.1341737 best: 0.0863082 (4)
871: learn: 0.0010157 test: 0.1341751 best: 0.0863082 (4)
872: learn: 0.0010157 test: 0.1341762 best: 0.0863082 (4)
873: learn: 0.0010157 test: 0.1341817 best: 0.0863082 (4)
874: learn: 0.0010151 test: 0.1341545 best: 0.0863082 (4)
875: learn: 0.0010106 test: 0.1342587 best: 0.0863082 (4)
876: learn: 0.0010080 test: 0.1341865 best: 0.0863082 (4)
877: learn: 0.0010080 test: 0.1341868 best: 0.0863082 (4) total: 13.7s remaining: 1.91s
878: learn: 0.0010080 test: 0.1341885 best: 0.0863082 (4)
879: learn: 0.0010079 test: 0.1341942 best: 0.0863082 (4)
880: learn: 0.0010078 test: 0.1341959 best: 0.0863082 (4)
881: learn: 0.0010075 test: 0.1341432 best: 0.0863082 (4)
882: learn: 0.0010074 test: 0.1341498 best: 0.0863082 (4)
883: learn: 0.0010074 test: 0.1341523 best: 0.0863082 (4)
884: learn: 0.0010074 test: 0.1341530 best: 0.0863082 (4)
885: learn: 0.0010073 test: 0.1341576 best: 0.0863082 (4)
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885: learn: 0.0010073 test: 0.1341576 best: 0.0863082 (4)
886: learn: 0.0010073 test: 0.1341625 best: 0.0863082 (4)
887: learn: 0.0010072 test: 0.1341617 best: 0.0863082 (4)
888: learn: 0.0010072 test: 0.1341634 best: 0.0863082 (4)
889: learn: 0.0010043 test: 0.1341948 best: 0.0863082 (4)
890: learn: 0.0010043 test: 0.1341934 best: 0.0863082 (4)
891: learn: 0.0010043 test: 0.1341931 best: 0.0863082 (4)
892: learn: 0.0010042 test: 0.1341944 best: 0.0863082 (4)
893: learn: 0.0010042 test: 0.1341960 best: 0.0863082 (4)
894: learn: 0.0010042 test: 0.1341976 best: 0.0863082 (4)
895: learn: 0.0010041 test: 0.1341991 best: 0.0863082 (4)
896: learn: 0.0010041 test: 0.1342004 best: 0.0863082 (4)
897: learn: 0.0010041 test: 0.1342016 best: 0.0863082 (4)
898: learn: 0.0010041 test: 0.1342024 best: 0.0863082 (4)
899: learn: 0.0010040 test: 0.1342025 best: 0.0863082 (4)
900: learn: 0.0010040 test: 0.1342028 best: 0.0863082 (4)
901: learn: 0.0010040 test: 0.1342019 best: 0.0863082 (4)
902: learn: 0.0010040 test: 0.1342051 best: 0.0863082 (4)
903: learn: 0.0010040 test: 0.1342046 best: 0.0863082 (4)
904: learn: 0.0010039 test: 0.1342031 best: 0.0863082 (4)
905: learn: 0.0010019 test: 0.1342542 best: 0.0863082 (4)
906: learn: 0.0010018 test: 0.1342552 best: 0.0863082 (4)
907: learn: 0.0010018 test: 0.1342558 best: 0.0863082 (4)
908: learn: 0.0010018 test: 0.1342564 best: 0.0863082 (4)
909: learn: 0.0010015 test: 0.1342749 best: 0.0863082 (4)
910: learn: 0.0010015 test: 0.1342736 best: 0.0863082 (4)
911: learn: 0.0010014 test: 0.1342793 best: 0.0863082 (4)
912: learn: 0.0010014 test: 0.1342792 best: 0.0863082 (4)
913: learn: 0.0010014 test: 0.1342792 best: 0.0863082 (4)
914: learn: 0.0010014 test: 0.1342794 best: 0.0863082 (4)
915: learn: 0.0010013 test: 0.1342779 best: 0.0863082 (4)
916: learn: 0.0009972 test: 0.1343558 best: 0.0863082 (4)
917: learn: 0.0009972 test: 0.1343557 best: 0.0863082 (4)
918: learn: 0.0009971 test: 0.1343560 best: 0.0863082 (4)
919: learn: 0.0009937 test: 0.1342775 best: 0.0863082 (4)
920: learn: 0.0009937 test: 0.1342776 best: 0.0863082 (4)
921: learn: 0.0009937 test: 0.1342782 best: 0.0863082 (4)
922: learn: 0.0009936 test: 0.1342797 best: 0.0863082 (4)
923: learn: 0.0009936 test: 0.1342806 best: 0.0863082 (4)
924: learn: 0.0009936 test: 0.1342800 best: 0.0863082 (4)
925: learn: 0.0009935 test: 0.1342770 best: 0.0863082 (4)
926: learn: 0.0009935 test: 0.1342766 best: 0.0863082 (4)
927: learn: 0.0009915 test: 0.1343087 best: 0.0863082 (4)
928: learn: 0.0009914 test: 0.1343091 best: 0.0863082 (4)
929: learn: 0.0009914 test: 0.1343094 best: 0.0863082 (4)
930: learn: 0.0009914 test: 0.1343089 best: 0.0863082 (4)
931: learn: 0.0009914 test: 0.1343091 best: 0.0863082 (4)
932: learn: 0.0009913 test: 0.1343088 best: 0.0863082 (4)
933: learn: 0.0009913 test: 0.1343094 best: 0.0863082 (4)
934: learn: 0.0009892 test: 0.1343554 best: 0.0863082 (4)
935: learn: 0.0009891 test: 0.1343564 best: 0.0863082 (4)
936: learn: 0.0009891 test: 0.1343563 best: 0.0863082 (4)
937: learn: 0.0009891 test: 0.1343566 best: 0.0863082 (4)
938: learn: 0.0009891 test: 0.1343567 best: 0.0863082 (4)
939: learn: 0.0009890 test: 0.1343556 best: 0.0863082 (4)
940: learn: 0.0009890 test: 0.1343547 best: 0.0863082 (4)
941: learn: 0.0009890 test: 0.1343555 best: 0.0863082 (4)
942: learn: 0.0009890 test: 0.1343542 best: 0.0863082 (4)
943: learn: 0.0009889 test: 0.1343531 best: 0.0863082 (4)
944: learn: 0.0009889 test: 0.1343521 best: 0.0863082 (4)
945: learn: 0.0009888 test: 0.1343512 best: 0.0863082 (4)
946: learn: 0.0009888 test: 0.1343508 best: 0.0863082 (4)
947: learn: 0.0009887 test: 0.1343439 best: 0.0863082 (4)
948: learn: 0.0009887 test: 0.1343473 best: 0.0863082 (4)
949: learn: 0.0009886 test: 0.1343467 best: 0.0863082 (4)
950: learn: 0.0009886 test: 0.1343440 best: 0.0863082 (4)
951: learn: 0.0009884 test: 0.1343518 best: 0.0863082 (4)
952: learn: 0.0009884 test: 0.1343519 best: 0.0863082 (4)
953: learn: 0.0009883 test: 0.1343553 best: 0.0863082 (4)
954: learn: 0.0009883 test: 0.1343564 best: 0.0863082 (4)
955: learn: 0.0009883 test: 0.1343574 best: 0.0863082 (4)
956: learn: 0.0009880 test: 0.1343493 best: 0.0863082 (4)
957: learn: 0.0009876 test: 0.1343753 best: 0.0863082 (4)
958: learn: 0.0009876 test: 0.1343765 best: 0.0863082 (4)
959: learn: 0.0009833 test: 0.1344898 best: 0.0863082 (4)
960: learn: 0.0009805 test: 0.1346438 best: 0.0863082 (4)
961: learn: 0.0009765 test: 0.1347022 best: 0.0863082 (4)
962: learn: 0.0009740 test: 0.1346473 best: 0.0863082 (4)
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962: learn: 0.0009740 test: 0.1346473 best: 0.0863082 (4)
963: learn: 0.0009740 test: 0.1346453 best: 0.0863082 (4)
964: learn: 0.0009739 test: 0.1346411 best: 0.0863082 (4)
965: learn: 0.0009739 test: 0.1346437 best: 0.0863082 (4)
966: learn: 0.0009739 test: 0.1346432 best: 0.0863082 (4)
967: learn: 0.0009738 test: 0.1346444 best: 0.0863082 (4)
968: learn: 0.0009734 test: 0.1346449 best: 0.0863082 (4)
969: learn: 0.0009733 test: 0.1346444 best: 0.0863082 (4)
970: learn: 0.0009733 test: 0.1346431 best: 0.0863082 (4)
971: learn: 0.0009733 test: 0.1346433 best: 0.0863082 (4)
972: learn: 0.0009732 test: 0.1346425 best: 0.0863082 (4)
973: learn: 0.0009732 test: 0.1346426 best: 0.0863082 (4)
974: learn: 0.0009731 test: 0.1346496 best: 0.0863082 (4)
975: learn: 0.0009675 test: 0.1346566 best: 0.0863082 (4)
976: learn: 0.0009674 test: 0.1346545 best: 0.0863082 (4)
977: learn: 0.0009674 test: 0.1346607 best: 0.0863082 (4)
978: learn: 0.0009674 test: 0.1346622 best: 0.0863082 (4)
979: learn: 0.0009674 test: 0.1346641 best: 0.0863082 (4)
980: learn: 0.0009673 test: 0.1346667 best: 0.0863082 (4)
981: learn: 0.0009673 test: 0.1346676 best: 0.0863082 (4)
982: learn: 0.0009673 test: 0.1346683 best: 0.0863082 (4)
983: learn: 0.0009673 test: 0.1346686 best: 0.0863082 (4)
984: learn: 0.0009673 test: 0.1346687 best: 0.0863082 (4)
985: learn: 0.0009672 test: 0.1346696 best: 0.0863082 (4)
986: learn: 0.0009672 test: 0.1346700 best: 0.0863082 (4)
987: learn: 0.0009672 test: 0.1346712 best: 0.0863082 (4) total: 15.6s remaining: 189ms
988: learn: 0.0009672 test: 0.1346708 best: 0.0863082 (4)
989: learn: 0.0009672 test: 0.1346712 best: 0.0863082 (4)
990: learn: 0.0009672 test: 0.1346717 best: 0.0863082 (4)
991: learn: 0.0009671 test: 0.1346719 best: 0.0863082 (4)
992: learn: 0.0009671 test: 0.1346710 best: 0.0863082 (4)
993: learn: 0.0009671 test: 0.1346677 best: 0.0863082 (4)
994: learn: 0.0009671 test: 0.1346684 best: 0.0863082 (4)
995: learn: 0.0009671 test: 0.1346688 best: 0.0863082 (4)
996: learn: 0.0009670 test: 0.1346697 best: 0.0863082 (4)
997: learn: 0.0009670 test: 0.1346690 best: 0.0863082 (4)
998: learn: 0.0009670 test: 0.1346694 best: 0.0863082 (4)
999: learn: 0.0009670 test: 0.1346706 best: 0.0863082 (4) total: 15.8s remaining: 0us
```
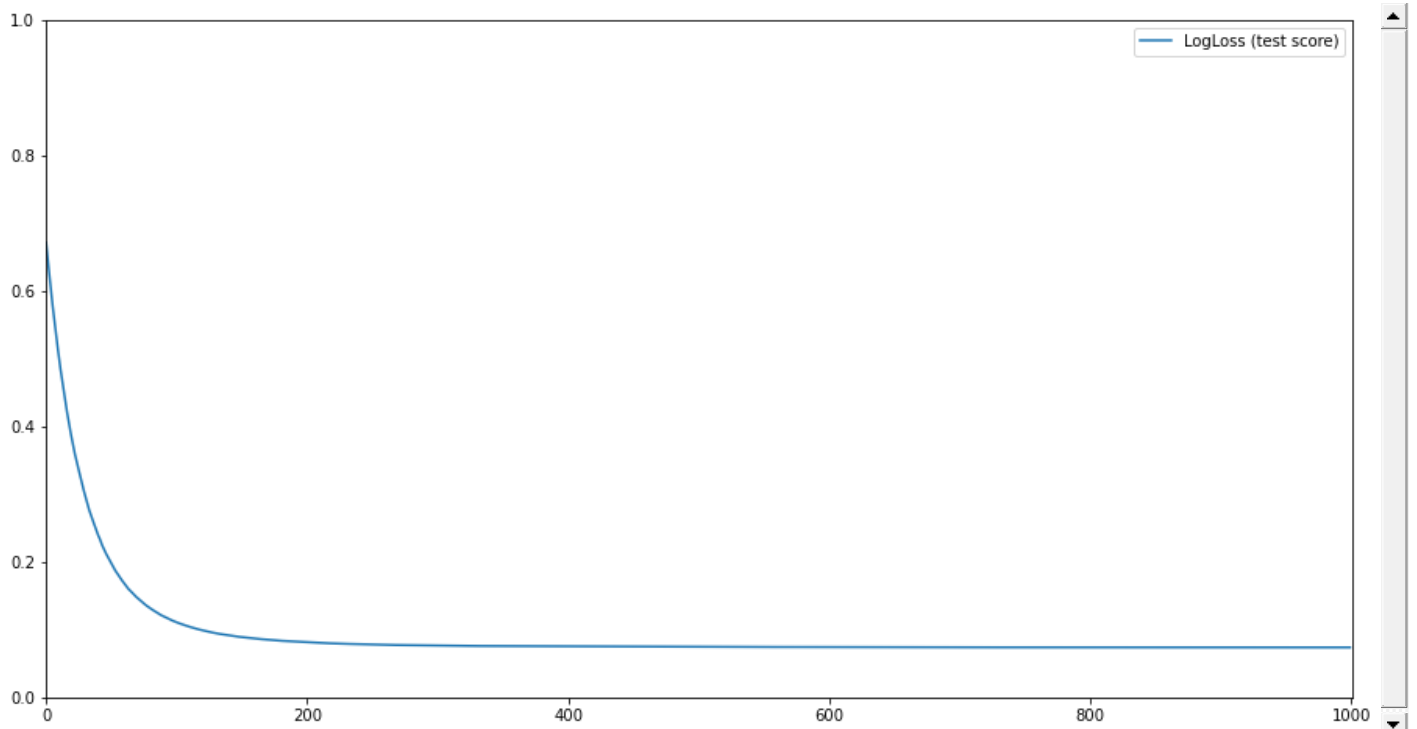
In [18]:

```python
fig, ax = plt.subplots(1, 1, figsize=(15, 8))


ax.plot(results["cv_results"]["iterations"], results["cv_results"]["test-Logloss-mean"], label = "LogLoss (te:
#ax.plot(param_range, grid.cv_results_["mean_train_{}".format(strategy)], label = strategy + " (train score)",

plt.xlim(0, 1001)
plt.ylim(0, 1)
#plt.xticks(param_range)
plt.legend(loc="best")

plt.show()
```

```
cb_cl_new.fit(lab5_cl_x_train, lab5_cl_y_train)

0: learn: 0.6712898 total: 19ms remaining: 19s
1: learn: 0.6507472 total: 27ms remaining: 13.5s
2: learn: 0.6327697 total: 35.5ms remaining: 11.8s
3: learn: 0.6139090 total: 43.6ms remaining: 10.9s
4: learn: 0.5958391 total: 52ms remaining: 10.4s
5: learn: 0.5774807 total: 60.3ms remaining: 9.98s
6: learn: 0.5613219 total: 68.8ms remaining: 9.76s
7: learn: 0.5444411 total: 77.1ms remaining: 9.55s
8: learn: 0.5283770 total: 85.4ms remaining: 9.4s
9: learn: 0.5133785 total: 93.3ms remaining: 9.24s
10: learn: 0.4981135 total: 102ms remaining: 9.14s
11: learn: 0.4841129 total: 110ms remaining: 9.03s
12: learn: 0.4715438 total: 118ms remaining: 8.97s
13: learn: 0.4586289 total: 126ms remaining: 8.88s
14: learn: 0.4446671 total: 134ms remaining: 8.83s
15: learn: 0.4319357 total: 142ms remaining: 8.76s
16: learn: 0.4204632 total: 151ms remaining: 8.72s
17: learn: 0.4090257 total: 160ms remaining: 8.72s
18: learn: 0.3978389 total: 169ms remaining: 8.73s
19: learn: 0.3877970 total: 177ms remaining: 8.69s
20: learn: 0.3777734 total: 186ms remaining: 8.66s
21: learn: 0.3687161 total: 194ms remaining: 8.62s
22: learn: 0.3597279 total: 203ms remaining: 8.6s
23: learn: 0.3513799 total: 211ms remaining: 8.58s
24: learn: 0.3434404 total: 219ms remaining: 8.56s
25: learn: 0.3356149 total: 228ms remaining: 8.53s
26: learn: 0.3274615 total: 236ms remaining: 8.52s
27: learn: 0.3199642 total: 245ms remaining: 8.5s
28: learn: 0.3115360 total: 253ms remaining: 8.48s
29: learn: 0.3039849 total: 262ms remaining: 8.46s
30: learn: 0.2968109 total: 270ms remaining: 8.44s
31: learn: 0.2898906 total: 279ms remaining: 8.43s
32: learn: 0.2832903 total: 287ms remaining: 8.41s
33: learn: 0.2760080 total: 297ms remaining: 8.44s
34: learn: 0.2701628 total: 307ms remaining: 8.45s
35: learn: 0.2644322 total: 316ms remaining: 8.46s
36: learn: 0.2584432 total: 325ms remaining: 8.46s
37: learn: 0.2535584 total: 333ms remaining: 8.42s
38: learn: 0.2484948 total: 342ms remaining: 8.42s
39: learn: 0.2430673 total: 350ms remaining: 8.4s
40: learn: 0.2372334 total: 359ms remaining: 8.39s
41: learn: 0.2328770 total: 367ms remaining: 8.36s
42: learn: 0.2281776 total: 375ms remaining: 8.35s
43: learn: 0.2230849 total: 384ms remaining: 8.34s
44: learn: 0.2189499 total: 392ms remaining: 8.32s
45: learn: 0.2149666 total: 400ms remaining: 8.3s
46: learn: 0.2103675 total: 408ms remaining: 8.28s
```

```
47: learn: 0.2068345 total: 416ms remaining: 8.26s
48: learn: 0.2026753 total: 424ms remaining: 8.24s
49: learn: 0.1992869 total: 432ms remaining: 8.21s
50: learn: 0.1955842 total: 440ms remaining: 8.19s
51: learn: 0.1923229 total: 449ms remaining: 8.18s
52: learn: 0.1891166 total: 457ms remaining: 8.16s
53: learn: 0.1854057 total: 465ms remaining: 8.14s
54: learn: 0.1824849 total: 473ms remaining: 8.12s
55: learn: 0.1795285 total: 481ms remaining: 8.1s
56: learn: 0.1764286 total: 488ms remaining: 8.08s
57: learn: 0.1737518 total: 497ms remaining: 8.06s
58: learn: 0.1711015 total: 505ms remaining: 8.05s
59: learn: 0.1683782 total: 512ms remaining: 8.03s
60: learn: 0.1657822 total: 520ms remaining: 8.01s
61: learn: 0.1633887 total: 528ms remaining: 7.99s
62: learn: 0.1606299 total: 536ms remaining: 7.97s
63: learn: 0.1583710 total: 544ms remaining: 7.95s
64: learn: 0.1565527 total: 551ms remaining: 7.93s
65: learn: 0.1545597 total: 560ms remaining: 7.92s
66: learn: 0.1526441 total: 568ms remaining: 7.91s
67: learn: 0.1504953 total: 576ms remaining: 7.89s
68: learn: 0.1483326 total: 584ms remaining: 7.88s
69: learn: 0.1464909 total: 592ms remaining: 7.86s
70: learn: 0.1448858 total: 600ms remaining: 7.85s
71: learn: 0.1430956 total: 608ms remaining: 7.83s
72: learn: 0.1411326 total: 616ms remaining: 7.82s
73: learn: 0.1394057 total: 624ms remaining: 7.8s
74: learn: 0.1376854 total: 631ms remaining: 7.79s
75: learn: 0.1358540 total: 639ms remaining: 7.77s
76: learn: 0.1344023 total: 647ms remaining: 7.76s
77: learn: 0.1329606 total: 655ms remaining: 7.74s
78: learn: 0.1314398 total: 663ms remaining: 7.73s
79: learn: 0.1301336 total: 671ms remaining: 7.72s
80: learn: 0.1287166 total: 679ms remaining: 7.7s
81: learn: 0.1273620 total: 687ms remaining: 7.69s
82: learn: 0.1260456 total: 695ms remaining: 7.68s
83: learn: 0.1249694 total: 703ms remaining: 7.67s
84: learn: 0.1237167 total: 712ms remaining: 7.66s
85: learn: 0.1223083 total: 720ms remaining: 7.65s
86: learn: 0.1213097 total: 729ms remaining: 7.64s
87: learn: 0.1200575 total: 737ms remaining: 7.64s
88: learn: 0.1188064 total: 746ms remaining: 7.63s
89: learn: 0.1178434 total: 754ms remaining: 7.62s
90: learn: 0.1167577 total: 762ms remaining: 7.61s
91: learn: 0.1157588 total: 770ms remaining: 7.6s
92: learn: 0.1145942 total: 778ms remaining: 7.59s
93: learn: 0.1137291 total: 786ms remaining: 7.58s
94: learn: 0.1127769 total: 794ms remaining: 7.56s
95: learn: 0.1118855 total: 802ms remaining: 7.55s
96: learn: 0.1109908 total: 810ms remaining: 7.54s
97: learn: 0.1101039 total: 818ms remaining: 7.53s
98: learn: 0.1092449 total: 826ms remaining: 7.51s
99: learn: 0.1084153 total: 839ms remaining: 7.55s
100: learn: 0.1076962 total: 847ms remaining: 7.54s
101: learn: 0.1070040 total: 855ms remaining: 7.53s
102: learn: 0.1064337 total: 863ms remaining: 7.51s
103: learn: 0.1056639 total: 871ms remaining: 7.5s
104: learn: 0.1050068 total: 879ms remaining: 7.49s
105: learn: 0.1043077 total: 887ms remaining: 7.48s
106: learn: 0.1034898 total: 895ms remaining: 7.47s
107: learn: 0.1029533 total: 903ms remaining: 7.46s
108: learn: 0.1022952 total: 911ms remaining: 7.44s
109: learn: 0.1016261 total: 919ms remaining: 7.43s
110: learn: 0.1009519 total: 927ms remaining: 7.42s
111: learn: 0.1004199 total: 935ms remaining: 7.41s
112: learn: 0.0998460 total: 943ms remaining: 7.4s
113: learn: 0.0992663 total: 951ms remaining: 7.39s
114: learn: 0.0987021 total: 959ms remaining: 7.38s
115: learn: 0.0980350 total: 967ms remaining: 7.37s
116: learn: 0.0975193 total: 975ms remaining: 7.36s
117: learn: 0.0970287 total: 983ms remaining: 7.35s
118: learn: 0.0964927 total: 991ms remaining: 7.33s
119: learn: 0.0959875 total: 999ms remaining: 7.32s
120: learn: 0.0954606 total: 1.01s remaining: 7.31s
121: learn: 0.0949994 total: 1.01s remaining: 7.3s
122: learn: 0.0944651 total: 1.02s remaining: 7.29s
123: learn: 0.0940591 total: 1.03s remaining: 7.28s
```

```
124: learn: 0.0935535 total: 1.04s remaining: 7.27s
125: learn: 0.0930103 total: 1.05s remaining: 7.26s
126: learn: 0.0925904 total: 1.05s remaining: 7.25s
127: learn: 0.0921791 total: 1.06s remaining: 7.24s
128: learn: 0.0917610 total: 1.07s remaining: 7.22s
129: learn: 0.0913845 total: 1.08s remaining: 7.21s
130: learn: 0.0909088 total: 1.08s remaining: 7.2s
131: learn: 0.0905340 total: 1.09s remaining: 7.19s
132: learn: 0.0901292 total: 1.1s remaining: 7.18s
133: learn: 0.0897633 total: 1.11s remaining: 7.17s
134: learn: 0.0894449 total: 1.12s remaining: 7.16s
135: learn: 0.0891545 total: 1.13s remaining: 7.15s
136: learn: 0.0888759 total: 1.13s remaining: 7.14s
137: learn: 0.0885085 total: 1.14s remaining: 7.13s
138: learn: 0.0881976 total: 1.15s remaining: 7.12s
139: learn: 0.0878421 total: 1.16s remaining: 7.11s
140: learn: 0.0875361 total: 1.17s remaining: 7.1s
141: learn: 0.0871427 total: 1.17s remaining: 7.09s
142: learn: 0.0867419 total: 1.18s remaining: 7.08s
143: learn: 0.0864366 total: 1.19s remaining: 7.07s
144: learn: 0.0860620 total: 1.2s remaining: 7.06s
145: learn: 0.0858072 total: 1.21s remaining: 7.05s
146: learn: 0.0854529 total: 1.21s remaining: 7.04s
147: learn: 0.0851516 total: 1.22s remaining: 7.03s
148: learn: 0.0848973 total: 1.23s remaining: 7.02s
149: learn: 0.0846643 total: 1.24s remaining: 7.01s
150: learn: 0.0844263 total: 1.25s remaining: 7s
151: learn: 0.0841853 total: 1.25s remaining: 6.99s
152: learn: 0.0838988 total: 1.26s remaining: 6.98s
153: learn: 0.0836604 total: 1.27s remaining: 6.98s
154: learn: 0.0834183 total: 1.28s remaining: 6.98s
155: learn: 0.0831319 total: 1.29s remaining: 6.97s
156: learn: 0.0829129 total: 1.3s remaining: 6.97s
157: learn: 0.0827504 total: 1.31s remaining: 6.97s
158: learn: 0.0825378 total: 1.32s remaining: 6.96s
159: learn: 0.0823392 total: 1.32s remaining: 6.96s
160: learn: 0.0820861 total: 1.33s remaining: 6.95s
161: learn: 0.0818476 total: 1.34s remaining: 6.94s
162: learn: 0.0816856 total: 1.35s remaining: 6.93s
163: learn: 0.0814523 total: 1.36s remaining: 6.92s
164: learn: 0.0812061 total: 1.37s remaining: 6.91s
165: learn: 0.0810100 total: 1.37s remaining: 6.9s
166: learn: 0.0807357 total: 1.38s remaining: 6.89s
167: learn: 0.0805547 total: 1.39s remaining: 6.89s
168: learn: 0.0804053 total: 1.4s remaining: 6.88s
169: learn: 0.0802488 total: 1.41s remaining: 6.87s
170: learn: 0.0801010 total: 1.41s remaining: 6.86s
171: learn: 0.0799171 total: 1.42s remaining: 6.85s
172: learn: 0.0796721 total: 1.43s remaining: 6.84s
173: learn: 0.0794815 total: 1.44s remaining: 6.83s
174: learn: 0.0792514 total: 1.45s remaining: 6.82s
175: learn: 0.0790417 total: 1.46s remaining: 6.81s
176: learn: 0.0788169 total: 1.46s remaining: 6.8s
177: learn: 0.0785906 total: 1.47s remaining: 6.8s
178: learn: 0.0784662 total: 1.48s remaining: 6.79s
179: learn: 0.0782690 total: 1.49s remaining: 6.78s
180: learn: 0.0781643 total: 1.5s remaining: 6.77s
181: learn: 0.0779772 total: 1.5s remaining: 6.76s
182: learn: 0.0778069 total: 1.51s remaining: 6.75s
183: learn: 0.0776299 total: 1.52s remaining: 6.74s
184: learn: 0.0774360 total: 1.53s remaining: 6.74s
185: learn: 0.0773256 total: 1.54s remaining: 6.73s
186: learn: 0.0771699 total: 1.55s remaining: 6.72s
187: learn: 0.0770422 total: 1.55s remaining: 6.72s
188: learn: 0.0768749 total: 1.56s remaining: 6.71s
189: learn: 0.0767353 total: 1.57s remaining: 6.7s
190: learn: 0.0766228 total: 1.58s remaining: 6.7s
191: learn: 0.0765321 total: 1.59s remaining: 6.69s
192: learn: 0.0763773 total: 1.6s remaining: 6.68s
193: learn: 0.0762453 total: 1.6s remaining: 6.67s
194: learn: 0.0760881 total: 1.61s remaining: 6.67s
195: learn: 0.0759606 total: 1.62s remaining: 6.66s
196: learn: 0.0758113 total: 1.63s remaining: 6.65s
197: learn: 0.0756783 total: 1.64s remaining: 6.64s
198: learn: 0.0755507 total: 1.65s remaining: 6.63s
199: learn: 0.0753787 total: 1.66s remaining: 6.63s
200: learn: 0.0752297 total: 1.67s remaining: 6.62s
```

```
201: learn: 0.0751297 total: 1.67s remaining: 6.61s
202: learn: 0.0750287 total: 1.68s remaining: 6.61s
203: learn: 0.0749028 total: 1.69s remaining: 6.6s
204: learn: 0.0747882 total: 1.7s remaining: 6.59s
205: learn: 0.0746553 total: 1.71s remaining: 6.58s
206: learn: 0.0745187 total: 1.72s remaining: 6.58s
207: learn: 0.0743674 total: 1.72s remaining: 6.57s
208: learn: 0.0742338 total: 1.73s remaining: 6.56s
209: learn: 0.0740972 total: 1.74s remaining: 6.55s
210: learn: 0.0739887 total: 1.75s remaining: 6.54s
211: learn: 0.0738968 total: 1.76s remaining: 6.54s
212: learn: 0.0737637 total: 1.77s remaining: 6.53s
213: learn: 0.0736296 total: 1.78s remaining: 6.53s
214: learn: 0.0735094 total: 1.78s remaining: 6.52s
215: learn: 0.0733906 total: 1.79s remaining: 6.51s
216: learn: 0.0732909 total: 1.8s remaining: 6.5s
217: learn: 0.0731981 total: 1.81s remaining: 6.49s
218: learn: 0.0731057 total: 1.82s remaining: 6.49s
219: learn: 0.0730007 total: 1.83s remaining: 6.48s
220: learn: 0.0729130 total: 1.84s remaining: 6.47s
221: learn: 0.0728158 total: 1.85s remaining: 6.49s
222: learn: 0.0727132 total: 1.86s remaining: 6.48s
223: learn: 0.0726070 total: 1.87s remaining: 6.47s
224: learn: 0.0725154 total: 1.88s remaining: 6.47s
225: learn: 0.0724388 total: 1.89s remaining: 6.46s
226: learn: 0.0723659 total: 1.89s remaining: 6.45s
227: learn: 0.0723044 total: 1.9s remaining: 6.44s
228: learn: 0.0722415 total: 1.91s remaining: 6.43s
229: learn: 0.0721246 total: 1.92s remaining: 6.43s
230: learn: 0.0720163 total: 1.93s remaining: 6.42s
231: learn: 0.0719528 total: 1.94s remaining: 6.41s
232: learn: 0.0718973 total: 1.94s remaining: 6.4s
233: learn: 0.0718063 total: 1.95s remaining: 6.39s
234: learn: 0.0717203 total: 1.96s remaining: 6.38s
235: learn: 0.0716301 total: 1.97s remaining: 6.38s
236: learn: 0.0715420 total: 1.98s remaining: 6.37s
237: learn: 0.0714681 total: 1.99s remaining: 6.36s
238: learn: 0.0713793 total: 1.99s remaining: 6.35s
239: learn: 0.0713071 total: 2s remaining: 6.34s
240: learn: 0.0712179 total: 2.01s remaining: 6.33s
241: learn: 0.0711262 total: 2.02s remaining: 6.32s
242: learn: 0.0710319 total: 2.03s remaining: 6.31s
243: learn: 0.0709758 total: 2.04s remaining: 6.3s
244: learn: 0.0709004 total: 2.04s remaining: 6.3s
245: learn: 0.0708209 total: 2.05s remaining: 6.29s
246: learn: 0.0707436 total: 2.06s remaining: 6.28s
247: learn: 0.0706694 total: 2.07s remaining: 6.27s
248: learn: 0.0705981 total: 2.08s remaining: 6.26s
249: learn: 0.0705204 total: 2.08s remaining: 6.25s
250: learn: 0.0704497 total: 2.09s remaining: 6.25s
251: learn: 0.0703818 total: 2.1s remaining: 6.24s
252: learn: 0.0702943 total: 2.11s remaining: 6.23s
253: learn: 0.0702346 total: 2.12s remaining: 6.22s
254: learn: 0.0701639 total: 2.13s remaining: 6.21s
255: learn: 0.0701045 total: 2.13s remaining: 6.2s
256: learn: 0.0700474 total: 2.14s remaining: 6.19s
257: learn: 0.0699800 total: 2.15s remaining: 6.18s
258: learn: 0.0699129 total: 2.16s remaining: 6.17s
259: learn: 0.0698742 total: 2.17s remaining: 6.16s
260: learn: 0.0698221 total: 2.17s remaining: 6.16s
261: learn: 0.0697454 total: 2.18s remaining: 6.15s
262: learn: 0.0696750 total: 2.19s remaining: 6.14s
263: learn: 0.0695993 total: 2.2s remaining: 6.13s
264: learn: 0.0695441 total: 2.21s remaining: 6.13s
265: learn: 0.0694938 total: 2.22s remaining: 6.12s
266: learn: 0.0694106 total: 2.23s remaining: 6.11s
267: learn: 0.0693463 total: 2.24s remaining: 6.11s
268: learn: 0.0693155 total: 2.25s remaining: 6.1s
269: learn: 0.0692523 total: 2.25s remaining: 6.1s
270: learn: 0.0692188 total: 2.26s remaining: 6.09s
271: learn: 0.0691472 total: 2.27s remaining: 6.08s
272: learn: 0.0691096 total: 2.28s remaining: 6.07s
273: learn: 0.0690575 total: 2.29s remaining: 6.06s
274: learn: 0.0690126 total: 2.3s remaining: 6.05s
275: learn: 0.0689621 total: 2.3s remaining: 6.04s
276: learn: 0.0689145 total: 2.31s remaining: 6.03s
277: learn: 0.0688890 total: 2.32s remaining: 6.02s
```

```
277: learn: 0.0688898 total: 2.32s remaining: 6.02s
278: learn: 0.0688485 total: 2.33s remaining: 6.01s
279: learn: 0.0687874 total: 2.33s remaining: 6s
280: learn: 0.0687543 total: 2.34s remaining: 6s
281: learn: 0.0686877 total: 2.36s remaining: 6s
282: learn: 0.0686428 total: 2.37s remaining: 5.99s
283: learn: 0.0685852 total: 2.37s remaining: 5.99s
284: learn: 0.0685306 total: 2.38s remaining: 5.98s
285: learn: 0.0685088 total: 2.39s remaining: 5.97s
286: learn: 0.0684594 total: 2.4s remaining: 5.96s
287: learn: 0.0684048 total: 2.41s remaining: 5.95s
288: learn: 0.0683518 total: 2.42s remaining: 5.94s
289: learn: 0.0683069 total: 2.42s remaining: 5.93s
290: learn: 0.0682590 total: 2.43s remaining: 5.92s
291: learn: 0.0682005 total: 2.44s remaining: 5.92s
292: learn: 0.0681643 total: 2.45s remaining: 5.91s
293: learn: 0.0681149 total: 2.46s remaining: 5.9s
294: learn: 0.0680635 total: 2.46s remaining: 5.89s
295: learn: 0.0680278 total: 2.47s remaining: 5.88s
296: learn: 0.0679867 total: 2.48s remaining: 5.87s
297: learn: 0.0679564 total: 2.49s remaining: 5.86s
298: learn: 0.0679164 total: 2.5s remaining: 5.85s
299: learn: 0.0678751 total: 2.5s remaining: 5.84s
300: learn: 0.0678289 total: 2.51s remaining: 5.83s
301: learn: 0.0677793 total: 2.52s remaining: 5.83s
302: learn: 0.0677145 total: 2.53s remaining: 5.82s
303: learn: 0.0676791 total: 2.54s remaining: 5.81s
304: learn: 0.0676442 total: 2.55s remaining: 5.8s
305: learn: 0.0675797 total: 2.55s remaining: 5.79s
306: learn: 0.0675243 total: 2.56s remaining: 5.78s
307: learn: 0.0674943 total: 2.57s remaining: 5.77s
308: learn: 0.0674519 total: 2.58s remaining: 5.76s
309: learn: 0.0674101 total: 2.59s remaining: 5.76s
310: learn: 0.0673636 total: 2.59s remaining: 5.75s
311: learn: 0.0673083 total: 2.6s remaining: 5.74s
312: learn: 0.0672813 total: 2.61s remaining: 5.73s
313: learn: 0.0672354 total: 2.62s remaining: 5.72s
314: learn: 0.0671903 total: 2.63s remaining: 5.71s
315: learn: 0.0671654 total: 2.63s remaining: 5.7s
316: learn: 0.0671285 total: 2.64s remaining: 5.69s
317: learn: 0.0670810 total: 2.65s remaining: 5.68s
318: learn: 0.0670501 total: 2.66s remaining: 5.67s
319: learn: 0.0669958 total: 2.67s remaining: 5.66s
320: learn: 0.0669548 total: 2.67s remaining: 5.66s
321: learn: 0.0669130 total: 2.68s remaining: 5.64s
322: learn: 0.0668798 total: 2.69s remaining: 5.63s
323: learn: 0.0668300 total: 2.7s remaining: 5.63s
324: learn: 0.0667993 total: 2.7s remaining: 5.62s
325: learn: 0.0667652 total: 2.71s remaining: 5.61s
326: learn: 0.0667201 total: 2.72s remaining: 5.6s
327: learn: 0.0666935 total: 2.73s remaining: 5.59s
328: learn: 0.0666491 total: 2.74s remaining: 5.58s
329: learn: 0.0665917 total: 2.75s remaining: 5.57s
330: learn: 0.0665481 total: 2.75s remaining: 5.56s
331: learn: 0.0665028 total: 2.76s remaining: 5.55s
332: learn: 0.0664666 total: 2.77s remaining: 5.54s
333: learn: 0.0664295 total: 2.78s remaining: 5.54s
334: learn: 0.0663836 total: 2.78s remaining: 5.53s
335: learn: 0.0663567 total: 2.79s remaining: 5.52s
336: learn: 0.0663033 total: 2.8s remaining: 5.51s
337: learn: 0.0662788 total: 2.81s remaining: 5.5s
338: learn: 0.0662260 total: 2.82s remaining: 5.49s
339: learn: 0.0661726 total: 2.82s remaining: 5.48s
340: learn: 0.0661436 total: 2.83s remaining: 5.47s
341: learn: 0.0661133 total: 2.84s remaining: 5.46s
342: learn: 0.0660898 total: 2.85s remaining: 5.46s
343: learn: 0.0660550 total: 2.85s remaining: 5.45s
344: learn: 0.0660269 total: 2.87s remaining: 5.45s
345: learn: 0.0659983 total: 2.88s remaining: 5.44s
346: learn: 0.0659402 total: 2.88s remaining: 5.43s
347: learn: 0.0659016 total: 2.89s remaining: 5.42s
348: learn: 0.0658558 total: 2.9s remaining: 5.41s
349: learn: 0.0658238 total: 2.91s remaining: 5.4s
350: learn: 0.0657875 total: 2.92s remaining: 5.39s
351: learn: 0.0657513 total: 2.92s remaining: 5.38s
352: learn: 0.0657241 total: 2.93s remaining: 5.38s
353: learn: 0.0656943 total: 2.94s remaining: 5.37s
354: learn: 0.0656543 total: 2.95s remaining: 5.36s
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351: learn: 0.0656515 total: 2.95s remaining: 5.36s
355: learn: 0.0656152 total: 2.96s remaining: 5.35s
356: learn: 0.0655779 total: 2.96s remaining: 5.34s
357: learn: 0.0655458 total: 2.97s remaining: 5.33s
358: learn: 0.0655097 total: 2.98s remaining: 5.32s
359: learn: 0.0654673 total: 2.99s remaining: 5.31s
360: learn: 0.0654286 total: 3s remaining: 5.3s
361: learn: 0.0653867 total: 3s remaining: 5.3s
362: learn: 0.0653610 total: 3.01s remaining: 5.29s
363: learn: 0.0653342 total: 3.02s remaining: 5.28s
364: learn: 0.0652830 total: 3.03s remaining: 5.27s
365: learn: 0.0652492 total: 3.04s remaining: 5.26s
366: learn: 0.0652156 total: 3.04s remaining: 5.25s
367: learn: 0.0651912 total: 3.05s remaining: 5.24s
368: learn: 0.0651652 total: 3.06s remaining: 5.23s
369: learn: 0.0651541 total: 3.07s remaining: 5.22s
370: learn: 0.0651257 total: 3.08s remaining: 5.22s
371: learn: 0.0650944 total: 3.08s remaining: 5.21s
372: learn: 0.0650595 total: 3.09s remaining: 5.2s
373: learn: 0.0650204 total: 3.1s remaining: 5.19s
374: learn: 0.0649953 total: 3.11s remaining: 5.18s
375: learn: 0.0649571 total: 3.12s remaining: 5.17s
376: learn: 0.0649294 total: 3.12s remaining: 5.16s
377: learn: 0.0649128 total: 3.13s remaining: 5.15s
378: learn: 0.0648900 total: 3.14s remaining: 5.14s
379: learn: 0.0648708 total: 3.15s remaining: 5.14s
380: learn: 0.0648282 total: 3.15s remaining: 5.13s
381: learn: 0.0647772 total: 3.16s remaining: 5.12s
382: learn: 0.0647386 total: 3.17s remaining: 5.11s
383: learn: 0.0647125 total: 3.18s remaining: 5.1s
384: learn: 0.0646791 total: 3.19s remaining: 5.09s
385: learn: 0.0646600 total: 3.2s remaining: 5.09s
386: learn: 0.0646349 total: 3.21s remaining: 5.08s
387: learn: 0.0646009 total: 3.21s remaining: 5.07s
388: learn: 0.0645758 total: 3.22s remaining: 5.06s
389: learn: 0.0645350 total: 3.23s remaining: 5.06s
390: learn: 0.0644927 total: 3.24s remaining: 5.05s
391: learn: 0.0644718 total: 3.25s remaining: 5.04s
392: learn: 0.0644285 total: 3.26s remaining: 5.03s
393: learn: 0.0643974 total: 3.26s remaining: 5.02s
394: learn: 0.0643755 total: 3.27s remaining: 5.01s
395: learn: 0.0643491 total: 3.28s remaining: 5s
396: learn: 0.0643196 total: 3.29s remaining: 5s
397: learn: 0.0642901 total: 3.3s remaining: 4.99s
398: learn: 0.0642696 total: 3.31s remaining: 4.98s
399: learn: 0.0642335 total: 3.31s remaining: 4.97s
400: learn: 0.0641974 total: 3.32s remaining: 4.96s
401: learn: 0.0641720 total: 3.33s remaining: 4.95s
402: learn: 0.0641479 total: 3.34s remaining: 4.94s
403: learn: 0.0641100 total: 3.34s remaining: 4.93s
404: learn: 0.0640775 total: 3.35s remaining: 4.92s
405: learn: 0.0640556 total: 3.36s remaining: 4.92s
406: learn: 0.0640238 total: 3.37s remaining: 4.92s
407: learn: 0.0639930 total: 3.38s remaining: 4.91s
408: learn: 0.0639477 total: 3.39s remaining: 4.9s
409: learn: 0.0639265 total: 3.4s remaining: 4.89s
410: learn: 0.0639011 total: 3.41s remaining: 4.88s
411: learn: 0.0638674 total: 3.41s remaining: 4.87s
412: learn: 0.0638124 total: 3.42s remaining: 4.87s
413: learn: 0.0637720 total: 3.43s remaining: 4.86s
414: learn: 0.0637487 total: 3.44s remaining: 4.85s
415: learn: 0.0637114 total: 3.45s remaining: 4.84s
416: learn: 0.0636775 total: 3.45s remaining: 4.83s
417: learn: 0.0636403 total: 3.46s remaining: 4.82s
418: learn: 0.0635999 total: 3.47s remaining: 4.81s
419: learn: 0.0635672 total: 3.48s remaining: 4.8s
420: learn: 0.0635438 total: 3.49s remaining: 4.79s
421: learn: 0.0635199 total: 3.5s remaining: 4.79s
422: learn: 0.0634840 total: 3.5s remaining: 4.78s
423: learn: 0.0634498 total: 3.51s remaining: 4.77s
424: learn: 0.0634351 total: 3.52s remaining: 4.76s
425: learn: 0.0634076 total: 3.53s remaining: 4.75s
426: learn: 0.0633828 total: 3.54s remaining: 4.74s
427: learn: 0.0633490 total: 3.54s remaining: 4.74s
428: learn: 0.0633215 total: 3.55s remaining: 4.73s
429: learn: 0.0633004 total: 3.56s remaining: 4.72s
430: learn: 0.0632749 total: 3.57s remaining: 4.71s
431: learn: 0.0632197 total: 3.58s remaining: 4.7s
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431: learn: 0.0632197 total: 3.58s remaining: 4.73s
432: learn: 0.0631967 total: 3.58s remaining: 4.69s
433: learn: 0.0631652 total: 3.59s remaining: 4.68s
434: learn: 0.0631378 total: 3.6s remaining: 4.67s
435: learn: 0.0631088 total: 3.61s remaining: 4.67s
436: learn: 0.0630820 total: 3.62s remaining: 4.66s
437: learn: 0.0630411 total: 3.62s remaining: 4.65s
438: learn: 0.0630232 total: 3.63s remaining: 4.64s
439: learn: 0.0630038 total: 3.64s remaining: 4.63s
440: learn: 0.0629789 total: 3.65s remaining: 4.62s
441: learn: 0.0629530 total: 3.65s remaining: 4.61s
442: learn: 0.0629220 total: 3.66s remaining: 4.61s
443: learn: 0.0628992 total: 3.67s remaining: 4.6s
444: learn: 0.0628744 total: 3.68s remaining: 4.59s
445: learn: 0.0628483 total: 3.69s remaining: 4.58s
446: learn: 0.0628304 total: 3.69s remaining: 4.57s
447: learn: 0.0627882 total: 3.7s remaining: 4.56s
448: learn: 0.0627623 total: 3.71s remaining: 4.55s
449: learn: 0.0627383 total: 3.72s remaining: 4.55s
450: learn: 0.0626834 total: 3.73s remaining: 4.54s
451: learn: 0.0626590 total: 3.74s remaining: 4.53s
452: learn: 0.0626296 total: 3.74s remaining: 4.52s
453: learn: 0.0625989 total: 3.75s remaining: 4.51s
454: learn: 0.0625611 total: 3.76s remaining: 4.5s
455: learn: 0.0625383 total: 3.77s remaining: 4.5s
456: learn: 0.0625090 total: 3.78s remaining: 4.49s
457: learn: 0.0624855 total: 3.78s remaining: 4.48s
458: learn: 0.0624563 total: 3.79s remaining: 4.47s
459: learn: 0.0624175 total: 3.8s remaining: 4.46s
460: learn: 0.0623838 total: 3.81s remaining: 4.45s
461: learn: 0.0623421 total: 3.82s remaining: 4.45s
462: learn: 0.0623155 total: 3.83s remaining: 4.44s
463: learn: 0.0622790 total: 3.83s remaining: 4.43s
464: learn: 0.0622394 total: 3.84s remaining: 4.42s
465: learn: 0.0622032 total: 3.85s remaining: 4.41s
466: learn: 0.0621423 total: 3.86s remaining: 4.4s
467: learn: 0.0621073 total: 3.87s remaining: 4.4s
468: learn: 0.0620853 total: 3.88s remaining: 4.39s
469: learn: 0.0620514 total: 3.88s remaining: 4.38s
470: learn: 0.0620223 total: 3.89s remaining: 4.37s
471: learn: 0.0619892 total: 3.9s remaining: 4.36s
472: learn: 0.0619556 total: 3.91s remaining: 4.35s
473: learn: 0.0619300 total: 3.92s remaining: 4.34s
474: learn: 0.0619039 total: 3.92s remaining: 4.34s
475: learn: 0.0618843 total: 3.93s remaining: 4.33s
476: learn: 0.0618604 total: 3.94s remaining: 4.32s
477: learn: 0.0618371 total: 3.95s remaining: 4.31s
478: learn: 0.0618024 total: 3.96s remaining: 4.3s
479: learn: 0.0617638 total: 3.96s remaining: 4.29s
480: learn: 0.0617394 total: 3.97s remaining: 4.29s
481: learn: 0.0617132 total: 3.98s remaining: 4.28s
482: learn: 0.0616825 total: 3.99s remaining: 4.27s
483: learn: 0.0616398 total: 4s remaining: 4.26s
484: learn: 0.0615926 total: 4s remaining: 4.25s
485: learn: 0.0615706 total: 4.01s remaining: 4.24s
486: learn: 0.0615432 total: 4.02s remaining: 4.24s
487: learn: 0.0615186 total: 4.03s remaining: 4.23s
488: learn: 0.0614888 total: 4.04s remaining: 4.22s
489: learn: 0.0614605 total: 4.05s remaining: 4.21s
490: learn: 0.0614396 total: 4.05s remaining: 4.2s
491: learn: 0.0614219 total: 4.06s remaining: 4.19s
492: learn: 0.0613831 total: 4.07s remaining: 4.19s
493: learn: 0.0613621 total: 4.08s remaining: 4.18s
494: learn: 0.0613364 total: 4.09s remaining: 4.17s
495: learn: 0.0613088 total: 4.09s remaining: 4.16s
496: learn: 0.0612939 total: 4.1s remaining: 4.15s
497: learn: 0.0612719 total: 4.11s remaining: 4.14s
498: learn: 0.0612373 total: 4.12s remaining: 4.13s
499: learn: 0.0612147 total: 4.13s remaining: 4.13s
500: learn: 0.0611982 total: 4.13s remaining: 4.12s
501: learn: 0.0611603 total: 4.14s remaining: 4.11s
502: learn: 0.0611457 total: 4.15s remaining: 4.1s
503: learn: 0.0611199 total: 4.16s remaining: 4.09s
504: learn: 0.0610978 total: 4.17s remaining: 4.08s
505: learn: 0.0610819 total: 4.17s remaining: 4.08s
506: learn: 0.0610682 total: 4.18s remaining: 4.07s
507: learn: 0.0610449 total: 4.19s remaining: 4.06s
508: learn: 0.0610205 total: 4.2s remaining: 4.05s
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508: learn: 0.0610205 total: 4.25 remaining: 4.05s
509: learn: 0.0609983 total: 4.21s remaining: 4.04s
510: learn: 0.0609655 total: 4.22s remaining: 4.04s
511: learn: 0.0609454 total: 4.23s remaining: 4.03s
512: learn: 0.0609143 total: 4.24s remaining: 4.02s
513: learn: 0.0608888 total: 4.24s remaining: 4.01s
514: learn: 0.0608560 total: 4.25s remaining: 4s
515: learn: 0.0608322 total: 4.26s remaining: 4s
516: learn: 0.0608143 total: 4.27s remaining: 3.99s
517: learn: 0.0607931 total: 4.28s remaining: 3.98s
518: learn: 0.0607686 total: 4.28s remaining: 3.97s
519: learn: 0.0607546 total: 4.29s remaining: 3.96s
520: learn: 0.0607429 total: 4.3s remaining: 3.95s
521: learn: 0.0607263 total: 4.31s remaining: 3.94s
522: learn: 0.0607029 total: 4.31s remaining: 3.94s
523: learn: 0.0606630 total: 4.32s remaining: 3.93s
524: learn: 0.0606458 total: 4.33s remaining: 3.92s
525: learn: 0.0606116 total: 4.34s remaining: 3.91s
526: learn: 0.0605901 total: 4.35s remaining: 3.9s
527: learn: 0.0605514 total: 4.36s remaining: 3.89s
528: learn: 0.0605314 total: 4.36s remaining: 3.88s
529: learn: 0.0605015 total: 4.37s remaining: 3.88s
530: learn: 0.0604834 total: 4.38s remaining: 3.87s
531: learn: 0.0604689 total: 4.39s remaining: 3.86s
532: learn: 0.0604549 total: 4.4s remaining: 3.85s
533: learn: 0.0604237 total: 4.4s remaining: 3.84s
534: learn: 0.0603932 total: 4.41s remaining: 3.83s
535: learn: 0.0603714 total: 4.42s remaining: 3.83s
536: learn: 0.0603383 total: 4.43s remaining: 3.82s
537: learn: 0.0603060 total: 4.44s remaining: 3.81s
538: learn: 0.0602747 total: 4.44s remaining: 3.8s
539: learn: 0.0602541 total: 4.45s remaining: 3.79s
540: learn: 0.0602336 total: 4.46s remaining: 3.78s
541: learn: 0.0602017 total: 4.47s remaining: 3.78s
542: learn: 0.0601845 total: 4.48s remaining: 3.77s
543: learn: 0.0601472 total: 4.48s remaining: 3.76s
544: learn: 0.0601170 total: 4.49s remaining: 3.75s
545: learn: 0.0600947 total: 4.5s remaining: 3.74s
546: learn: 0.0600737 total: 4.51s remaining: 3.73s
547: learn: 0.0600513 total: 4.52s remaining: 3.73s
548: learn: 0.0600326 total: 4.52s remaining: 3.72s
549: learn: 0.0600038 total: 4.53s remaining: 3.71s
550: learn: 0.0599656 total: 4.54s remaining: 3.7s
551: learn: 0.0599324 total: 4.55s remaining: 3.69s
552: learn: 0.0599017 total: 4.56s remaining: 3.68s
553: learn: 0.0598768 total: 4.56s remaining: 3.67s
554: learn: 0.0598573 total: 4.57s remaining: 3.67s
555: learn: 0.0598364 total: 4.58s remaining: 3.66s
556: learn: 0.0598132 total: 4.59s remaining: 3.65s
557: learn: 0.0597959 total: 4.59s remaining: 3.64s
558: learn: 0.0597595 total: 4.6s remaining: 3.63s
559: learn: 0.0597044 total: 4.61s remaining: 3.62s
560: learn: 0.0596683 total: 4.62s remaining: 3.62s
561: learn: 0.0596479 total: 4.63s remaining: 3.61s
562: learn: 0.0596323 total: 4.63s remaining: 3.6s
563: learn: 0.0596187 total: 4.64s remaining: 3.59s
564: learn: 0.0595869 total: 4.65s remaining: 3.58s
565: learn: 0.0595691 total: 4.66s remaining: 3.57s
566: learn: 0.0595460 total: 4.67s remaining: 3.56s
567: learn: 0.0595247 total: 4.67s remaining: 3.56s
568: learn: 0.0595082 total: 4.68s remaining: 3.55s
569: learn: 0.0594831 total: 4.69s remaining: 3.54s
570: learn: 0.0594687 total: 4.7s remaining: 3.53s
571: learn: 0.0594581 total: 4.71s remaining: 3.52s
572: learn: 0.0594343 total: 4.71s remaining: 3.51s
573: learn: 0.0594169 total: 4.72s remaining: 3.5s
574: learn: 0.0593951 total: 4.73s remaining: 3.5s
575: learn: 0.0593671 total: 4.74s remaining: 3.49s
576: learn: 0.0593159 total: 4.75s remaining: 3.48s
577: learn: 0.0592986 total: 4.75s remaining: 3.47s
578: learn: 0.0592537 total: 4.76s remaining: 3.46s
579: learn: 0.0592400 total: 4.77s remaining: 3.46s
580: learn: 0.0592178 total: 4.78s remaining: 3.45s
581: learn: 0.0591989 total: 4.79s remaining: 3.44s
582: learn: 0.0591874 total: 4.79s remaining: 3.43s
583: learn: 0.0591568 total: 4.8s remaining: 3.42s
584: learn: 0.0591370 total: 4.81s remaining: 3.41s
585: learn: 0.0591095 total: 4.82s remaining: 3.4s
```

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585: learn: 0.0591095 total: 4.82s remaining: 3.4s
586: learn: 0.0590778 total: 4.83s remaining: 3.4s
587: learn: 0.0590496 total: 4.83s remaining: 3.39s
588: learn: 0.0590180 total: 4.84s remaining: 3.38s
589: learn: 0.0589925 total: 4.85s remaining: 3.37s
590: learn: 0.0589729 total: 4.86s remaining: 3.36s
591: learn: 0.0589478 total: 4.87s remaining: 3.35s
592: learn: 0.0589139 total: 4.87s remaining: 3.34s
593: learn: 0.0588988 total: 4.88s remaining: 3.34s
594: learn: 0.0588792 total: 4.89s remaining: 3.33s
595: learn: 0.0588661 total: 4.9s remaining: 3.32s
596: learn: 0.0588384 total: 4.9s remaining: 3.31s
597: learn: 0.0588003 total: 4.91s remaining: 3.3s
598: learn: 0.0587869 total: 4.92s remaining: 3.29s
599: learn: 0.0587677 total: 4.93s remaining: 3.29s
600: learn: 0.0587459 total: 4.94s remaining: 3.28s
601: learn: 0.0587348 total: 4.94s remaining: 3.27s
602: learn: 0.0587150 total: 4.95s remaining: 3.26s
603: learn: 0.0587062 total: 4.96s remaining: 3.25s
604: learn: 0.0586679 total: 4.97s remaining: 3.24s
605: learn: 0.0586601 total: 4.97s remaining: 3.23s
606: learn: 0.0586418 total: 4.98s remaining: 3.23s
607: learn: 0.0586112 total: 4.99s remaining: 3.22s
608: learn: 0.0585867 total: 5s remaining: 3.21s
609: learn: 0.0585669 total: 5.01s remaining: 3.2s
610: learn: 0.0585573 total: 5.01s remaining: 3.19s
611: learn: 0.0585356 total: 5.02s remaining: 3.18s
612: learn: 0.0585220 total: 5.03s remaining: 3.18s
613: learn: 0.0585068 total: 5.04s remaining: 3.17s
614: learn: 0.0584805 total: 5.05s remaining: 3.16s
615: learn: 0.0584505 total: 5.05s remaining: 3.15s
616: learn: 0.0584346 total: 5.06s remaining: 3.14s
617: learn: 0.0584034 total: 5.07s remaining: 3.13s
618: learn: 0.0583902 total: 5.08s remaining: 3.13s
619: learn: 0.0583576 total: 5.09s remaining: 3.12s
620: learn: 0.0583352 total: 5.09s remaining: 3.11s
621: learn: 0.0583220 total: 5.1s remaining: 3.1s
622: learn: 0.0583042 total: 5.11s remaining: 3.09s
623: learn: 0.0582778 total: 5.12s remaining: 3.08s
624: learn: 0.0582509 total: 5.13s remaining: 3.08s
625: learn: 0.0582244 total: 5.13s remaining: 3.07s
626: learn: 0.0581817 total: 5.14s remaining: 3.06s
627: learn: 0.0581649 total: 5.15s remaining: 3.05s
628: learn: 0.0581405 total: 5.16s remaining: 3.04s
629: learn: 0.0581092 total: 5.17s remaining: 3.04s
630: learn: 0.0580823 total: 5.18s remaining: 3.03s
631: learn: 0.0580571 total: 5.19s remaining: 3.02s
632: learn: 0.0580468 total: 5.19s remaining: 3.01s
633: learn: 0.0580302 total: 5.2s remaining: 3s
634: learn: 0.0580088 total: 5.21s remaining: 2.99s
635: learn: 0.0579776 total: 5.22s remaining: 2.99s
636: learn: 0.0579629 total: 5.22s remaining: 2.98s
637: learn: 0.0579361 total: 5.23s remaining: 2.97s
638: learn: 0.0579235 total: 5.24s remaining: 2.96s
639: learn: 0.0578974 total: 5.25s remaining: 2.95s
640: learn: 0.0578868 total: 5.26s remaining: 2.94s
641: learn: 0.0578626 total: 5.26s remaining: 2.94s
642: learn: 0.0578486 total: 5.27s remaining: 2.93s
643: learn: 0.0578252 total: 5.28s remaining: 2.92s
644: learn: 0.0578041 total: 5.29s remaining: 2.91s
645: learn: 0.0577840 total: 5.29s remaining: 2.9s
646: learn: 0.0577535 total: 5.3s remaining: 2.89s
647: learn: 0.0577136 total: 5.31s remaining: 2.88s
648: learn: 0.0576967 total: 5.32s remaining: 2.88s
649: learn: 0.0576783 total: 5.33s remaining: 2.87s
650: learn: 0.0576607 total: 5.33s remaining: 2.86s
651: learn: 0.0576222 total: 5.34s remaining: 2.85s
652: learn: 0.0575977 total: 5.35s remaining: 2.84s
653: learn: 0.0575822 total: 5.36s remaining: 2.83s
654: learn: 0.0575560 total: 5.37s remaining: 2.83s
655: learn: 0.0575390 total: 5.38s remaining: 2.82s
656: learn: 0.0575078 total: 5.38s remaining: 2.81s
657: learn: 0.0574956 total: 5.39s remaining: 2.8s
658: learn: 0.0574490 total: 5.4s remaining: 2.79s
659: learn: 0.0574276 total: 5.41s remaining: 2.79s
660: learn: 0.0574102 total: 5.42s remaining: 2.78s
661: learn: 0.0573782 total: 5.42s remaining: 2.77s
662: learn: 0.0573554 total: 5.43s remaining: 2.76s
```

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662: learn: 0.0573554 total: 5.43s remaining: 2.76s
663: learn: 0.0573233 total: 5.44s remaining: 2.75s
664: learn: 0.0573092 total: 5.45s remaining: 2.74s
665: learn: 0.0572780 total: 5.46s remaining: 2.74s
666: learn: 0.0572524 total: 5.46s remaining: 2.73s
667: learn: 0.0572314 total: 5.47s remaining: 2.72s
668: learn: 0.0571912 total: 5.48s remaining: 2.71s
669: learn: 0.0571795 total: 5.49s remaining: 2.7s
670: learn: 0.0571566 total: 5.5s remaining: 2.69s
671: learn: 0.0571284 total: 5.5s remaining: 2.69s
672: learn: 0.0571022 total: 5.51s remaining: 2.68s
673: learn: 0.0570742 total: 5.52s remaining: 2.67s
674: learn: 0.0570428 total: 5.53s remaining: 2.66s
675: learn: 0.0570322 total: 5.54s remaining: 2.65s
676: learn: 0.0569963 total: 5.54s remaining: 2.64s
677: learn: 0.0569635 total: 5.55s remaining: 2.64s
678: learn: 0.0569330 total: 5.56s remaining: 2.63s
679: learn: 0.0569094 total: 5.57s remaining: 2.62s
680: learn: 0.0568994 total: 5.58s remaining: 2.61s
681: learn: 0.0568737 total: 5.58s remaining: 2.6s
682: learn: 0.0568459 total: 5.59s remaining: 2.6s
683: learn: 0.0568125 total: 5.6s remaining: 2.59s
684: learn: 0.0567940 total: 5.61s remaining: 2.58s
685: learn: 0.0567721 total: 5.62s remaining: 2.57s
686: learn: 0.0567536 total: 5.62s remaining: 2.56s
687: learn: 0.0567196 total: 5.63s remaining: 2.55s
688: learn: 0.0566939 total: 5.64s remaining: 2.54s
689: learn: 0.0566802 total: 5.65s remaining: 2.54s
690: learn: 0.0566509 total: 5.66s remaining: 2.53s
691: learn: 0.0566373 total: 5.66s remaining: 2.52s
692: learn: 0.0566203 total: 5.67s remaining: 2.51s
693: learn: 0.0566007 total: 5.68s remaining: 2.5s
694: learn: 0.0565698 total: 5.69s remaining: 2.5s
695: learn: 0.0565471 total: 5.69s remaining: 2.49s
696: learn: 0.0565370 total: 5.7s remaining: 2.48s
697: learn: 0.0565120 total: 5.71s remaining: 2.47s
698: learn: 0.0565003 total: 5.72s remaining: 2.46s
699: learn: 0.0564814 total: 5.72s remaining: 2.45s
700: learn: 0.0564595 total: 5.73s remaining: 2.44s
701: learn: 0.0564485 total: 5.74s remaining: 2.44s
702: learn: 0.0564227 total: 5.75s remaining: 2.43s
703: learn: 0.0563941 total: 5.76s remaining: 2.42s
704: learn: 0.0563642 total: 5.76s remaining: 2.41s
705: learn: 0.0563411 total: 5.77s remaining: 2.4s
706: learn: 0.0563069 total: 5.78s remaining: 2.4s
707: learn: 0.0562760 total: 5.79s remaining: 2.39s
708: learn: 0.0562628 total: 5.8s remaining: 2.38s
709: learn: 0.0562459 total: 5.8s remaining: 2.37s
710: learn: 0.0562063 total: 5.81s remaining: 2.36s
711: learn: 0.0561809 total: 5.82s remaining: 2.35s
712: learn: 0.0561556 total: 5.83s remaining: 2.35s
713: learn: 0.0561432 total: 5.84s remaining: 2.34s
714: learn: 0.0561189 total: 5.84s remaining: 2.33s
715: learn: 0.0561054 total: 5.85s remaining: 2.32s
716: learn: 0.0560820 total: 5.86s remaining: 2.31s
717: learn: 0.0560599 total: 5.87s remaining: 2.31s
718: learn: 0.0560345 total: 5.88s remaining: 2.3s
719: learn: 0.0560114 total: 5.88s remaining: 2.29s
720: learn: 0.0559790 total: 5.89s remaining: 2.28s
721: learn: 0.0559694 total: 5.9s remaining: 2.27s
722: learn: 0.0559573 total: 5.91s remaining: 2.26s
723: learn: 0.0559152 total: 5.92s remaining: 2.25s
724: learn: 0.0558938 total: 5.92s remaining: 2.25s
725: learn: 0.0558764 total: 5.93s remaining: 2.24s
726: learn: 0.0558443 total: 5.94s remaining: 2.23s
727: learn: 0.0558230 total: 5.95s remaining: 2.22s
728: learn: 0.0558007 total: 5.96s remaining: 2.21s
729: learn: 0.0557706 total: 5.96s remaining: 2.21s
730: learn: 0.0557444 total: 5.97s remaining: 2.2s
731: learn: 0.0557089 total: 5.98s remaining: 2.19s
732: learn: 0.0556902 total: 5.99s remaining: 2.18s
733: learn: 0.0556794 total: 6s remaining: 2.17s
734: learn: 0.0556511 total: 6s remaining: 2.17s
735: learn: 0.0556386 total: 6.01s remaining: 2.16s
736: learn: 0.0556188 total: 6.02s remaining: 2.15s
737: learn: 0.0555843 total: 6.03s remaining: 2.14s
738: learn: 0.0555682 total: 6.04s remaining: 2.13s
739: learn: 0.0555534 total: 6.04s remaining: 2.13s
```

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739: learn: 0.0555534 total: 6.04s remaining: 2.12s
740: learn: 0.0555449 total: 6.05s remaining: 2.12s
741: learn: 0.0555290 total: 6.06s remaining: 2.11s
742: learn: 0.0555113 total: 6.07s remaining: 2.1s
743: learn: 0.0554994 total: 6.08s remaining: 2.09s
744: learn: 0.0554816 total: 6.08s remaining: 2.08s
745: learn: 0.0554531 total: 6.09s remaining: 2.07s
746: learn: 0.0554370 total: 6.1s remaining: 2.07s
747: learn: 0.0554141 total: 6.11s remaining: 2.06s
748: learn: 0.0553910 total: 6.12s remaining: 2.05s
749: learn: 0.0553651 total: 6.13s remaining: 2.04s
750: learn: 0.0553461 total: 6.13s remaining: 2.03s
751: learn: 0.0553269 total: 6.14s remaining: 2.02s
752: learn: 0.0552909 total: 6.15s remaining: 2.02s
753: learn: 0.0552770 total: 6.16s remaining: 2.01s
754: learn: 0.0552583 total: 6.17s remaining: 2s
755: learn: 0.0552401 total: 6.17s remaining: 1.99s
756: learn: 0.0552185 total: 6.18s remaining: 1.98s
757: learn: 0.0551967 total: 6.19s remaining: 1.98s
758: learn: 0.0551706 total: 6.2s remaining: 1.97s
759: learn: 0.0551511 total: 6.21s remaining: 1.96s
760: learn: 0.0551403 total: 6.21s remaining: 1.95s
761: learn: 0.0551275 total: 6.22s remaining: 1.94s
762: learn: 0.0550888 total: 6.23s remaining: 1.94s
763: learn: 0.0550599 total: 6.24s remaining: 1.93s
764: learn: 0.0550419 total: 6.25s remaining: 1.92s
765: learn: 0.0550137 total: 6.26s remaining: 1.91s
766: learn: 0.0550013 total: 6.26s remaining: 1.9s
767: learn: 0.0549936 total: 6.27s remaining: 1.89s
768: learn: 0.0549791 total: 6.28s remaining: 1.89s
769: learn: 0.0549654 total: 6.29s remaining: 1.88s
770: learn: 0.0549483 total: 6.3s remaining: 1.87s
771: learn: 0.0549313 total: 6.3s remaining: 1.86s
772: learn: 0.0549103 total: 6.31s remaining: 1.85s
773: learn: 0.0548811 total: 6.32s remaining: 1.84s
774: learn: 0.0548647 total: 6.33s remaining: 1.84s
775: learn: 0.0548379 total: 6.34s remaining: 1.83s
776: learn: 0.0548296 total: 6.35s remaining: 1.82s
777: learn: 0.0547953 total: 6.36s remaining: 1.81s
778: learn: 0.0547769 total: 6.36s remaining: 1.8s
779: learn: 0.0547609 total: 6.37s remaining: 1.8s
780: learn: 0.0547319 total: 6.38s remaining: 1.79s
781: learn: 0.0547088 total: 6.39s remaining: 1.78s
782: learn: 0.0546960 total: 6.4s remaining: 1.77s
783: learn: 0.0546746 total: 6.41s remaining: 1.76s
784: learn: 0.0546525 total: 6.41s remaining: 1.76s
785: learn: 0.0546380 total: 6.42s remaining: 1.75s
786: learn: 0.0546041 total: 6.43s remaining: 1.74s
787: learn: 0.0545888 total: 6.44s remaining: 1.73s
788: learn: 0.0545623 total: 6.45s remaining: 1.72s
789: learn: 0.0545346 total: 6.46s remaining: 1.72s
790: learn: 0.0545014 total: 6.46s remaining: 1.71s
791: learn: 0.0544899 total: 6.47s remaining: 1.7s
792: learn: 0.0544750 total: 6.48s remaining: 1.69s
793: learn: 0.0544592 total: 6.49s remaining: 1.68s
794: learn: 0.0544501 total: 6.5s remaining: 1.68s
795: learn: 0.0544184 total: 6.51s remaining: 1.67s
796: learn: 0.0543797 total: 6.52s remaining: 1.66s
797: learn: 0.0543603 total: 6.52s remaining: 1.65s
798: learn: 0.0543262 total: 6.53s remaining: 1.64s
799: learn: 0.0543024 total: 6.54s remaining: 1.64s
800: learn: 0.0542737 total: 6.55s remaining: 1.63s
801: learn: 0.0542430 total: 6.56s remaining: 1.62s
802: learn: 0.0542218 total: 6.57s remaining: 1.61s
803: learn: 0.0542091 total: 6.58s remaining: 1.6s
804: learn: 0.0541981 total: 6.58s remaining: 1.59s
805: learn: 0.0541711 total: 6.59s remaining: 1.59s
806: learn: 0.0541611 total: 6.6s remaining: 1.58s
807: learn: 0.0541423 total: 6.61s remaining: 1.57s
808: learn: 0.0541292 total: 6.62s remaining: 1.56s
809: learn: 0.0541000 total: 6.63s remaining: 1.55s
810: learn: 0.0540848 total: 6.63s remaining: 1.55s
811: learn: 0.0540753 total: 6.64s remaining: 1.54s
812: learn: 0.0540579 total: 6.65s remaining: 1.53s
813: learn: 0.0540343 total: 6.66s remaining: 1.52s
814: learn: 0.0540171 total: 6.67s remaining: 1.51s
815: learn: 0.0540027 total: 6.67s remaining: 1.5s
816: learn: 0.0539846 total: 6.68s remaining: 1.5s
```

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816: learn: 0.0539846 total: 6.68s remaining: 1.5s
817: learn: 0.0539603 total: 6.69s remaining: 1.49s
818: learn: 0.0539561 total: 6.7s remaining: 1.48s
819: learn: 0.0539469 total: 6.71s remaining: 1.47s
820: learn: 0.0539317 total: 6.72s remaining: 1.46s
821: learn: 0.0539172 total: 6.72s remaining: 1.46s
822: learn: 0.0539094 total: 6.73s remaining: 1.45s
823: learn: 0.0538872 total: 6.74s remaining: 1.44s
824: learn: 0.0538584 total: 6.75s remaining: 1.43s
825: learn: 0.0538201 total: 6.76s remaining: 1.42s
826: learn: 0.0538108 total: 6.77s remaining: 1.42s
827: learn: 0.0537940 total: 6.77s remaining: 1.41s
828: learn: 0.0537694 total: 6.78s remaining: 1.4s
829: learn: 0.0537588 total: 6.79s remaining: 1.39s
830: learn: 0.0537309 total: 6.8s remaining: 1.38s
831: learn: 0.0537141 total: 6.81s remaining: 1.37s
832: learn: 0.0536957 total: 6.82s remaining: 1.37s
833: learn: 0.0536847 total: 6.82s remaining: 1.36s
834: learn: 0.0536727 total: 6.83s remaining: 1.35s
835: learn: 0.0536268 total: 6.84s remaining: 1.34s
836: learn: 0.0536187 total: 6.85s remaining: 1.33s
837: learn: 0.0536029 total: 6.86s remaining: 1.32s
838: learn: 0.0535896 total: 6.86s remaining: 1.32s
839: learn: 0.0535727 total: 6.87s remaining: 1.31s
840: learn: 0.0535597 total: 6.88s remaining: 1.3s
841: learn: 0.0535355 total: 6.89s remaining: 1.29s
842: learn: 0.0535205 total: 6.89s remaining: 1.28s
843: learn: 0.0534974 total: 6.9s remaining: 1.27s
844: learn: 0.0534767 total: 6.91s remaining: 1.27s
845: learn: 0.0534563 total: 6.92s remaining: 1.26s
846: learn: 0.0534411 total: 6.92s remaining: 1.25s
847: learn: 0.0534219 total: 6.93s remaining: 1.24s
848: learn: 0.0534140 total: 6.94s remaining: 1.23s
849: learn: 0.0533909 total: 6.95s remaining: 1.23s
850: learn: 0.0533694 total: 6.96s remaining: 1.22s
851: learn: 0.0533627 total: 6.96s remaining: 1.21s
852: learn: 0.0533540 total: 6.97s remaining: 1.2s
853: learn: 0.0533405 total: 6.98s remaining: 1.19s
854: learn: 0.0533254 total: 6.99s remaining: 1.19s
855: learn: 0.0532981 total: 7s remaining: 1.18s
856: learn: 0.0532668 total: 7s remaining: 1.17s
857: learn: 0.0532420 total: 7.01s remaining: 1.16s
858: learn: 0.0532214 total: 7.02s remaining: 1.15s
859: learn: 0.0531889 total: 7.03s remaining: 1.14s
860: learn: 0.0531727 total: 7.04s remaining: 1.14s
861: learn: 0.0531535 total: 7.04s remaining: 1.13s
862: learn: 0.0531363 total: 7.05s remaining: 1.12s
863: learn: 0.0531066 total: 7.06s remaining: 1.11s
864: learn: 0.0530856 total: 7.07s remaining: 1.1s
865: learn: 0.0530655 total: 7.08s remaining: 1.09s
866: learn: 0.0530285 total: 7.09s remaining: 1.09s
867: learn: 0.0530158 total: 7.1s remaining: 1.08s
868: learn: 0.0530079 total: 7.1s remaining: 1.07s
869: learn: 0.0529832 total: 7.11s remaining: 1.06s
870: learn: 0.0529565 total: 7.12s remaining: 1.05s
871: learn: 0.0529452 total: 7.13s remaining: 1.05s
872: learn: 0.0529182 total: 7.14s remaining: 1.04s
873: learn: 0.0528844 total: 7.14s remaining: 1.03s
874: learn: 0.0528764 total: 7.15s remaining: 1.02s
875: learn: 0.0528559 total: 7.16s remaining: 1.01s
876: learn: 0.0528508 total: 7.17s remaining: 1s
877: learn: 0.0528364 total: 7.17s remaining: 997ms
878: learn: 0.0528265 total: 7.18s remaining: 989ms
879: learn: 0.0528056 total: 7.19s remaining: 981ms
880: learn: 0.0527851 total: 7.2s remaining: 972ms
881: learn: 0.0527646 total: 7.21s remaining: 964ms
882: learn: 0.0527438 total: 7.21s remaining: 956ms
883: learn: 0.0527132 total: 7.22s remaining: 948ms
884: learn: 0.0527021 total: 7.23s remaining: 940ms
885: learn: 0.0526887 total: 7.24s remaining: 931ms
886: learn: 0.0526718 total: 7.25s remaining: 923ms
887: learn: 0.0526535 total: 7.25s remaining: 915ms
888: learn: 0.0526335 total: 7.26s remaining: 907ms
889: learn: 0.0526136 total: 7.27s remaining: 899ms
890: learn: 0.0525963 total: 7.28s remaining: 890ms
891: learn: 0.0525598 total: 7.29s remaining: 882ms
892: learn: 0.0525506 total: 7.29s remaining: 874ms
```

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893: learn: 0.0525318 total: 7.3s remaining: 866ms
894: learn: 0.0525221 total: 7.31s remaining: 858ms
895: learn: 0.0525048 total: 7.32s remaining: 849ms
896: learn: 0.0524949 total: 7.33s remaining: 841ms
897: learn: 0.0524655 total: 7.33s remaining: 833ms
898: learn: 0.0524476 total: 7.34s remaining: 825ms
899: learn: 0.0524162 total: 7.35s remaining: 817ms
900: learn: 0.0524005 total: 7.36s remaining: 809ms
901: learn: 0.0523860 total: 7.37s remaining: 800ms
902: learn: 0.0523629 total: 7.38s remaining: 792ms
903: learn: 0.0523430 total: 7.38s remaining: 784ms
904: learn: 0.0523233 total: 7.39s remaining: 776ms
905: learn: 0.0523086 total: 7.4s remaining: 768ms
906: learn: 0.0522750 total: 7.41s remaining: 760ms
907: learn: 0.0522599 total: 7.42s remaining: 751ms
908: learn: 0.0522477 total: 7.42s remaining: 743ms
909: learn: 0.0522272 total: 7.43s remaining: 735ms
910: learn: 0.0521941 total: 7.44s remaining: 727ms
911: learn: 0.0521735 total: 7.45s remaining: 719ms
912: learn: 0.0521543 total: 7.46s remaining: 711ms
913: learn: 0.0521397 total: 7.46s remaining: 702ms
914: learn: 0.0521237 total: 7.47s remaining: 694ms
915: learn: 0.0521094 total: 7.48s remaining: 686ms
916: learn: 0.0520896 total: 7.49s remaining: 678ms
917: learn: 0.0520606 total: 7.5s remaining: 670ms
918: learn: 0.0520362 total: 7.5s remaining: 661ms
919: learn: 0.0520208 total: 7.51s remaining: 653ms
920: learn: 0.0519919 total: 7.52s remaining: 645ms
921: learn: 0.0519683 total: 7.53s remaining: 637ms
922: learn: 0.0519504 total: 7.54s remaining: 629ms
923: learn: 0.0519388 total: 7.54s remaining: 620ms
924: learn: 0.0519320 total: 7.55s remaining: 612ms
925: learn: 0.0519114 total: 7.56s remaining: 604ms
926: learn: 0.0518885 total: 7.57s remaining: 596ms
927: learn: 0.0518734 total: 7.58s remaining: 588ms
928: learn: 0.0518491 total: 7.58s remaining: 580ms
929: learn: 0.0518423 total: 7.59s remaining: 571ms
930: learn: 0.0518282 total: 7.6s remaining: 563ms
931: learn: 0.0518157 total: 7.61s remaining: 555ms
932: learn: 0.0518006 total: 7.61s remaining: 547ms
933: learn: 0.0517746 total: 7.62s remaining: 539ms
934: learn: 0.0517618 total: 7.63s remaining: 530ms
935: learn: 0.0517472 total: 7.64s remaining: 522ms
936: learn: 0.0517407 total: 7.65s remaining: 514ms
937: learn: 0.0517281 total: 7.65s remaining: 506ms
938: learn: 0.0517061 total: 7.66s remaining: 498ms
939: learn: 0.0516760 total: 7.67s remaining: 490ms
940: learn: 0.0516665 total: 7.68s remaining: 481ms
941: learn: 0.0516554 total: 7.68s remaining: 473ms
942: learn: 0.0516276 total: 7.69s remaining: 465ms
943: learn: 0.0516130 total: 7.7s remaining: 457ms
944: learn: 0.0516034 total: 7.71s remaining: 449ms
945: learn: 0.0515634 total: 7.72s remaining: 441ms
946: learn: 0.0515460 total: 7.72s remaining: 432ms
947: learn: 0.0515305 total: 7.73s remaining: 424ms
948: learn: 0.0515197 total: 7.74s remaining: 416ms
949: learn: 0.0515056 total: 7.75s remaining: 408ms
950: learn: 0.0514894 total: 7.76s remaining: 400ms
951: learn: 0.0514759 total: 7.76s remaining: 392ms
952: learn: 0.0514573 total: 7.77s remaining: 383ms
953: learn: 0.0514483 total: 7.78s remaining: 375ms
954: learn: 0.0514284 total: 7.79s remaining: 367ms
955: learn: 0.0514219 total: 7.8s remaining: 359ms
956: learn: 0.0514027 total: 7.8s remaining: 351ms
957: learn: 0.0513933 total: 7.81s remaining: 342ms
958: learn: 0.0513753 total: 7.82s remaining: 334ms
959: learn: 0.0513671 total: 7.83s remaining: 326ms
960: learn: 0.0513601 total: 7.83s remaining: 318ms
961: learn: 0.0513441 total: 7.84s remaining: 310ms
962: learn: 0.0513196 total: 7.85s remaining: 302ms
963: learn: 0.0513116 total: 7.86s remaining: 293ms
964: learn: 0.0513041 total: 7.87s remaining: 285ms
965: learn: 0.0512933 total: 7.87s remaining: 277ms
966: learn: 0.0512829 total: 7.88s remaining: 269ms
967: learn: 0.0512726 total: 7.89s remaining: 261ms
968: learn: 0.0512594 total: 7.9s remaining: 253ms
969: learn: 0.0512481 total: 7.91s remaining: 245ms
```

```
970: learn: 0.0512343 total: 7.92s remaining: 236ms
971: learn: 0.0512167 total: 7.92s remaining: 228ms
972: learn: 0.0511944 total: 7.93s remaining: 220ms
973: learn: 0.0511785 total: 7.94s remaining: 212ms
974: learn: 0.0511589 total: 7.95s remaining: 204ms
975: learn: 0.0511488 total: 7.95s remaining: 196ms
976: learn: 0.0511350 total: 7.96s remaining: 187ms
977: learn: 0.0511199 total: 7.97s remaining: 179ms
978: learn: 0.0511112 total: 7.98s remaining: 171ms
979: learn: 0.0511021 total: 7.99s remaining: 163ms
980: learn: 0.0510801 total: 7.99s remaining: 155ms
981: learn: 0.0510739 total: 8s remaining: 147ms
982: learn: 0.0510484 total: 8.01s remaining: 139ms
983: learn: 0.0510407 total: 8.02s remaining: 130ms
984: learn: 0.0510221 total: 8.03s remaining: 122ms
985: learn: 0.0510085 total: 8.03s remaining: 114ms
986: learn: 0.0509885 total: 8.04s remaining: 106ms
987: learn: 0.0509683 total: 8.05s remaining: 97.8ms
988: learn: 0.0509620 total: 8.06s remaining: 89.7ms
989: learn: 0.0509430 total: 8.07s remaining: 81.5ms
990: learn: 0.0509292 total: 8.08s remaining: 73.4ms
991: learn: 0.0509235 total: 8.09s remaining: 65.2ms
992: learn: 0.0509105 total: 8.09s remaining: 57.1ms
993: learn: 0.0509022 total: 8.1s remaining: 48.9ms
994: learn: 0.0508814 total: 8.11s remaining: 40.8ms
995: learn: 0.0508724 total: 8.12s remaining: 32.6ms
996: learn: 0.0508603 total: 8.13s remaining: 24.4ms
997: learn: 0.0508526 total: 8.13s remaining: 16.3ms
998: learn: 0.0508413 total: 8.14s remaining: 8.15ms
999: learn: 0.0508055 total: 8.15s remaining: 0us
```

Out[19]:

```
<catboost.core.CatBoostClassifier at 0x26851859490>
```

In [20]:

```
cb_cl_prediction = cb_cl_new.predict(lab5_cl_x_test)
```

In [21]:

```
PrintClassificationMetrics(lab5_cl_y_test, cb_cl_prediction)
```

```
-Погрешность (accuracy, balanced) = 0.936325247927962;
-Меткость (precision, класс 1) = 0.91875;
-Полнота (recall, класс 1) = 0.8802395209580839;
-F1 (класс 1) = 0.8990825688073394;
-ROC AUC = 0.9363252479279619.
```

In [22]:

```
plot_confusion_matrix(cb_cl_new, lab5_cl_x_test, lab5_cl_y_test)
```
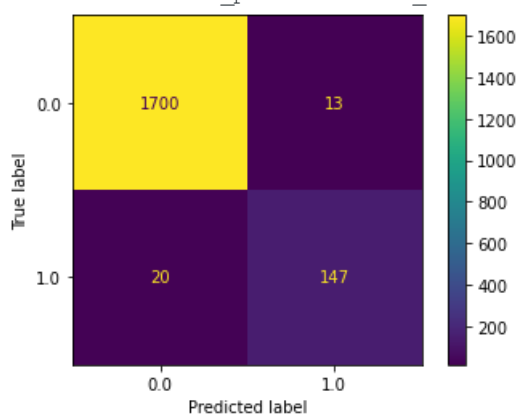
Out[22]:

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at 0x2684bf2de20>
```


Получилось незначительно хуже. Это может означать, что подбор произошёл внутри модели автоматически и простейший решётчатый поиск проиграл.

Дополнительное исследование

Снова попробуем сбалансировать выборку и посмотреть на результат

In [23]:

```
from imblearn.under_sampling import InstanceHardnessThreshold
```

In [24]:

```
iht = InstanceHardnessThreshold(random_state = RANDOM_STATE, cv = 6, n_jobs = 8)
iht_x, iht_y = iht.fit_resample(lab5_cl[columns[:-1]], lab5_cl[columns[-1]].astype("int32"))
```

```
iht_x_train, iht_x_test, iht_y_train, iht_y_test = train_test_split(iht_x, iht_y, random_state = RANDOM_STATE,
```

```
cb_cl_iht = CatBoostClassifier(random_seed = RANDOM_STATE)
cb_cl_iht.fit(iht_x_train, iht_y_train)
cb_cl_iht_prediction = cb_cl_iht.predict(iht_x_test)
```

```
Learning rate set to 0.02356
0: learn: 0.6362255 total: 5.63ms remaining: 5.62s
1: learn: 0.5904040 total: 10.6ms remaining: 5.3s
2: learn: 0.5478634 total: 15.7ms remaining: 5.21s
3: learn: 0.5059430 total: 20.9ms remaining: 5.2s
4: learn: 0.4687712 total: 26.2ms remaining: 5.21s
5: learn: 0.4308228 total: 31.3ms remaining: 5.19s
6: learn: 0.3994620 total: 36.5ms remaining: 5.18s
7: learn: 0.3745827 total: 41.6ms remaining: 5.16s
8: learn: 0.3481482 total: 46.7ms remaining: 5.14s
9: learn: 0.3256370 total: 51.7ms remaining: 5.12s
10: learn: 0.3008615 total: 56.8ms remaining: 5.11s
11: learn: 0.2808339 total: 61.9ms remaining: 5.09s
12: learn: 0.2612792 total: 67ms remaining: 5.08s
13: learn: 0.2458740 total: 72ms remaining: 5.07s
14: learn: 0.2310816 total: 77.1ms remaining: 5.06s
15: learn: 0.2155132 total: 82.2ms remaining: 5.05s
16: learn: 0.2042507 total: 87.2ms remaining: 5.04s
17: learn: 0.1921657 total: 92.3ms remaining: 5.03s
18: learn: 0.1798835 total: 97.4ms remaining: 5.03s
19: learn: 0.1703648 total: 102ms remaining: 5.02s
20: learn: 0.1622830 total: 108ms remaining: 5.01s
21: learn: 0.1539314 total: 113ms remaining: 5.01s
22: learn: 0.1455422 total: 118ms remaining: 5s
23: learn: 0.1393833 total: 123ms remaining: 4.99s
24: learn: 0.1342908 total: 128ms remaining: 4.99s
25: learn: 0.1290025 total: 133ms remaining: 4.98s
26: learn: 0.1245121 total: 138ms remaining: 4.97s
27: learn: 0.1190214 total: 143ms remaining: 4.97s
28: learn: 0.1141601 total: 148ms remaining: 4.96s
29: learn: 0.1100232 total: 153ms remaining: 4.96s
30: learn: 0.1064387 total: 158ms remaining: 4.95s
31: learn: 0.1034056 total: 164ms remaining: 4.95s
32: learn: 0.0990902 total: 169ms remaining: 4.94s
33: learn: 0.0958227 total: 174ms remaining: 4.93s
34: learn: 0.0930422 total: 179ms remaining: 4.93s
35: learn: 0.0903845 total: 184ms remaining: 4.93s
36: learn: 0.0874613 total: 189ms remaining: 4.92s
37: learn: 0.0851253 total: 194ms remaining: 4.92s
38: learn: 0.0829026 total: 199ms remaining: 4.91s
39: learn: 0.0807792 total: 204ms remaining: 4.9s
40: learn: 0.0786558 total: 209ms remaining: 4.9s
41: learn: 0.0773902 total: 214ms remaining: 4.89s
42: learn: 0.0753691 total: 220ms remaining: 4.89s
43: learn: 0.0740227 total: 225ms remaining: 4.88s
44: learn: 0.0723107 total: 230ms remaining: 4.88s
45: learn: 0.0705729 total: 235ms remaining: 4.87s
46: learn: 0.0693454 total: 240ms remaining: 4.86s
47: learn: 0.0681570 total: 245ms remaining: 4.86s
48: learn: 0.0667276 total: 250ms remaining: 4.85s
49: learn: 0.0654173 total: 255ms remaining: 4.85s
50: learn: 0.0642262 total: 261ms remaining: 4.85s
51: learn: 0.0634047 total: 266ms remaining: 4.84s
52: learn: 0.0622503 total: 271ms remaining: 4.84s
53: learn: 0.0611131 total: 276ms remaining: 4.83s
54: learn: 0.0602497 total: 281ms remaining: 4.83s
55: learn: 0.0593400 total: 286ms remaining: 4.82s
56: learn: 0.0584478 total: 291ms remaining: 4.82s
57: learn: 0.0575600 total: 296ms remaining: 4.81s
58: learn: 0.0568610 total: 301ms remaining: 4.81s
59: learn: 0.0560794 total: 306ms remaining: 4.8s
60: learn: 0.0555009 total: 312ms remaining: 4.8s
61: learn: 0.0549906 total: 317ms remaining: 4.79s
62: learn: 0.0543239 total: 322ms remaining: 4.79s
63: learn: 0.0537343 total: 327ms remaining: 4.78s
64: learn: 0.0533092 total: 332ms remaining: 4.77s
65: learn: 0.0527387 total: 337ms remaining: 4.77s
66: learn: 0.0523673 total: 342ms remaining: 4.76s
67: learn: 0.0519097 total: 347ms remaining: 4.76s
```

```
68: learn: 0.0513633 total: 352ms remaining: 4.75s
69: learn: 0.0510314 total: 357ms remaining: 4.75s
70: learn: 0.0505819 total: 363ms remaining: 4.74s
71: learn: 0.0501655 total: 368ms remaining: 4.74s
72: learn: 0.0497581 total: 373ms remaining: 4.73s
73: learn: 0.0493336 total: 378ms remaining: 4.73s
74: learn: 0.0488832 total: 384ms remaining: 4.74s
75: learn: 0.0486100 total: 389ms remaining: 4.73s
76: learn: 0.0483044 total: 395ms remaining: 4.73s
77: learn: 0.0479890 total: 400ms remaining: 4.72s
78: learn: 0.0476888 total: 405ms remaining: 4.72s
79: learn: 0.0474920 total: 410ms remaining: 4.71s
80: learn: 0.0473052 total: 415ms remaining: 4.71s
81: learn: 0.0470437 total: 420ms remaining: 4.71s
82: learn: 0.0468094 total: 426ms remaining: 4.7s
83: learn: 0.0466038 total: 437ms remaining: 4.76s
84: learn: 0.0463645 total: 442ms remaining: 4.76s
85: learn: 0.0462047 total: 447ms remaining: 4.75s
86: learn: 0.0459787 total: 453ms remaining: 4.75s
87: learn: 0.0456426 total: 458ms remaining: 4.75s
88: learn: 0.0454236 total: 463ms remaining: 4.74s
89: learn: 0.0451829 total: 468ms remaining: 4.74s
90: learn: 0.0450131 total: 473ms remaining: 4.73s
91: learn: 0.0448810 total: 479ms remaining: 4.72s
92: learn: 0.0446359 total: 484ms remaining: 4.72s
93: learn: 0.0443666 total: 489ms remaining: 4.71s
94: learn: 0.0442179 total: 494ms remaining: 4.71s
95: learn: 0.0439952 total: 499ms remaining: 4.7s
96: learn: 0.0438185 total: 505ms remaining: 4.7s
97: learn: 0.0436174 total: 510ms remaining: 4.69s
98: learn: 0.0434231 total: 515ms remaining: 4.69s
99: learn: 0.0431880 total: 520ms remaining: 4.68s
100: learn: 0.0430467 total: 526ms remaining: 4.68s
101: learn: 0.0429002 total: 531ms remaining: 4.68s
102: learn: 0.0427171 total: 537ms remaining: 4.67s
103: learn: 0.0425509 total: 542ms remaining: 4.67s
104: learn: 0.0423966 total: 547ms remaining: 4.66s
105: learn: 0.0422578 total: 552ms remaining: 4.66s
106: learn: 0.0420605 total: 557ms remaining: 4.65s
107: learn: 0.0419211 total: 563ms remaining: 4.65s
108: learn: 0.0418182 total: 568ms remaining: 4.64s
109: learn: 0.0417016 total: 573ms remaining: 4.63s
110: learn: 0.0415480 total: 578ms remaining: 4.63s
111: learn: 0.0414116 total: 583ms remaining: 4.62s
112: learn: 0.0413062 total: 589ms remaining: 4.62s
113: learn: 0.0411580 total: 594ms remaining: 4.62s
114: learn: 0.0410731 total: 599ms remaining: 4.61s
115: learn: 0.0409632 total: 604ms remaining: 4.61s
116: learn: 0.0409210 total: 609ms remaining: 4.6s
117: learn: 0.0408135 total: 615ms remaining: 4.59s
118: learn: 0.0406191 total: 620ms remaining: 4.59s
119: learn: 0.0404887 total: 625ms remaining: 4.58s
120: learn: 0.0402964 total: 630ms remaining: 4.58s
121: learn: 0.0402098 total: 635ms remaining: 4.57s
122: learn: 0.0400968 total: 640ms remaining: 4.57s
123: learn: 0.0399349 total: 645ms remaining: 4.56s
124: learn: 0.0398143 total: 651ms remaining: 4.55s
125: learn: 0.0396637 total: 656ms remaining: 4.55s
126: learn: 0.0395713 total: 661ms remaining: 4.54s
127: learn: 0.0394699 total: 666ms remaining: 4.54s
128: learn: 0.0393003 total: 671ms remaining: 4.53s
129: learn: 0.0392037 total: 677ms remaining: 4.53s
130: learn: 0.0391508 total: 683ms remaining: 4.53s
131: learn: 0.0391049 total: 688ms remaining: 4.52s
132: learn: 0.0389929 total: 693ms remaining: 4.52s
133: learn: 0.0389283 total: 699ms remaining: 4.51s
134: learn: 0.0388243 total: 704ms remaining: 4.51s
135: learn: 0.0387664 total: 709ms remaining: 4.5s
136: learn: 0.0386388 total: 714ms remaining: 4.5s
137: learn: 0.0385247 total: 719ms remaining: 4.49s
138: learn: 0.0383576 total: 725ms remaining: 4.49s
139: learn: 0.0382645 total: 730ms remaining: 4.49s
140: learn: 0.0381822 total: 736ms remaining: 4.48s
141: learn: 0.0380614 total: 741ms remaining: 4.48s
142: learn: 0.0379986 total: 746ms remaining: 4.47s
143: learn: 0.0379415 total: 751ms remaining: 4.46s
144: learn: 0.0378259 total: 757ms remaining: 4.46s
```

```
145: learn: 0.0377484 total: 762ms remaining: 4.46s
146: learn: 0.0376532 total: 768ms remaining: 4.46s
147: learn: 0.0375515 total: 774ms remaining: 4.46s
148: learn: 0.0374753 total: 780ms remaining: 4.45s
149: learn: 0.0373918 total: 785ms remaining: 4.45s
150: learn: 0.0372987 total: 790ms remaining: 4.44s
151: learn: 0.0371650 total: 796ms remaining: 4.44s
152: learn: 0.0370943 total: 801ms remaining: 4.43s
153: learn: 0.0369949 total: 806ms remaining: 4.43s
154: learn: 0.0369144 total: 812ms remaining: 4.43s
155: learn: 0.0368266 total: 817ms remaining: 4.42s
156: learn: 0.0367495 total: 822ms remaining: 4.42s
157: learn: 0.0366837 total: 828ms remaining: 4.41s
158: learn: 0.0365596 total: 833ms remaining: 4.41s
159: learn: 0.0364569 total: 839ms remaining: 4.4s
160: learn: 0.0363882 total: 844ms remaining: 4.4s
161: learn: 0.0362898 total: 849ms remaining: 4.39s
162: learn: 0.0361728 total: 854ms remaining: 4.38s
163: learn: 0.0360695 total: 859ms remaining: 4.38s
164: learn: 0.0359922 total: 864ms remaining: 4.37s
165: learn: 0.0359556 total: 869ms remaining: 4.37s
166: learn: 0.0358538 total: 875ms remaining: 4.36s
167: learn: 0.0357540 total: 880ms remaining: 4.36s
168: learn: 0.0356955 total: 885ms remaining: 4.35s
169: learn: 0.0356386 total: 890ms remaining: 4.35s
170: learn: 0.0355902 total: 895ms remaining: 4.34s
171: learn: 0.0355099 total: 901ms remaining: 4.34s
172: learn: 0.0354067 total: 906ms remaining: 4.33s
173: learn: 0.0353150 total: 911ms remaining: 4.33s
174: learn: 0.0352394 total: 917ms remaining: 4.32s
175: learn: 0.0351103 total: 922ms remaining: 4.32s
176: learn: 0.0350084 total: 928ms remaining: 4.31s
177: learn: 0.0349604 total: 933ms remaining: 4.31s
178: learn: 0.0348777 total: 938ms remaining: 4.3s
179: learn: 0.0348155 total: 943ms remaining: 4.3s
180: learn: 0.0347761 total: 948ms remaining: 4.29s
181: learn: 0.0347036 total: 953ms remaining: 4.29s
182: learn: 0.0346330 total: 959ms remaining: 4.28s
183: learn: 0.0345057 total: 964ms remaining: 4.27s
184: learn: 0.0344846 total: 969ms remaining: 4.27s
185: learn: 0.0344072 total: 974ms remaining: 4.26s
186: learn: 0.0343720 total: 979ms remaining: 4.26s
187: learn: 0.0343120 total: 985ms remaining: 4.25s
188: learn: 0.0342632 total: 990ms remaining: 4.25s
189: learn: 0.0341892 total: 995ms remaining: 4.24s
190: learn: 0.0341450 total: 1s remaining: 4.24s
191: learn: 0.0340973 total: 1s remaining: 4.23s
192: learn: 0.0340034 total: 1.01s remaining: 4.23s
193: learn: 0.0339326 total: 1.02s remaining: 4.22s
194: learn: 0.0338693 total: 1.02s remaining: 4.22s
195: learn: 0.0338140 total: 1.03s remaining: 4.21s
196: learn: 0.0337701 total: 1.03s remaining: 4.21s
197: learn: 0.0337089 total: 1.04s remaining: 4.2s
198: learn: 0.0336022 total: 1.04s remaining: 4.2s
199: learn: 0.0335199 total: 1.05s remaining: 4.2s
200: learn: 0.0334432 total: 1.05s remaining: 4.19s
201: learn: 0.0333305 total: 1.06s remaining: 4.19s
202: learn: 0.0332696 total: 1.06s remaining: 4.18s
203: learn: 0.0332230 total: 1.07s remaining: 4.18s
204: learn: 0.0331458 total: 1.08s remaining: 4.17s
205: learn: 0.0330940 total: 1.08s remaining: 4.17s
206: learn: 0.0330653 total: 1.09s remaining: 4.17s
207: learn: 0.0330131 total: 1.09s remaining: 4.17s
208: learn: 0.0329234 total: 1.1s remaining: 4.16s
209: learn: 0.0328476 total: 1.1s remaining: 4.15s
210: learn: 0.0327523 total: 1.11s remaining: 4.15s
211: learn: 0.0326364 total: 1.11s remaining: 4.14s
212: learn: 0.0325877 total: 1.12s remaining: 4.13s
213: learn: 0.0325568 total: 1.12s remaining: 4.13s
214: learn: 0.0325096 total: 1.13s remaining: 4.12s
215: learn: 0.0324964 total: 1.13s remaining: 4.12s
216: learn: 0.0323982 total: 1.14s remaining: 4.11s
217: learn: 0.0323304 total: 1.14s remaining: 4.11s
218: learn: 0.0322552 total: 1.15s remaining: 4.1s
219: learn: 0.0321950 total: 1.15s remaining: 4.09s
220: learn: 0.0321235 total: 1.16s remaining: 4.09s
221: learn: 0.0320966 total: 1.17s remaining: 4.08s
```

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222: learn: 0.0320452 total: 1.17s remaining: 4.08s
223: learn: 0.0319715 total: 1.18s remaining: 4.07s
224: learn: 0.0319427 total: 1.18s remaining: 4.07s
225: learn: 0.0318501 total: 1.19s remaining: 4.06s
226: learn: 0.0318242 total: 1.19s remaining: 4.06s
227: learn: 0.0317398 total: 1.2s remaining: 4.05s
228: learn: 0.0316259 total: 1.2s remaining: 4.04s
229: learn: 0.0315845 total: 1.21s remaining: 4.04s
230: learn: 0.0315138 total: 1.21s remaining: 4.04s
231: learn: 0.0314286 total: 1.22s remaining: 4.03s
232: learn: 0.0313983 total: 1.22s remaining: 4.02s
233: learn: 0.0313601 total: 1.23s remaining: 4.02s
234: learn: 0.0313297 total: 1.23s remaining: 4.01s
235: learn: 0.0312649 total: 1.24s remaining: 4.01s
236: learn: 0.0312008 total: 1.24s remaining: 4s
237: learn: 0.0311224 total: 1.25s remaining: 3.99s
238: learn: 0.0310719 total: 1.25s remaining: 3.99s
239: learn: 0.0310100 total: 1.26s remaining: 3.98s
240: learn: 0.0309735 total: 1.26s remaining: 3.98s
241: learn: 0.0309220 total: 1.27s remaining: 3.97s
242: learn: 0.0308510 total: 1.27s remaining: 3.97s
243: learn: 0.0308379 total: 1.28s remaining: 3.96s
244: learn: 0.0307931 total: 1.28s remaining: 3.96s
245: learn: 0.0307694 total: 1.29s remaining: 3.95s
246: learn: 0.0306763 total: 1.29s remaining: 3.94s
247: learn: 0.0305819 total: 1.3s remaining: 3.94s
248: learn: 0.0305125 total: 1.3s remaining: 3.93s
249: learn: 0.0304532 total: 1.31s remaining: 3.93s
250: learn: 0.0304039 total: 1.31s remaining: 3.92s
251: learn: 0.0303404 total: 1.32s remaining: 3.92s
252: learn: 0.0303153 total: 1.32s remaining: 3.91s
253: learn: 0.0302625 total: 1.33s remaining: 3.9s
254: learn: 0.0301713 total: 1.33s remaining: 3.9s
255: learn: 0.0301243 total: 1.34s remaining: 3.9s
256: learn: 0.0300593 total: 1.35s remaining: 3.89s
257: learn: 0.0300274 total: 1.35s remaining: 3.89s
258: learn: 0.0299314 total: 1.36s remaining: 3.88s
259: learn: 0.0299138 total: 1.36s remaining: 3.88s
260: learn: 0.0298573 total: 1.37s remaining: 3.87s
261: learn: 0.0297993 total: 1.37s remaining: 3.87s
262: learn: 0.0297425 total: 1.38s remaining: 3.86s
263: learn: 0.0297112 total: 1.38s remaining: 3.85s
264: learn: 0.0296508 total: 1.39s remaining: 3.85s
265: learn: 0.0296032 total: 1.39s remaining: 3.84s
266: learn: 0.0295731 total: 1.4s remaining: 3.84s
267: learn: 0.0295422 total: 1.4s remaining: 3.83s
268: learn: 0.0294133 total: 1.41s remaining: 3.83s
269: learn: 0.0294025 total: 1.41s remaining: 3.83s
270: learn: 0.0293587 total: 1.42s remaining: 3.82s
271: learn: 0.0292642 total: 1.43s remaining: 3.81s
272: learn: 0.0291626 total: 1.43s remaining: 3.81s
273: learn: 0.0291327 total: 1.44s remaining: 3.8s
274: learn: 0.0290476 total: 1.44s remaining: 3.8s
275: learn: 0.0290044 total: 1.45s remaining: 3.79s
276: learn: 0.0289547 total: 1.45s remaining: 3.79s
277: learn: 0.0288888 total: 1.46s remaining: 3.78s
278: learn: 0.0288613 total: 1.46s remaining: 3.77s
279: learn: 0.0288022 total: 1.47s remaining: 3.77s
280: learn: 0.0287484 total: 1.47s remaining: 3.76s
281: learn: 0.0286940 total: 1.48s remaining: 3.76s
282: learn: 0.0286563 total: 1.48s remaining: 3.75s
283: learn: 0.0285798 total: 1.49s remaining: 3.75s
284: learn: 0.0285108 total: 1.49s remaining: 3.74s
285: learn: 0.0284347 total: 1.5s remaining: 3.74s
286: learn: 0.0284005 total: 1.5s remaining: 3.73s
287: learn: 0.0283652 total: 1.51s remaining: 3.72s
288: learn: 0.0283252 total: 1.51s remaining: 3.72s
289: learn: 0.0282679 total: 1.52s remaining: 3.71s
290: learn: 0.0281966 total: 1.52s remaining: 3.71s
291: learn: 0.0281573 total: 1.53s remaining: 3.7s
292: learn: 0.0281048 total: 1.53s remaining: 3.7s
293: learn: 0.0280610 total: 1.54s remaining: 3.69s
294: learn: 0.0280372 total: 1.54s remaining: 3.69s
295: learn: 0.0279996 total: 1.55s remaining: 3.68s
296: learn: 0.0279760 total: 1.55s remaining: 3.67s
297: learn: 0.0279451 total: 1.56s remaining: 3.67s
298: learn: 0.0278777 total: 1.56s remaining: 3.66s
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299: learn: 0.0278168 total: 1.57s remaining: 3.66s
300: learn: 0.0277889 total: 1.57s remaining: 3.65s
301: learn: 0.0277362 total: 1.58s remaining: 3.65s
302: learn: 0.0276867 total: 1.58s remaining: 3.64s
303: learn: 0.0276370 total: 1.59s remaining: 3.63s
304: learn: 0.0276187 total: 1.59s remaining: 3.63s
305: learn: 0.0275415 total: 1.6s remaining: 3.62s
306: learn: 0.0275033 total: 1.6s remaining: 3.62s
307: learn: 0.0274575 total: 1.61s remaining: 3.61s
308: learn: 0.0274192 total: 1.61s remaining: 3.61s
309: learn: 0.0273808 total: 1.62s remaining: 3.6s
310: learn: 0.0273128 total: 1.62s remaining: 3.6s
311: learn: 0.0273033 total: 1.63s remaining: 3.59s
312: learn: 0.0272892 total: 1.63s remaining: 3.59s
313: learn: 0.0272613 total: 1.64s remaining: 3.58s
314: learn: 0.0271771 total: 1.64s remaining: 3.58s
315: learn: 0.0270782 total: 1.65s remaining: 3.57s
316: learn: 0.0270471 total: 1.66s remaining: 3.56s
317: learn: 0.0270286 total: 1.66s remaining: 3.56s
318: learn: 0.0270052 total: 1.67s remaining: 3.56s
319: learn: 0.0269589 total: 1.67s remaining: 3.55s
320: learn: 0.0269366 total: 1.68s remaining: 3.54s
321: learn: 0.0269052 total: 1.68s remaining: 3.54s
322: learn: 0.0268523 total: 1.69s remaining: 3.53s
323: learn: 0.0267974 total: 1.69s remaining: 3.53s
324: learn: 0.0267595 total: 1.7s remaining: 3.52s
325: learn: 0.0267172 total: 1.7s remaining: 3.52s
326: learn: 0.0266386 total: 1.71s remaining: 3.51s
327: learn: 0.0266133 total: 1.71s remaining: 3.51s
328: learn: 0.0265755 total: 1.72s remaining: 3.5s
329: learn: 0.0265393 total: 1.72s remaining: 3.5s
330: learn: 0.0264364 total: 1.73s remaining: 3.49s
331: learn: 0.0263899 total: 1.73s remaining: 3.48s
332: learn: 0.0263649 total: 1.74s remaining: 3.48s
333: learn: 0.0263117 total: 1.74s remaining: 3.48s
334: learn: 0.0262302 total: 1.75s remaining: 3.47s
335: learn: 0.0261953 total: 1.75s remaining: 3.47s
336: learn: 0.0261290 total: 1.76s remaining: 3.46s
337: learn: 0.0261146 total: 1.76s remaining: 3.46s
338: learn: 0.0261003 total: 1.77s remaining: 3.45s
339: learn: 0.0260458 total: 1.77s remaining: 3.44s
340: learn: 0.0259916 total: 1.78s remaining: 3.44s
341: learn: 0.0259760 total: 1.78s remaining: 3.43s
342: learn: 0.0259486 total: 1.79s remaining: 3.43s
343: learn: 0.0259307 total: 1.79s remaining: 3.42s
344: learn: 0.0259117 total: 1.8s remaining: 3.42s
345: learn: 0.0259004 total: 1.8s remaining: 3.41s
346: learn: 0.0258854 total: 1.81s remaining: 3.41s
347: learn: 0.0258137 total: 1.81s remaining: 3.4s
348: learn: 0.0257858 total: 1.82s remaining: 3.4s
349: learn: 0.0257617 total: 1.83s remaining: 3.39s
350: learn: 0.0257163 total: 1.83s remaining: 3.39s
351: learn: 0.0256718 total: 1.84s remaining: 3.38s
352: learn: 0.0256432 total: 1.84s remaining: 3.38s
353: learn: 0.0256126 total: 1.85s remaining: 3.37s
354: learn: 0.0255391 total: 1.85s remaining: 3.36s
355: learn: 0.0255178 total: 1.86s remaining: 3.36s
356: learn: 0.0254955 total: 1.86s remaining: 3.35s
357: learn: 0.0254769 total: 1.87s remaining: 3.35s
358: learn: 0.0253861 total: 1.87s remaining: 3.34s
359: learn: 0.0253122 total: 1.88s remaining: 3.34s
360: learn: 0.0252920 total: 1.88s remaining: 3.33s
361: learn: 0.0252670 total: 1.89s remaining: 3.33s
362: learn: 0.0252249 total: 1.89s remaining: 3.32s
363: learn: 0.0252080 total: 1.9s remaining: 3.32s
364: learn: 0.0251584 total: 1.9s remaining: 3.31s
365: learn: 0.0251332 total: 1.91s remaining: 3.31s
366: learn: 0.0251030 total: 1.91s remaining: 3.3s
367: learn: 0.0250718 total: 1.92s remaining: 3.29s
368: learn: 0.0250186 total: 1.92s remaining: 3.29s
369: learn: 0.0249900 total: 1.93s remaining: 3.28s
370: learn: 0.0249215 total: 1.93s remaining: 3.28s
371: learn: 0.0249027 total: 1.94s remaining: 3.27s
372: learn: 0.0248510 total: 1.94s remaining: 3.27s
373: learn: 0.0247951 total: 1.95s remaining: 3.26s
374: learn: 0.0247566 total: 1.95s remaining: 3.26s
375: learn: 0.0247475 total: 1.96s remaining: 3.25s
```

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376: learn: 0.0247266 total: 1.96s remaining: 3.25s
377: learn: 0.0247025 total: 1.97s remaining: 3.24s
378: learn: 0.0246552 total: 1.98s remaining: 3.24s
379: learn: 0.0246186 total: 1.98s remaining: 3.23s
380: learn: 0.0246068 total: 1.99s remaining: 3.23s
381: learn: 0.0245981 total: 1.99s remaining: 3.22s
382: learn: 0.0245165 total: 2s remaining: 3.21s
383: learn: 0.0245066 total: 2s remaining: 3.21s
384: learn: 0.0244894 total: 2s remaining: 3.2s
385: learn: 0.0244582 total: 2.01s remaining: 3.2s
386: learn: 0.0244174 total: 2.02s remaining: 3.19s
387: learn: 0.0244010 total: 2.02s remaining: 3.19s
388: learn: 0.0243704 total: 2.02s remaining: 3.18s
389: learn: 0.0243229 total: 2.03s remaining: 3.18s
390: learn: 0.0243042 total: 2.04s remaining: 3.17s
391: learn: 0.0242556 total: 2.04s remaining: 3.17s
392: learn: 0.0242412 total: 2.05s remaining: 3.16s
393: learn: 0.0241933 total: 2.05s remaining: 3.16s
394: learn: 0.0241723 total: 2.06s remaining: 3.15s
395: learn: 0.0241280 total: 2.06s remaining: 3.15s
396: learn: 0.0241020 total: 2.07s remaining: 3.14s
397: learn: 0.0240659 total: 2.07s remaining: 3.14s
398: learn: 0.0240566 total: 2.08s remaining: 3.13s
399: learn: 0.0240113 total: 2.08s remaining: 3.13s
400: learn: 0.0239857 total: 2.09s remaining: 3.12s
401: learn: 0.0239279 total: 2.09s remaining: 3.12s
402: learn: 0.0238965 total: 2.1s remaining: 3.11s
403: learn: 0.0238732 total: 2.1s remaining: 3.1s
404: learn: 0.0238532 total: 2.11s remaining: 3.1s
405: learn: 0.0238381 total: 2.11s remaining: 3.09s
406: learn: 0.0238300 total: 2.12s remaining: 3.09s
407: learn: 0.0238058 total: 2.12s remaining: 3.08s
408: learn: 0.0237991 total: 2.13s remaining: 3.08s
409: learn: 0.0237815 total: 2.13s remaining: 3.07s
410: learn: 0.0237513 total: 2.14s remaining: 3.07s
411: learn: 0.0237454 total: 2.14s remaining: 3.06s
412: learn: 0.0237393 total: 2.15s remaining: 3.06s
413: learn: 0.0237322 total: 2.15s remaining: 3.05s
414: learn: 0.0237259 total: 2.16s remaining: 3.04s
415: learn: 0.0237145 total: 2.17s remaining: 3.04s
416: learn: 0.0236970 total: 2.17s remaining: 3.03s
417: learn: 0.0236615 total: 2.17s remaining: 3.03s
418: learn: 0.0236567 total: 2.18s remaining: 3.02s
419: learn: 0.0236212 total: 2.19s remaining: 3.02s
420: learn: 0.0235838 total: 2.19s remaining: 3.01s
421: learn: 0.0235739 total: 2.19s remaining: 3.01s
422: learn: 0.0235368 total: 2.2s remaining: 3s
423: learn: 0.0235132 total: 2.21s remaining: 3s
424: learn: 0.0234586 total: 2.21s remaining: 2.99s
425: learn: 0.0233779 total: 2.22s remaining: 2.99s
426: learn: 0.0233657 total: 2.22s remaining: 2.98s
427: learn: 0.0233491 total: 2.23s remaining: 2.98s
428: learn: 0.0233417 total: 2.23s remaining: 2.97s
429: learn: 0.0233362 total: 2.24s remaining: 2.96s
430: learn: 0.0233113 total: 2.24s remaining: 2.96s
431: learn: 0.0233051 total: 2.25s remaining: 2.95s
432: learn: 0.0232767 total: 2.25s remaining: 2.95s
433: learn: 0.0232529 total: 2.26s remaining: 2.94s
434: learn: 0.0232436 total: 2.26s remaining: 2.94s
435: learn: 0.0232361 total: 2.27s remaining: 2.93s
436: learn: 0.0231870 total: 2.27s remaining: 2.93s
437: learn: 0.0231816 total: 2.28s remaining: 2.92s
438: learn: 0.0231776 total: 2.28s remaining: 2.92s
439: learn: 0.0231414 total: 2.29s remaining: 2.91s
440: learn: 0.0231239 total: 2.29s remaining: 2.9s
441: learn: 0.0231037 total: 2.3s remaining: 2.9s
442: learn: 0.0230884 total: 2.3s remaining: 2.9s
443: learn: 0.0230754 total: 2.31s remaining: 2.89s
444: learn: 0.0230712 total: 2.31s remaining: 2.88s
445: learn: 0.0230663 total: 2.32s remaining: 2.88s
446: learn: 0.0230434 total: 2.32s remaining: 2.87s
447: learn: 0.0230216 total: 2.33s remaining: 2.87s
448: learn: 0.0230181 total: 2.33s remaining: 2.86s
449: learn: 0.0230083 total: 2.34s remaining: 2.86s
450: learn: 0.0229542 total: 2.34s remaining: 2.85s
451: learn: 0.0229512 total: 2.35s remaining: 2.85s
452: learn: 0.0229308 total: 2.35s remaining: 2.84s
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453: learn: 0.0229202 total: 2.36s remaining: 2.84s
454: learn: 0.0229172 total: 2.36s remaining: 2.83s
455: learn: 0.0228881 total: 2.37s remaining: 2.83s
456: learn: 0.0228803 total: 2.37s remaining: 2.82s
457: learn: 0.0228651 total: 2.38s remaining: 2.81s
458: learn: 0.0228164 total: 2.38s remaining: 2.81s
459: learn: 0.0228090 total: 2.39s remaining: 2.8s
460: learn: 0.0227985 total: 2.39s remaining: 2.8s
461: learn: 0.0227876 total: 2.4s remaining: 2.79s
462: learn: 0.0227847 total: 2.4s remaining: 2.79s
463: learn: 0.0227650 total: 2.41s remaining: 2.78s
464: learn: 0.0227490 total: 2.41s remaining: 2.78s
465: learn: 0.0226840 total: 2.42s remaining: 2.77s
466: learn: 0.0226802 total: 2.42s remaining: 2.77s
467: learn: 0.0226688 total: 2.43s remaining: 2.76s
468: learn: 0.0226546 total: 2.43s remaining: 2.76s
469: learn: 0.0226335 total: 2.44s remaining: 2.75s
470: learn: 0.0226007 total: 2.44s remaining: 2.75s
471: learn: 0.0225815 total: 2.45s remaining: 2.74s
472: learn: 0.0225491 total: 2.45s remaining: 2.73s
473: learn: 0.0225318 total: 2.46s remaining: 2.73s
474: learn: 0.0225149 total: 2.46s remaining: 2.72s
475: learn: 0.0224520 total: 2.47s remaining: 2.72s
476: learn: 0.0224490 total: 2.48s remaining: 2.71s
477: learn: 0.0224137 total: 2.48s remaining: 2.71s
478: learn: 0.0223911 total: 2.48s remaining: 2.7s
479: learn: 0.0223796 total: 2.49s remaining: 2.7s
480: learn: 0.0223696 total: 2.5s remaining: 2.69s
481: learn: 0.0223523 total: 2.5s remaining: 2.69s
482: learn: 0.0223009 total: 2.5s remaining: 2.68s
483: learn: 0.0222858 total: 2.51s remaining: 2.68s
484: learn: 0.0222746 total: 2.52s remaining: 2.67s
485: learn: 0.0222550 total: 2.52s remaining: 2.67s
486: learn: 0.0222475 total: 2.52s remaining: 2.66s
487: learn: 0.0222394 total: 2.53s remaining: 2.65s
488: learn: 0.0222023 total: 2.54s remaining: 2.65s
489: learn: 0.0221918 total: 2.54s remaining: 2.64s
490: learn: 0.0221630 total: 2.54s remaining: 2.64s
491: learn: 0.0221524 total: 2.55s remaining: 2.63s
492: learn: 0.0221177 total: 2.56s remaining: 2.63s
493: learn: 0.0221007 total: 2.56s remaining: 2.62s
494: learn: 0.0220501 total: 2.57s remaining: 2.62s
495: learn: 0.0220477 total: 2.57s remaining: 2.61s
496: learn: 0.0220265 total: 2.58s remaining: 2.61s
497: learn: 0.0220183 total: 2.58s remaining: 2.6s
498: learn: 0.0220032 total: 2.59s remaining: 2.6s
499: learn: 0.0219588 total: 2.59s remaining: 2.59s
500: learn: 0.0219421 total: 2.6s remaining: 2.58s
501: learn: 0.0219318 total: 2.6s remaining: 2.58s
502: learn: 0.0218983 total: 2.61s remaining: 2.58s
503: learn: 0.0218702 total: 2.61s remaining: 2.57s
504: learn: 0.0218401 total: 2.62s remaining: 2.56s
505: learn: 0.0218078 total: 2.62s remaining: 2.56s
506: learn: 0.0217965 total: 2.63s remaining: 2.55s
507: learn: 0.0217314 total: 2.63s remaining: 2.55s
508: learn: 0.0216874 total: 2.64s remaining: 2.54s
509: learn: 0.0216449 total: 2.64s remaining: 2.54s
510: learn: 0.0216215 total: 2.65s remaining: 2.53s
511: learn: 0.0215767 total: 2.65s remaining: 2.53s
512: learn: 0.0215656 total: 2.66s remaining: 2.52s
513: learn: 0.0215571 total: 2.66s remaining: 2.52s
514: learn: 0.0215432 total: 2.67s remaining: 2.51s
515: learn: 0.0215276 total: 2.67s remaining: 2.51s
516: learn: 0.0214967 total: 2.68s remaining: 2.5s
517: learn: 0.0214318 total: 2.68s remaining: 2.5s
518: learn: 0.0214293 total: 2.69s remaining: 2.49s
519: learn: 0.0214207 total: 2.69s remaining: 2.49s
520: learn: 0.0213771 total: 2.7s remaining: 2.48s
521: learn: 0.0213676 total: 2.7s remaining: 2.48s
522: learn: 0.0213494 total: 2.71s remaining: 2.47s
523: learn: 0.0213428 total: 2.71s remaining: 2.46s
524: learn: 0.0213338 total: 2.72s remaining: 2.46s
525: learn: 0.0213239 total: 2.72s remaining: 2.46s
526: learn: 0.0213136 total: 2.73s remaining: 2.45s
527: learn: 0.0212843 total: 2.73s remaining: 2.44s
528: learn: 0.0212233 total: 2.74s remaining: 2.44s
529: learn: 0.0212192 total: 2.74s remaining: 2.43s
```

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530: learn: 0.0212057 total: 2.75s remaining: 2.43s
531: learn: 0.0211909 total: 2.75s remaining: 2.42s
532: learn: 0.0211736 total: 2.76s remaining: 2.42s
533: learn: 0.0211327 total: 2.76s remaining: 2.41s
534: learn: 0.0211171 total: 2.77s remaining: 2.41s
535: learn: 0.0211078 total: 2.77s remaining: 2.4s
536: learn: 0.0210478 total: 2.78s remaining: 2.4s
537: learn: 0.0210203 total: 2.79s remaining: 2.39s
538: learn: 0.0210183 total: 2.79s remaining: 2.39s
539: learn: 0.0209617 total: 2.79s remaining: 2.38s
540: learn: 0.0209463 total: 2.8s remaining: 2.38s
541: learn: 0.0208976 total: 2.81s remaining: 2.37s
542: learn: 0.0208845 total: 2.81s remaining: 2.37s
543: learn: 0.0208577 total: 2.81s remaining: 2.36s
544: learn: 0.0208079 total: 2.82s remaining: 2.35s
545: learn: 0.0207717 total: 2.83s remaining: 2.35s
546: learn: 0.0207277 total: 2.83s remaining: 2.34s
547: learn: 0.0207253 total: 2.84s remaining: 2.34s
548: learn: 0.0207062 total: 2.84s remaining: 2.33s
549: learn: 0.0206983 total: 2.85s remaining: 2.33s
550: learn: 0.0206836 total: 2.85s remaining: 2.32s
551: learn: 0.0206421 total: 2.86s remaining: 2.32s
552: learn: 0.0206298 total: 2.86s remaining: 2.31s
553: learn: 0.0205834 total: 2.87s remaining: 2.31s
554: learn: 0.0205684 total: 2.87s remaining: 2.3s
555: learn: 0.0205366 total: 2.88s remaining: 2.3s
556: learn: 0.0204975 total: 2.88s remaining: 2.29s
557: learn: 0.0204593 total: 2.89s remaining: 2.29s
558: learn: 0.0204134 total: 2.89s remaining: 2.28s
559: learn: 0.0204109 total: 2.9s remaining: 2.28s
560: learn: 0.0204031 total: 2.9s remaining: 2.27s
561: learn: 0.0203958 total: 2.91s remaining: 2.27s
562: learn: 0.0203628 total: 2.91s remaining: 2.26s
563: learn: 0.0203161 total: 2.92s remaining: 2.25s
564: learn: 0.0203050 total: 2.92s remaining: 2.25s
565: learn: 0.0202931 total: 2.93s remaining: 2.25s
566: learn: 0.0202858 total: 2.93s remaining: 2.24s
567: learn: 0.0202727 total: 2.94s remaining: 2.23s
568: learn: 0.0202584 total: 2.94s remaining: 2.23s
569: learn: 0.0202566 total: 2.95s remaining: 2.22s
570: learn: 0.0202489 total: 2.95s remaining: 2.22s
571: learn: 0.0202040 total: 2.96s remaining: 2.21s
572: learn: 0.0201406 total: 2.96s remaining: 2.21s
573: learn: 0.0201294 total: 2.97s remaining: 2.2s
574: learn: 0.0201225 total: 2.97s remaining: 2.2s
575: learn: 0.0201144 total: 2.98s remaining: 2.19s
576: learn: 0.0200973 total: 2.98s remaining: 2.19s
577: learn: 0.0200725 total: 2.99s remaining: 2.18s
578: learn: 0.0200471 total: 2.99s remaining: 2.18s
579: learn: 0.0200381 total: 3s remaining: 2.17s
580: learn: 0.0199905 total: 3s remaining: 2.17s
581: learn: 0.0199165 total: 3.01s remaining: 2.16s
582: learn: 0.0199149 total: 3.01s remaining: 2.15s
583: learn: 0.0199024 total: 3.02s remaining: 2.15s
584: learn: 0.0199008 total: 3.02s remaining: 2.14s
585: learn: 0.0198709 total: 3.03s remaining: 2.14s
586: learn: 0.0198415 total: 3.03s remaining: 2.13s
587: learn: 0.0198334 total: 3.04s remaining: 2.13s
588: learn: 0.0197856 total: 3.04s remaining: 2.12s
589: learn: 0.0197839 total: 3.05s remaining: 2.12s
590: learn: 0.0197760 total: 3.05s remaining: 2.11s
591: learn: 0.0197589 total: 3.06s remaining: 2.11s
592: learn: 0.0197423 total: 3.06s remaining: 2.1s
593: learn: 0.0197358 total: 3.07s remaining: 2.1s
594: learn: 0.0196761 total: 3.07s remaining: 2.09s
595: learn: 0.0196312 total: 3.08s remaining: 2.09s
596: learn: 0.0195888 total: 3.08s remaining: 2.08s
597: learn: 0.0195609 total: 3.09s remaining: 2.08s
598: learn: 0.0195593 total: 3.09s remaining: 2.07s
599: learn: 0.0195515 total: 3.1s remaining: 2.07s
600: learn: 0.0195356 total: 3.1s remaining: 2.06s
601: learn: 0.0195017 total: 3.11s remaining: 2.06s
602: learn: 0.0194724 total: 3.11s remaining: 2.05s
603: learn: 0.0194283 total: 3.12s remaining: 2.04s
604: learn: 0.0194100 total: 3.13s remaining: 2.04s
605: learn: 0.0193749 total: 3.13s remaining: 2.04s
606: learn: 0.0193168 total: 3.13s remaining: 2.03s
```

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606: learn: 0.0192800 total: 3.13s remaining: 2.03s
607: learn: 0.0192572 total: 3.14s remaining: 2.02s
608: learn: 0.0192249 total: 3.15s remaining: 2.02s
609: learn: 0.0192161 total: 3.15s remaining: 2.01s
610: learn: 0.0191867 total: 3.16s remaining: 2.01s
611: learn: 0.0191530 total: 3.16s remaining: 2s
612: learn: 0.0190963 total: 3.17s remaining: 2s
613: learn: 0.0190470 total: 3.17s remaining: 1.99s
614: learn: 0.0190350 total: 3.18s remaining: 1.99s
615: learn: 0.0189936 total: 3.18s remaining: 1.98s
616: learn: 0.0189455 total: 3.19s remaining: 1.98s
617: learn: 0.0189433 total: 3.19s remaining: 1.97s
618: learn: 0.0189336 total: 3.2s remaining: 1.97s
619: learn: 0.0188882 total: 3.2s remaining: 1.96s
620: learn: 0.0188470 total: 3.21s remaining: 1.96s
621: learn: 0.0188237 total: 3.21s remaining: 1.95s
622: learn: 0.0187874 total: 3.22s remaining: 1.95s
623: learn: 0.0187860 total: 3.22s remaining: 1.94s
624: learn: 0.0187783 total: 3.23s remaining: 1.94s
625: learn: 0.0187769 total: 3.23s remaining: 1.93s
626: learn: 0.0187688 total: 3.24s remaining: 1.93s
627: learn: 0.0187288 total: 3.24s remaining: 1.92s
628: learn: 0.0186937 total: 3.25s remaining: 1.92s
629: learn: 0.0186875 total: 3.25s remaining: 1.91s
630: learn: 0.0186804 total: 3.26s remaining: 1.91s
631: learn: 0.0186411 total: 3.26s remaining: 1.9s
632: learn: 0.0185896 total: 3.27s remaining: 1.9s
633: learn: 0.0185599 total: 3.27s remaining: 1.89s
634: learn: 0.0185339 total: 3.28s remaining: 1.88s
635: learn: 0.0185077 total: 3.28s remaining: 1.88s
636: learn: 0.0184574 total: 3.29s remaining: 1.87s
637: learn: 0.0184163 total: 3.29s remaining: 1.87s
638: learn: 0.0184085 total: 3.3s remaining: 1.86s
639: learn: 0.0183770 total: 3.3s remaining: 1.86s
640: learn: 0.0183702 total: 3.31s remaining: 1.85s
641: learn: 0.0183185 total: 3.31s remaining: 1.85s
642: learn: 0.0182902 total: 3.32s remaining: 1.84s
643: learn: 0.0182860 total: 3.32s remaining: 1.84s
644: learn: 0.0182604 total: 3.33s remaining: 1.83s
645: learn: 0.0182224 total: 3.33s remaining: 1.83s
646: learn: 0.0182016 total: 3.34s remaining: 1.82s
647: learn: 0.0181585 total: 3.35s remaining: 1.82s
648: learn: 0.0181293 total: 3.35s remaining: 1.81s
649: learn: 0.0181042 total: 3.35s remaining: 1.81s
650: learn: 0.0180432 total: 3.36s remaining: 1.8s
651: learn: 0.0180319 total: 3.37s remaining: 1.8s
652: learn: 0.0180044 total: 3.37s remaining: 1.79s
653: learn: 0.0179968 total: 3.38s remaining: 1.79s
654: learn: 0.0179756 total: 3.38s remaining: 1.78s
655: learn: 0.0179736 total: 3.39s remaining: 1.77s
656: learn: 0.0179664 total: 3.39s remaining: 1.77s
657: learn: 0.0179652 total: 3.4s remaining: 1.76s
658: learn: 0.0179588 total: 3.4s remaining: 1.76s
659: learn: 0.0179257 total: 3.41s remaining: 1.75s
660: learn: 0.0178935 total: 3.41s remaining: 1.75s
661: learn: 0.0178591 total: 3.42s remaining: 1.74s
662: learn: 0.0178573 total: 3.42s remaining: 1.74s
663: learn: 0.0178513 total: 3.43s remaining: 1.73s
664: learn: 0.0178462 total: 3.43s remaining: 1.73s
665: learn: 0.0178261 total: 3.44s remaining: 1.72s
666: learn: 0.0177978 total: 3.44s remaining: 1.72s
667: learn: 0.0177873 total: 3.45s remaining: 1.71s
668: learn: 0.0177424 total: 3.45s remaining: 1.71s
669: learn: 0.0177395 total: 3.46s remaining: 1.7s
670: learn: 0.0177104 total: 3.46s remaining: 1.7s
671: learn: 0.0176714 total: 3.47s remaining: 1.69s
672: learn: 0.0176703 total: 3.47s remaining: 1.69s
673: learn: 0.0176390 total: 3.48s remaining: 1.68s
674: learn: 0.0176086 total: 3.48s remaining: 1.68s
675: learn: 0.0175735 total: 3.49s remaining: 1.67s
676: learn: 0.0175424 total: 3.49s remaining: 1.67s
677: learn: 0.0175362 total: 3.5s remaining: 1.66s
678: learn: 0.0175013 total: 3.5s remaining: 1.66s
679: learn: 0.0174644 total: 3.51s remaining: 1.65s
680: learn: 0.0174332 total: 3.51s remaining: 1.64s
681: learn: 0.0174314 total: 3.52s remaining: 1.64s
682: learn: 0.0174072 total: 3.52s remaining: 1.63s
683: learn: 0.0174003 total: 3.53s remaining: 1.63s
```

```
683: learn: 0.0174003 total: 3.53s remaining: 1.63s
684: learn: 0.0173938 total: 3.53s remaining: 1.62s
685: learn: 0.0173853 total: 3.54s remaining: 1.62s
686: learn: 0.0173486 total: 3.54s remaining: 1.61s
687: learn: 0.0173417 total: 3.55s remaining: 1.61s
688: learn: 0.0173156 total: 3.55s remaining: 1.6s
689: learn: 0.0172938 total: 3.56s remaining: 1.6s
690: learn: 0.0172857 total: 3.56s remaining: 1.59s
691: learn: 0.0172780 total: 3.57s remaining: 1.59s
692: learn: 0.0172768 total: 3.57s remaining: 1.58s
693: learn: 0.0172622 total: 3.58s remaining: 1.58s
694: learn: 0.0172531 total: 3.58s remaining: 1.57s
695: learn: 0.0172112 total: 3.59s remaining: 1.57s
696: learn: 0.0171534 total: 3.59s remaining: 1.56s
697: learn: 0.0171457 total: 3.6s remaining: 1.56s
698: learn: 0.0171445 total: 3.6s remaining: 1.55s
699: learn: 0.0171113 total: 3.61s remaining: 1.55s
700: learn: 0.0170843 total: 3.61s remaining: 1.54s
701: learn: 0.0170482 total: 3.62s remaining: 1.53s
702: learn: 0.0169965 total: 3.62s remaining: 1.53s
703: learn: 0.0169899 total: 3.63s remaining: 1.52s
704: learn: 0.0169824 total: 3.63s remaining: 1.52s
705: learn: 0.0169765 total: 3.64s remaining: 1.51s
706: learn: 0.0169509 total: 3.64s remaining: 1.51s
707: learn: 0.0169263 total: 3.65s remaining: 1.5s
708: learn: 0.0168949 total: 3.65s remaining: 1.5s
709: learn: 0.0168663 total: 3.66s remaining: 1.49s
710: learn: 0.0168533 total: 3.66s remaining: 1.49s
711: learn: 0.0168476 total: 3.67s remaining: 1.48s
712: learn: 0.0168243 total: 3.67s remaining: 1.48s
713: learn: 0.0167848 total: 3.68s remaining: 1.47s
714: learn: 0.0167567 total: 3.69s remaining: 1.47s
715: learn: 0.0167339 total: 3.69s remaining: 1.46s
716: learn: 0.0167063 total: 3.69s remaining: 1.46s
717: learn: 0.0166363 total: 3.7s remaining: 1.45s
718: learn: 0.0166176 total: 3.71s remaining: 1.45s
719: learn: 0.0166106 total: 3.71s remaining: 1.44s
720: learn: 0.0166033 total: 3.72s remaining: 1.44s
721: learn: 0.0165986 total: 3.72s remaining: 1.43s
722: learn: 0.0165950 total: 3.73s remaining: 1.43s
723: learn: 0.0165897 total: 3.73s remaining: 1.42s
724: learn: 0.0165851 total: 3.74s remaining: 1.42s
725: learn: 0.0165363 total: 3.74s remaining: 1.41s
726: learn: 0.0165098 total: 3.75s remaining: 1.41s
727: learn: 0.0164453 total: 3.75s remaining: 1.4s
728: learn: 0.0164255 total: 3.76s remaining: 1.4s
729: learn: 0.0164217 total: 3.76s remaining: 1.39s
730: learn: 0.0164051 total: 3.77s remaining: 1.39s
731: learn: 0.0163998 total: 3.77s remaining: 1.38s
732: learn: 0.0163674 total: 3.78s remaining: 1.38s
733: learn: 0.0163496 total: 3.78s remaining: 1.37s
734: learn: 0.0163452 total: 3.79s remaining: 1.36s
735: learn: 0.0163408 total: 3.79s remaining: 1.36s
736: learn: 0.0163357 total: 3.8s remaining: 1.35s
737: learn: 0.0163033 total: 3.8s remaining: 1.35s
738: learn: 0.0162990 total: 3.81s remaining: 1.34s
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740: learn: 0.0162801 total: 3.82s remaining: 1.33s
741: learn: 0.0162548 total: 3.82s remaining: 1.33s
742: learn: 0.0162215 total: 3.83s remaining: 1.32s
743: learn: 0.0162174 total: 3.83s remaining: 1.32s
744: learn: 0.0161917 total: 3.84s remaining: 1.31s
745: learn: 0.0161604 total: 3.84s remaining: 1.31s
746: learn: 0.0161186 total: 3.85s remaining: 1.3s
747: learn: 0.0160953 total: 3.85s remaining: 1.3s
748: learn: 0.0160634 total: 3.86s remaining: 1.29s
749: learn: 0.0160531 total: 3.86s remaining: 1.29s
750: learn: 0.0160319 total: 3.87s remaining: 1.28s
751: learn: 0.0159846 total: 3.87s remaining: 1.28s
752: learn: 0.0159685 total: 3.88s remaining: 1.27s
753: learn: 0.0159617 total: 3.88s remaining: 1.27s
754: learn: 0.0159567 total: 3.89s remaining: 1.26s
755: learn: 0.0159091 total: 3.89s remaining: 1.26s
756: learn: 0.0159055 total: 3.9s remaining: 1.25s
757: learn: 0.0158990 total: 3.9s remaining: 1.25s
758: learn: 0.0158945 total: 3.91s remaining: 1.24s
759: learn: 0.0158809 total: 3.91s remaining: 1.24s
760: learn: 0.0158799 total: 3.92s remaining: 1.23s
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760: learn: 0.0158799 total: 3.92s remaining: 1.23s
761: learn: 0.0158587 total: 3.92s remaining: 1.23s
762: learn: 0.0158193 total: 3.93s remaining: 1.22s
763: learn: 0.0157914 total: 3.94s remaining: 1.22s
764: learn: 0.0157654 total: 3.94s remaining: 1.21s
765: learn: 0.0157591 total: 3.94s remaining: 1.21s
766: learn: 0.0157352 total: 3.95s remaining: 1.2s
767: learn: 0.0157343 total: 3.96s remaining: 1.19s
768: learn: 0.0156998 total: 3.96s remaining: 1.19s
769: learn: 0.0156934 total: 3.97s remaining: 1.18s
770: learn: 0.0156703 total: 3.97s remaining: 1.18s
771: learn: 0.0156408 total: 3.98s remaining: 1.17s
772: learn: 0.0156169 total: 3.98s remaining: 1.17s
773: learn: 0.0155796 total: 3.99s remaining: 1.16s
774: learn: 0.0155787 total: 3.99s remaining: 1.16s
775: learn: 0.0155742 total: 4s remaining: 1.15s
776: learn: 0.0155373 total: 4s remaining: 1.15s
777: learn: 0.0155273 total: 4.01s remaining: 1.14s
778: learn: 0.0154831 total: 4.01s remaining: 1.14s
779: learn: 0.0154551 total: 4.02s remaining: 1.13s
780: learn: 0.0154245 total: 4.02s remaining: 1.13s
781: learn: 0.0154001 total: 4.03s remaining: 1.12s
782: learn: 0.0153417 total: 4.03s remaining: 1.12s
783: learn: 0.0153198 total: 4.04s remaining: 1.11s
784: learn: 0.0153159 total: 4.04s remaining: 1.11s
785: learn: 0.0152812 total: 4.05s remaining: 1.1s
786: learn: 0.0152542 total: 4.05s remaining: 1.1s
787: learn: 0.0152180 total: 4.06s remaining: 1.09s
788: learn: 0.0151955 total: 4.06s remaining: 1.09s
789: learn: 0.0151673 total: 4.07s remaining: 1.08s
790: learn: 0.0151543 total: 4.07s remaining: 1.08s
791: learn: 0.0151272 total: 4.08s remaining: 1.07s
792: learn: 0.0151154 total: 4.08s remaining: 1.06s
793: learn: 0.0150790 total: 4.09s remaining: 1.06s
794: learn: 0.0150507 total: 4.09s remaining: 1.05s
795: learn: 0.0150113 total: 4.1s remaining: 1.05s
796: learn: 0.0150017 total: 4.1s remaining: 1.04s
797: learn: 0.0149614 total: 4.11s remaining: 1.04s
798: learn: 0.0149465 total: 4.11s remaining: 1.03s
799: learn: 0.0149427 total: 4.12s remaining: 1.03s
800: learn: 0.0149366 total: 4.12s remaining: 1.02s
801: learn: 0.0149356 total: 4.13s remaining: 1.02s
802: learn: 0.0149037 total: 4.13s remaining: 1.01s
803: learn: 0.0149002 total: 4.14s remaining: 1.01s
804: learn: 0.0148945 total: 4.14s remaining: 1s
805: learn: 0.0148897 total: 4.15s remaining: 999ms
806: learn: 0.0148350 total: 4.16s remaining: 994ms
807: learn: 0.0148204 total: 4.16s remaining: 989ms
808: learn: 0.0148169 total: 4.17s remaining: 983ms
809: learn: 0.0148116 total: 4.17s remaining: 978ms
810: learn: 0.0148081 total: 4.17s remaining: 973ms
811: learn: 0.0147837 total: 4.18s remaining: 968ms
812: learn: 0.0147528 total: 4.18s remaining: 963ms
813: learn: 0.0147490 total: 4.19s remaining: 957ms
814: learn: 0.0147436 total: 4.2s remaining: 952ms
815: learn: 0.0147322 total: 4.2s remaining: 947ms
816: learn: 0.0147094 total: 4.21s remaining: 942ms
817: learn: 0.0146840 total: 4.21s remaining: 937ms
818: learn: 0.0146747 total: 4.21s remaining: 932ms
819: learn: 0.0146714 total: 4.22s remaining: 927ms
820: learn: 0.0146619 total: 4.22s remaining: 921ms
821: learn: 0.0146585 total: 4.23s remaining: 916ms
822: learn: 0.0146503 total: 4.24s remaining: 911ms
823: learn: 0.0146204 total: 4.24s remaining: 906ms
824: learn: 0.0146046 total: 4.25s remaining: 901ms
825: learn: 0.0145790 total: 4.25s remaining: 896ms
826: learn: 0.0145627 total: 4.26s remaining: 890ms
827: learn: 0.0145380 total: 4.26s remaining: 885ms
828: learn: 0.0145142 total: 4.27s remaining: 880ms
829: learn: 0.0144681 total: 4.27s remaining: 875ms
830: learn: 0.0144476 total: 4.28s remaining: 870ms
831: learn: 0.0144094 total: 4.28s remaining: 865ms
832: learn: 0.0143792 total: 4.29s remaining: 859ms
833: learn: 0.0143563 total: 4.29s remaining: 854ms
834: learn: 0.0143427 total: 4.3s remaining: 849ms
835: learn: 0.0143125 total: 4.3s remaining: 844ms
836: learn: 0.0142903 total: 4.31s remaining: 839ms
837: learn: 0.0142871 total: 4.31s remaining: 834ms
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857: learn: 0.0142871 total: 4.31s remaining: 834ms
838: learn: 0.0142598 total: 4.32s remaining: 829ms
839: learn: 0.0142234 total: 4.32s remaining: 823ms
840: learn: 0.0142203 total: 4.33s remaining: 818ms
841: learn: 0.0142152 total: 4.33s remaining: 813ms
842: learn: 0.0141889 total: 4.34s remaining: 808ms
843: learn: 0.0141709 total: 4.34s remaining: 803ms
844: learn: 0.0141660 total: 4.35s remaining: 798ms
845: learn: 0.0141152 total: 4.35s remaining: 792ms
846: learn: 0.0141072 total: 4.36s remaining: 787ms
847: learn: 0.0140883 total: 4.36s remaining: 782ms
848: learn: 0.0140848 total: 4.37s remaining: 777ms
849: learn: 0.0140702 total: 4.37s remaining: 772ms
850: learn: 0.0140671 total: 4.38s remaining: 767ms
851: learn: 0.0140662 total: 4.38s remaining: 761ms
852: learn: 0.0140293 total: 4.39s remaining: 756ms
853: learn: 0.0140205 total: 4.39s remaining: 751ms
854: learn: 0.0140071 total: 4.4s remaining: 746ms
855: learn: 0.0139980 total: 4.4s remaining: 741ms
856: learn: 0.0139854 total: 4.41s remaining: 736ms
857: learn: 0.0139340 total: 4.41s remaining: 730ms
858: learn: 0.0139220 total: 4.42s remaining: 725ms
859: learn: 0.0139020 total: 4.42s remaining: 720ms
860: learn: 0.0138849 total: 4.43s remaining: 715ms
861: learn: 0.0138711 total: 4.43s remaining: 710ms
862: learn: 0.0138523 total: 4.44s remaining: 705ms
863: learn: 0.0138447 total: 4.44s remaining: 699ms
864: learn: 0.0138416 total: 4.45s remaining: 694ms
865: learn: 0.0138386 total: 4.45s remaining: 689ms
866: learn: 0.0138266 total: 4.46s remaining: 684ms
867: learn: 0.0138150 total: 4.46s remaining: 679ms
868: learn: 0.0138121 total: 4.47s remaining: 674ms
869: learn: 0.0137866 total: 4.47s remaining: 668ms
870: learn: 0.0137832 total: 4.48s remaining: 663ms
871: learn: 0.0137658 total: 4.48s remaining: 658ms
872: learn: 0.0137318 total: 4.49s remaining: 653ms
873: learn: 0.0136969 total: 4.49s remaining: 648ms
874: learn: 0.0136836 total: 4.5s remaining: 643ms
875: learn: 0.0136594 total: 4.5s remaining: 638ms
876: learn: 0.0136363 total: 4.51s remaining: 632ms
877: learn: 0.0135936 total: 4.51s remaining: 627ms
878: learn: 0.0135849 total: 4.52s remaining: 622ms
879: learn: 0.0135726 total: 4.52s remaining: 617ms
880: learn: 0.0135602 total: 4.53s remaining: 612ms
881: learn: 0.0135483 total: 4.53s remaining: 607ms
882: learn: 0.0135290 total: 4.54s remaining: 602ms
883: learn: 0.0135054 total: 4.54s remaining: 596ms
884: learn: 0.0134964 total: 4.55s remaining: 591ms
885: learn: 0.0134735 total: 4.55s remaining: 586ms
886: learn: 0.0134515 total: 4.56s remaining: 581ms
887: learn: 0.0134454 total: 4.57s remaining: 576ms
888: learn: 0.0134323 total: 4.57s remaining: 571ms
889: learn: 0.0134163 total: 4.58s remaining: 566ms
890: learn: 0.0134135 total: 4.58s remaining: 560ms
891: learn: 0.0133764 total: 4.58s remaining: 555ms
892: learn: 0.0133475 total: 4.59s remaining: 550ms
893: learn: 0.0133157 total: 4.59s remaining: 545ms
894: learn: 0.0133041 total: 4.6s remaining: 540ms
895: learn: 0.0132986 total: 4.61s remaining: 535ms
896: learn: 0.0132958 total: 4.61s remaining: 529ms
897: learn: 0.0132875 total: 4.62s remaining: 524ms
898: learn: 0.0132790 total: 4.62s remaining: 519ms
899: learn: 0.0132633 total: 4.63s remaining: 514ms
900: learn: 0.0132352 total: 4.63s remaining: 509ms
901: learn: 0.0132320 total: 4.64s remaining: 504ms
902: learn: 0.0132180 total: 4.64s remaining: 499ms
903: learn: 0.0132125 total: 4.65s remaining: 493ms
904: learn: 0.0131876 total: 4.65s remaining: 488ms
905: learn: 0.0131566 total: 4.66s remaining: 483ms
906: learn: 0.0131484 total: 4.66s remaining: 478ms
907: learn: 0.0131251 total: 4.67s remaining: 473ms
908: learn: 0.0131023 total: 4.67s remaining: 468ms
909: learn: 0.0130891 total: 4.68s remaining: 463ms
910: learn: 0.0130719 total: 4.68s remaining: 457ms
911: learn: 0.0130586 total: 4.69s remaining: 452ms
912: learn: 0.0130431 total: 4.69s remaining: 447ms
913: learn: 0.0130229 total: 4.7s remaining: 442ms
914: learn: 0.0130198 total: 4.7s remaining: 437ms
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914: learn: 0.0130198 total: 4.7s remaining: 437ms
915: learn: 0.0130118 total: 4.71s remaining: 432ms
916: learn: 0.0130044 total: 4.71s remaining: 427ms
917: learn: 0.0129821 total: 4.72s remaining: 421ms
918: learn: 0.0129613 total: 4.72s remaining: 416ms
919: learn: 0.0129433 total: 4.73s remaining: 411ms
920: learn: 0.0129118 total: 4.73s remaining: 406ms
921: learn: 0.0129062 total: 4.74s remaining: 401ms
922: learn: 0.0128910 total: 4.74s remaining: 396ms
923: learn: 0.0128618 total: 4.75s remaining: 391ms
924: learn: 0.0128543 total: 4.75s remaining: 385ms
925: learn: 0.0128349 total: 4.76s remaining: 380ms
926: learn: 0.0128271 total: 4.76s remaining: 375ms
927: learn: 0.0128017 total: 4.77s remaining: 370ms
928: learn: 0.0127935 total: 4.77s remaining: 365ms
929: learn: 0.0127723 total: 4.78s remaining: 360ms
930: learn: 0.0127460 total: 4.78s remaining: 355ms
931: learn: 0.0127372 total: 4.79s remaining: 349ms
932: learn: 0.0126965 total: 4.79s remaining: 344ms
933: learn: 0.0126696 total: 4.8s remaining: 339ms
934: learn: 0.0126657 total: 4.8s remaining: 334ms
935: learn: 0.0126578 total: 4.81s remaining: 329ms
936: learn: 0.0126552 total: 4.82s remaining: 324ms
937: learn: 0.0126451 total: 4.82s remaining: 319ms
938: learn: 0.0126266 total: 4.83s remaining: 313ms
939: learn: 0.0126086 total: 4.83s remaining: 308ms
940: learn: 0.0125924 total: 4.83s remaining: 303ms
941: learn: 0.0125631 total: 4.84s remaining: 298ms
942: learn: 0.0125593 total: 4.85s remaining: 293ms
943: learn: 0.0125383 total: 4.85s remaining: 288ms
944: learn: 0.0125356 total: 4.86s remaining: 283ms
945: learn: 0.0125266 total: 4.86s remaining: 277ms
946: learn: 0.0125183 total: 4.87s remaining: 272ms
947: learn: 0.0125025 total: 4.87s remaining: 267ms
948: learn: 0.0124841 total: 4.88s remaining: 262ms
949: learn: 0.0124764 total: 4.88s remaining: 257ms
950: learn: 0.0124451 total: 4.89s remaining: 252ms
951: learn: 0.0124403 total: 4.89s remaining: 247ms
952: learn: 0.0124142 total: 4.9s remaining: 242ms
953: learn: 0.0123963 total: 4.9s remaining: 236ms
954: learn: 0.0123889 total: 4.91s remaining: 231ms
955: learn: 0.0123639 total: 4.91s remaining: 226ms
956: learn: 0.0123558 total: 4.92s remaining: 221ms
957: learn: 0.0123504 total: 4.92s remaining: 216ms
958: learn: 0.0123323 total: 4.93s remaining: 211ms
959: learn: 0.0123214 total: 4.93s remaining: 206ms
960: learn: 0.0123042 total: 4.94s remaining: 200ms
961: learn: 0.0123005 total: 4.94s remaining: 195ms
962: learn: 0.0122942 total: 4.95s remaining: 190ms
963: learn: 0.0122872 total: 4.95s remaining: 185ms
964: learn: 0.0122802 total: 4.96s remaining: 180ms
965: learn: 0.0122605 total: 4.96s remaining: 175ms
966: learn: 0.0122418 total: 4.97s remaining: 170ms
967: learn: 0.0122326 total: 4.97s remaining: 164ms
968: learn: 0.0122051 total: 4.98s remaining: 159ms
969: learn: 0.0121986 total: 4.98s remaining: 154ms
970: learn: 0.0121953 total: 4.99s remaining: 149ms
971: learn: 0.0121860 total: 4.99s remaining: 144ms
972: learn: 0.0121752 total: 5s remaining: 139ms
973: learn: 0.0121524 total: 5s remaining: 134ms
974: learn: 0.0121277 total: 5.01s remaining: 128ms
975: learn: 0.0121249 total: 5.01s remaining: 123ms
976: learn: 0.0121159 total: 5.02s remaining: 118ms
977: learn: 0.0121033 total: 5.02s remaining: 113ms
978: learn: 0.0120914 total: 5.03s remaining: 108ms
979: learn: 0.0120733 total: 5.03s remaining: 103ms
980: learn: 0.0120659 total: 5.04s remaining: 97.6ms
981: learn: 0.0120532 total: 5.04s remaining: 92.5ms
982: learn: 0.0120463 total: 5.05s remaining: 87.3ms
983: learn: 0.0120416 total: 5.05s remaining: 82.2ms
984: learn: 0.0120250 total: 5.06s remaining: 77.1ms
985: learn: 0.0120177 total: 5.07s remaining: 71.9ms
986: learn: 0.0119925 total: 5.07s remaining: 66.8ms
987: learn: 0.0119877 total: 5.08s remaining: 61.6ms
988: learn: 0.0119833 total: 5.08s remaining: 56.5ms
989: learn: 0.0119726 total: 5.08s remaining: 51.4ms
990: learn: 0.0119423 total: 5.09s remaining: 46.2ms
991: learn: 0.0119323 total: 5.1s remaining: 41.1ms
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991: learn: 0.0119323 total: 5.1s remaining: 41.1ms
992: learn: 0.0119232 total: 5.1s remaining: 36ms
993: learn: 0.0119123 total: 5.11s remaining: 30.8ms
994: learn: 0.0118971 total: 5.11s remaining: 25.7ms
995: learn: 0.0118902 total: 5.12s remaining: 20.5ms
996: learn: 0.0118765 total: 5.12s remaining: 15.4ms
997: learn: 0.0118721 total: 5.13s remaining: 10.3ms
998: learn: 0.0118552 total: 5.13s remaining: 5.14ms
999: learn: 0.0118439 total: 5.14s remaining: 0us
```

(выбрал другое значение LearningRate)

In [27]:

```
PrintClassificationMetrics(iht_y_test, cb_cl_iht_prediction)
```

-Погрешность (accuracy, balanced) = 0.9484848484848485;
-Меткость (precision, класс 1) = 1.0;
-Полнота (recall, класс 1) = 0.896969696969697;
-F1 (класс 1) = 0.9456869009584664;
-ROC AUC = 0.9484848484848485.

In [28]:

```
plot_confusion_matrix(cb_cl_iht, iht_x_test, iht_y_test)
```

Out[28]:

`<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at 0x26853128eb0>`
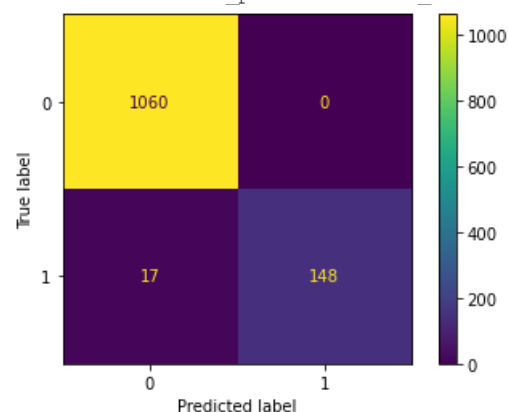
Результат говорит сам за себя!

Часть 2. Регрессия

In [29]:

```python
def MoveColumnToEnd(data, column_name):
    columns = data.columns.tolist()
    column = columns.pop(columns.index(column_name))
    columns.append(column)
    return columns


lab5_regr = pd.read_csv("ML_Datasets/Lab2/lab2_scaled.csv")
columns = MoveColumnToEnd(lab5_regr, "Price")[1:]
lab5_regr = lab5_regr[columns]
```

In [30]:

```python
from sklearn.metrics import mean_absolute_error, mean_squared_error, median_absolute_error, r2_score


def PrintRegressionMetrics(y_test, y_predicted):
    print("-Средняя абсолютная ошибка = {0};\
        \n-Медианная абсолютная ошибка = {1};\
        \n-Среднеквадратичная ошибка = {2};\
        \n-Коэффициент детерминации = {3}.".format(mean_absolute_error(y_test, y_predicted),
                                                median_absolute_error(y_test, y_predicted),
                                                mean_squared_error(y_test, y_predicted, squared = Fals
                                                r2_score(y_test, y_predicted)))

def FitPredictRegr(model, x_train, x_test, y_train, y_test):
    solver = model
    solver.fit(x_train, y_train)
    prediction = solver.predict(x_test)
    PrintRegressionMetrics(y_test, prediction)
```

In [31]:

```python
lab5_regr_x_train, lab5_regr_x_test, lab5_regr_y_train, lab5_regr_y_test = train_test_split(lab5_regr[columns
```

```
lab5_regr[columns
train_size = 0.85,
random_state = RAN
```

Бэггинг

```
FitPredictRegr(BaggingRegressor(random_state = RANDOM_STATE), lab5_regr_x_train, lab5_regr_x_test, lab5_regr_
```

-Средняя абсолютная ошибка = 0.13489055988703724;
-Медианная абсолютная ошибка = 0.05112312126793245;
-Среднеквадратичная ошибка = 0.3007806042422112;
-Коэффициент детерминации = 0.8951171622792088.

Здесь уже видим существенный прирост в сравнении с наилучшей моделью из предыдущей работы - SVR-RBF

```
from sklearn.model_selection import ShuffleSplit


cv_scoring_strategies = {"RMSE (negative)" : "neg_root_mean_squared_error",
                         "MedianAE" : "neg_median_absolute_error",
                         "R2-score" : "r2"}

estimators_range = [i for i in range(1, 25)]

bagging_regr_grid = GridSearchCV(estimator = BaggingRegressor(random_state = RANDOM_STATE),
                                 param_grid = [{"n_estimators" : estimators_range}],
                                 cv = ShuffleSplit(random_state = RANDOM_STATE),
                                 n_jobs = 8,
                                 scoring = cv_scoring_strategies,
                                 refit = False,
                                 return_train_score = True)

bagging_regr_grid.fit(lab5_regr[columns[:-1]], lab5_regr[columns[-1]])
```

```
GridSearchCV(cv=ShuffleSplit(n_splits=10, random_state=6, test_size=None, train_size=None),
             estimator=BaggingRegressor(random_state=6), n_jobs=8,
             param_grid=[{'n_estimators': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
                                           12, 13, 14, 15, 16, 17, 18, 19, 20,
                                           21, 22, 23, 24]}],
             refit=False, return_train_score=True,
             scoring={'MedianAE': 'neg_median_absolute_error', 'R2-score': 'r2',
                      'RMSE (negative)': 'neg_root_mean_squared_error'})
```

```
PlotGridSearchResults(cv_scoring_strategies, bagging_regr_grid, estimators_range, 0, 26, -0.5, 1)
```
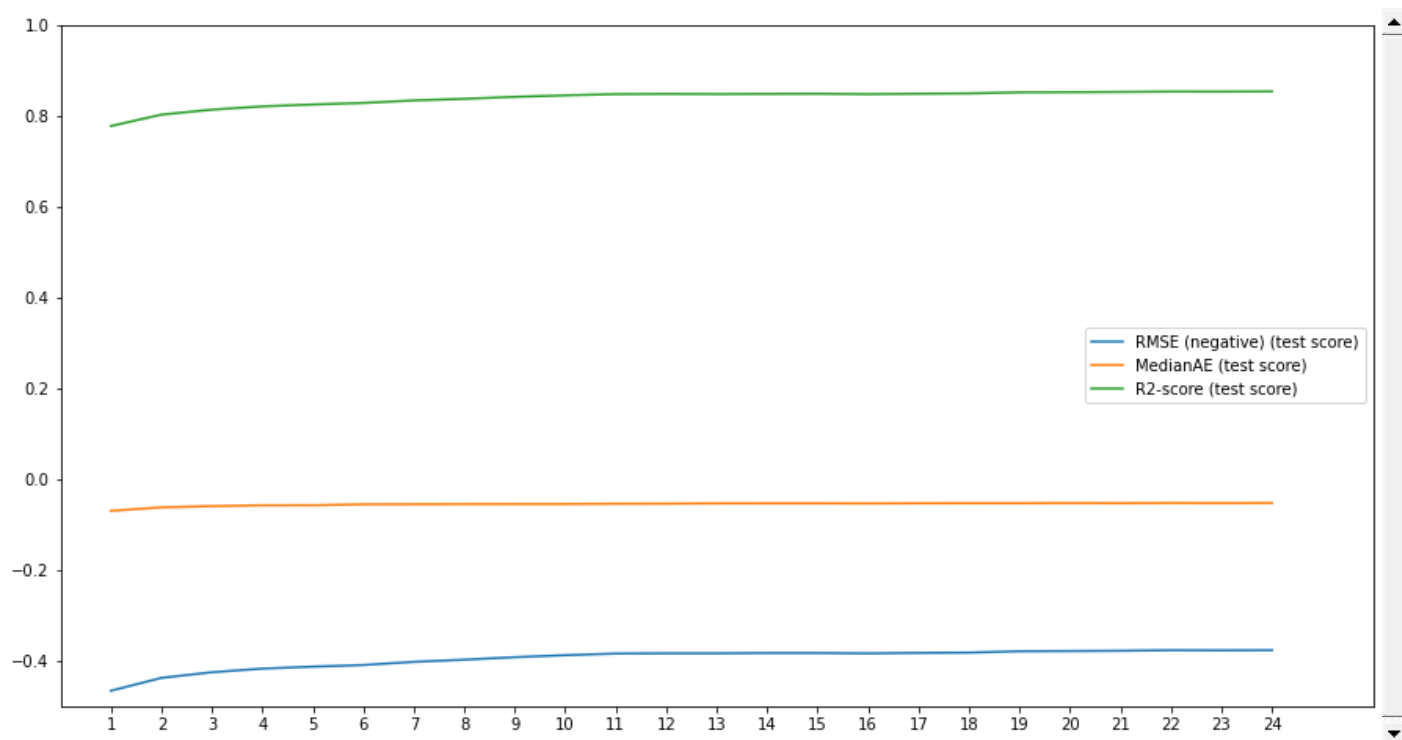
```
FitPredictRegr(BaggingRegressor(n_estimators = 19, random_state = RANDOM_STATE), lab5_regr_x_train, lab5_regr_
```

-Средняя абсолютная ошибка = 0.12781867263767066;
-Медианная абсолютная ошибка = 0.05235557045565786;
-Среднеквадратичная ошибка = 0.26801513545482347;
-Коэффициент детерминации = 0.9167233176619671.

Случайный лес

In [36]:

```
FitPredictRegr(RandomForestRegressor(random_state = RANDOM_STATE), lab5_regr_x_train, lab5_regr_x_test, lab5_
```

-Средняя абсолютная ошибка = 0.12466018147348676;
-Медианная абсолютная ошибка = 0.05113205887654604;
-Среднеквадратичная ошибка = 0.26290791365495664;
-Коэффициент детерминации = 0.9198668727344836.

In [37]:

```
estimators_range = [i for i in range(1, 102, 4)]

rf_regr_grid = GridSearchCV(estimator = RandomForestRegressor(random_state = RANDOM_STATE),
                            param_grid = [{"n_estimators" : estimators_range}],
                            cv = ShuffleSplit(random_state = RANDOM_STATE),
                            n_jobs = 8,
                            scoring = cv_scoring_strategies,
                            refit = False,
                            return_train_score = True)

rf_regr_grid.fit(lab5_regr[columns[:-1]], lab5_regr[columns[-1]])
```

Out[37]:

```
GridSearchCV(cv=ShuffleSplit(n_splits=10, random_state=6, test_size=None, train_size=None),
             estimator=RandomForestRegressor(random_state=6), n_jobs=8,
             param_grid=[{'n_estimators': [1, 5, 9, 13, 17, 21, 25, 29, 33, 37,
                                           41, 45, 49, 53, 57, 61, 65, 69, 73,
                                           77, 81, 85, 89, 93, 97, 101]}],
             refit=False, return_train_score=True,
             scoring={'MedianAE': 'neg_median_absolute_error', 'R2-score': 'r2',
                      'RMSE (negative)': 'neg_root_mean_squared_error'})
```

In [38]:

```
PlotGridSearchResults(cv_scoring_strategies, rf_regr_grid, estimators_range, 0, 102, -0.5, 1)
```
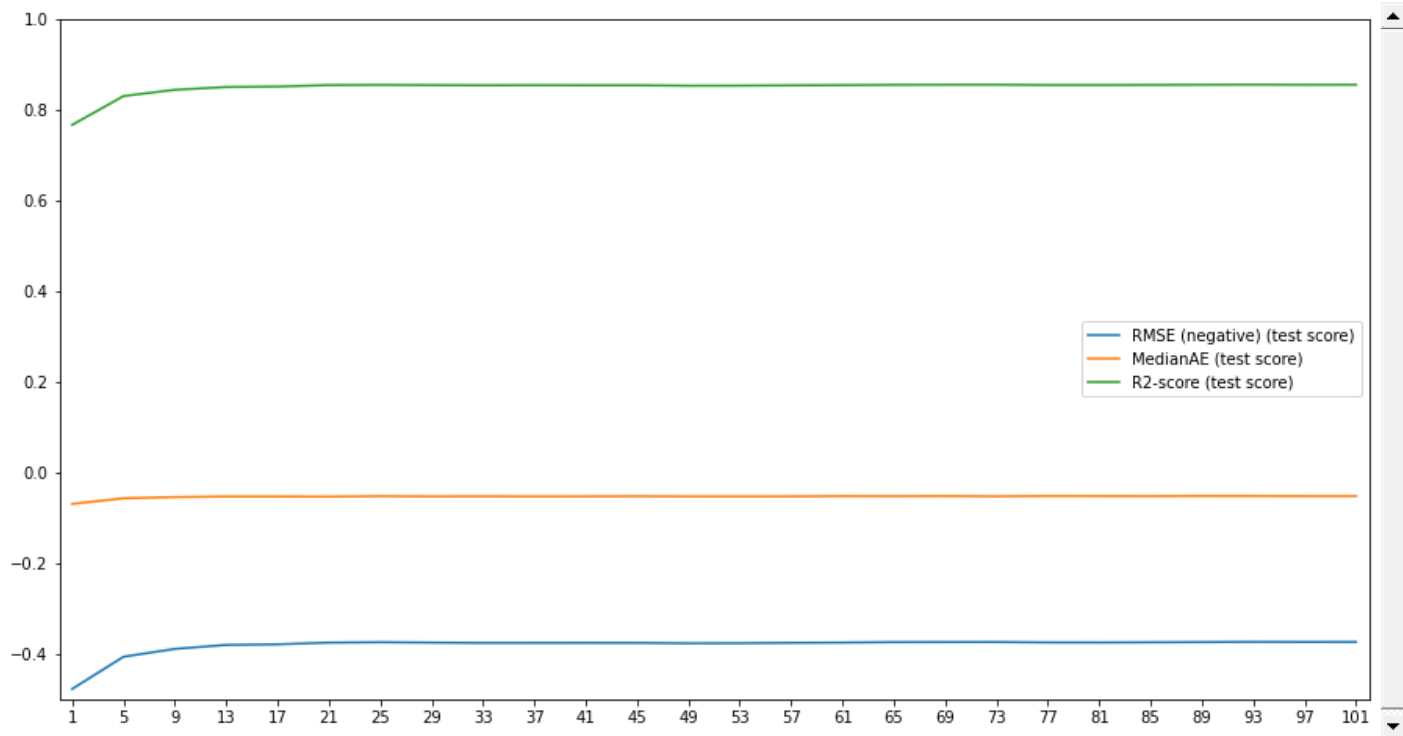

In [39]:

```
FitPredictRegr(RandomForestRegressor(n_estimators = 30, random_state = RANDOM_STATE), lab5_regr_x_train, lab5_
```

-Средняя абсолютная ошибка = 0.12650711293649639;
-Медианная абсолютная ошибка = 0.052910642990587564;
-Среднеквадратичная ошибка = 0.2669840880173342;
-Коэффициент детерминации = 0.9173628118077617.

CatBoost

```
cb_regr = CatBoostRegressor(random_seed = RANDOM_STATE)
cb_regr.fit(lab5_regr_x_train, lab5_regr_y_train)
cb_regr_prediction = cb_regr.predict(lab5_regr_x_test)
```

```
Learning rate set to 0.052187
0: learn: 0.9752961 total: 2.63ms remaining: 2.63s
1: learn: 0.9392755 total: 4.91ms remaining: 2.45s
2: learn: 0.9046029 total: 7.19ms remaining: 2.39s
3: learn: 0.8719543 total: 9.49ms remaining: 2.36s
4: learn: 0.8406479 total: 11.8ms remaining: 2.34s
5: learn: 0.8127355 total: 14.1ms remaining: 2.34s
6: learn: 0.7857565 total: 16.4ms remaining: 2.33s
7: learn: 0.7610209 total: 18.7ms remaining: 2.32s
8: learn: 0.7381586 total: 20.9ms remaining: 2.3s
9: learn: 0.7157287 total: 23.2ms remaining: 2.3s
10: learn: 0.6956452 total: 25.5ms remaining: 2.29s
11: learn: 0.6748119 total: 27.8ms remaining: 2.29s
12: learn: 0.6561441 total: 30.1ms remaining: 2.29s
13: learn: 0.6391546 total: 32.4ms remaining: 2.28s
14: learn: 0.6230648 total: 34.7ms remaining: 2.28s
15: learn: 0.6073891 total: 37ms remaining: 2.27s
16: learn: 0.5926161 total: 39.2ms remaining: 2.27s
17: learn: 0.5796076 total: 41.6ms remaining: 2.27s
18: learn: 0.5665119 total: 43.9ms remaining: 2.26s
19: learn: 0.5534772 total: 46.1ms remaining: 2.26s
20: learn: 0.5417799 total: 48.4ms remaining: 2.25s
21: learn: 0.5306838 total: 50.6ms remaining: 2.25s
22: learn: 0.5212873 total: 52.9ms remaining: 2.25s
23: learn: 0.5119503 total: 55.2ms remaining: 2.24s
24: learn: 0.5027133 total: 57.4ms remaining: 2.24s
25: learn: 0.4946105 total: 59.6ms remaining: 2.23s
26: learn: 0.4865635 total: 61.9ms remaining: 2.23s
27: learn: 0.4792396 total: 64.1ms remaining: 2.23s
28: learn: 0.4724334 total: 66.3ms remaining: 2.22s
29: learn: 0.4652337 total: 68.6ms remaining: 2.22s
30: learn: 0.4586877 total: 70.8ms remaining: 2.21s
31: learn: 0.4522259 total: 73.1ms remaining: 2.21s
32: learn: 0.4469570 total: 75.4ms remaining: 2.21s
33: learn: 0.4412949 total: 77.7ms remaining: 2.21s
34: learn: 0.4365217 total: 79.9ms remaining: 2.2s
35: learn: 0.4318461 total: 82.2ms remaining: 2.2s
36: learn: 0.4275153 total: 84.4ms remaining: 2.2s
37: learn: 0.4234056 total: 86.7ms remaining: 2.19s
38: learn: 0.4192251 total: 89ms remaining: 2.19s
39: learn: 0.4156439 total: 91.3ms remaining: 2.19s
40: learn: 0.4110263 total: 93.6ms remaining: 2.19s
41: learn: 0.4079365 total: 95.9ms remaining: 2.19s
42: learn: 0.4048094 total: 98.2ms remaining: 2.18s
43: learn: 0.4016936 total: 100ms remaining: 2.18s
44: learn: 0.3985599 total: 103ms remaining: 2.18s
45: learn: 0.3958138 total: 105ms remaining: 2.18s
46: learn: 0.3929970 total: 107ms remaining: 2.17s
47: learn: 0.3904448 total: 109ms remaining: 2.17s
48: learn: 0.3876266 total: 112ms remaining: 2.17s
49: learn: 0.3852359 total: 114ms remaining: 2.17s
50: learn: 0.3834631 total: 116ms remaining: 2.16s
51: learn: 0.3811154 total: 118ms remaining: 2.16s
52: learn: 0.3792981 total: 121ms remaining: 2.16s
53: learn: 0.3769756 total: 123ms remaining: 2.15s
54: learn: 0.3750256 total: 125ms remaining: 2.15s
55: learn: 0.3728121 total: 128ms remaining: 2.15s
56: learn: 0.3710906 total: 130ms remaining: 2.15s
57: learn: 0.3692028 total: 132ms remaining: 2.15s
58: learn: 0.3673416 total: 134ms remaining: 2.14s
59: learn: 0.3659111 total: 137ms remaining: 2.14s
60: learn: 0.3645656 total: 139ms remaining: 2.14s
61: learn: 0.3630929 total: 141ms remaining: 2.14s
62: learn: 0.3618473 total: 144ms remaining: 2.13s
63: learn: 0.3602052 total: 146ms remaining: 2.13s
64: learn: 0.3589692 total: 148ms remaining: 2.13s
65: learn: 0.3571642 total: 151ms remaining: 2.13s
66: learn: 0.3552483 total: 153ms remaining: 2.13s
67: learn: 0.3535939 total: 155ms remaining: 2.12s
68: learn: 0.3519207 total: 157ms remaining: 2.12s
69: learn: 0.3506858 total: 160ms remaining: 2.12s
70: learn: 0.3496503 total: 162ms remaining: 2.12s
```

```
71: learn: 0.3482222 total: 164ms remaining: 2.12s
72: learn: 0.3471052 total: 166ms remaining: 2.11s
73: learn: 0.3462834 total: 169ms remaining: 2.11s
74: learn: 0.3453102 total: 171ms remaining: 2.11s
75: learn: 0.3439771 total: 173ms remaining: 2.1s
76: learn: 0.3426794 total: 175ms remaining: 2.1s
77: learn: 0.3417440 total: 178ms remaining: 2.1s
78: learn: 0.3406903 total: 180ms remaining: 2.1s
79: learn: 0.3404171 total: 182ms remaining: 2.09s
80: learn: 0.3395323 total: 184ms remaining: 2.09s
81: learn: 0.3377893 total: 187ms remaining: 2.09s
82: learn: 0.3368656 total: 189ms remaining: 2.09s
83: learn: 0.3357636 total: 191ms remaining: 2.08s
84: learn: 0.3345964 total: 193ms remaining: 2.08s
85: learn: 0.3341908 total: 196ms remaining: 2.08s
86: learn: 0.3334539 total: 198ms remaining: 2.08s
87: learn: 0.3328370 total: 200ms remaining: 2.07s
88: learn: 0.3319281 total: 202ms remaining: 2.07s
89: learn: 0.3313434 total: 205ms remaining: 2.07s
90: learn: 0.3307499 total: 207ms remaining: 2.07s
91: learn: 0.3296887 total: 209ms remaining: 2.06s
92: learn: 0.3291108 total: 211ms remaining: 2.06s
93: learn: 0.3284950 total: 214ms remaining: 2.06s
94: learn: 0.3276486 total: 216ms remaining: 2.06s
95: learn: 0.3266477 total: 218ms remaining: 2.05s
96: learn: 0.3257551 total: 220ms remaining: 2.05s
97: learn: 0.3244365 total: 223ms remaining: 2.05s
98: learn: 0.3239766 total: 225ms remaining: 2.05s
99: learn: 0.3229395 total: 227ms remaining: 2.04s
100: learn: 0.3224692 total: 230ms remaining: 2.04s
101: learn: 0.3219241 total: 232ms remaining: 2.04s
102: learn: 0.3214170 total: 234ms remaining: 2.04s
103: learn: 0.3200086 total: 236ms remaining: 2.04s
104: learn: 0.3189462 total: 239ms remaining: 2.03s
105: learn: 0.3179691 total: 241ms remaining: 2.03s
106: learn: 0.3175920 total: 243ms remaining: 2.03s
107: learn: 0.3172888 total: 245ms remaining: 2.03s
108: learn: 0.3161994 total: 248ms remaining: 2.02s
109: learn: 0.3151980 total: 250ms remaining: 2.02s
110: learn: 0.3145512 total: 252ms remaining: 2.02s
111: learn: 0.3140524 total: 255ms remaining: 2.02s
112: learn: 0.3139713 total: 256ms remaining: 2.01s
113: learn: 0.3127506 total: 258ms remaining: 2.01s
114: learn: 0.3123640 total: 261ms remaining: 2s
115: learn: 0.3119808 total: 263ms remaining: 2s
116: learn: 0.3114066 total: 265ms remaining: 2s
117: learn: 0.3105121 total: 267ms remaining: 2s
118: learn: 0.3098314 total: 270ms remaining: 2s
119: learn: 0.3092178 total: 272ms remaining: 1.99s
120: learn: 0.3086438 total: 274ms remaining: 1.99s
121: learn: 0.3071006 total: 276ms remaining: 1.99s
122: learn: 0.3056956 total: 279ms remaining: 1.99s
123: learn: 0.3047842 total: 281ms remaining: 1.99s
124: learn: 0.3036940 total: 283ms remaining: 1.98s
125: learn: 0.3032961 total: 285ms remaining: 1.98s
126: learn: 0.3029031 total: 288ms remaining: 1.98s
127: learn: 0.3020504 total: 290ms remaining: 1.98s
128: learn: 0.3014535 total: 292ms remaining: 1.97s
129: learn: 0.3007839 total: 295ms remaining: 1.97s
130: learn: 0.2997062 total: 297ms remaining: 1.97s
131: learn: 0.2986255 total: 299ms remaining: 1.97s
132: learn: 0.2978702 total: 301ms remaining: 1.97s
133: learn: 0.2973849 total: 304ms remaining: 1.96s
134: learn: 0.2967358 total: 306ms remaining: 1.96s
135: learn: 0.2962473 total: 308ms remaining: 1.96s
136: learn: 0.2957896 total: 310ms remaining: 1.96s
137: learn: 0.2952194 total: 313ms remaining: 1.95s
138: learn: 0.2946937 total: 315ms remaining: 1.95s
139: learn: 0.2940806 total: 317ms remaining: 1.95s
140: learn: 0.2938274 total: 319ms remaining: 1.95s
141: learn: 0.2932962 total: 322ms remaining: 1.94s
142: learn: 0.2926790 total: 324ms remaining: 1.94s
143: learn: 0.2921314 total: 326ms remaining: 1.94s
144: learn: 0.2915535 total: 329ms remaining: 1.94s
145: learn: 0.2911793 total: 331ms remaining: 1.93s
146: learn: 0.2909274 total: 333ms remaining: 1.93s
147: learn: 0.2903262 total: 335ms remaining: 1.93s
```

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148: learn: 0.2898422 total: 338ms remaining: 1.93s
149: learn: 0.2890673 total: 340ms remaining: 1.93s
150: learn: 0.2887352 total: 342ms remaining: 1.92s
151: learn: 0.2881170 total: 344ms remaining: 1.92s
152: learn: 0.2876882 total: 347ms remaining: 1.92s
153: learn: 0.2874369 total: 349ms remaining: 1.92s
154: learn: 0.2864864 total: 351ms remaining: 1.91s
155: learn: 0.2859403 total: 353ms remaining: 1.91s
156: learn: 0.2854750 total: 356ms remaining: 1.91s
157: learn: 0.2851066 total: 358ms remaining: 1.91s
158: learn: 0.2847024 total: 360ms remaining: 1.91s
159: learn: 0.2843138 total: 363ms remaining: 1.9s
160: learn: 0.2838592 total: 365ms remaining: 1.9s
161: learn: 0.2833774 total: 367ms remaining: 1.9s
162: learn: 0.2824153 total: 370ms remaining: 1.9s
163: learn: 0.2819840 total: 372ms remaining: 1.9s
164: learn: 0.2813182 total: 374ms remaining: 1.89s
165: learn: 0.2805693 total: 376ms remaining: 1.89s
166: learn: 0.2802653 total: 379ms remaining: 1.89s
167: learn: 0.2795778 total: 381ms remaining: 1.89s
168: learn: 0.2792506 total: 383ms remaining: 1.88s
169: learn: 0.2785841 total: 385ms remaining: 1.88s
170: learn: 0.2776769 total: 388ms remaining: 1.88s
171: learn: 0.2773783 total: 390ms remaining: 1.88s
172: learn: 0.2768318 total: 392ms remaining: 1.88s
173: learn: 0.2764485 total: 394ms remaining: 1.87s
174: learn: 0.2760958 total: 397ms remaining: 1.87s
175: learn: 0.2758546 total: 399ms remaining: 1.87s
176: learn: 0.2748712 total: 401ms remaining: 1.86s
177: learn: 0.2744502 total: 403ms remaining: 1.86s
178: learn: 0.2742090 total: 406ms remaining: 1.86s
179: learn: 0.2737722 total: 408ms remaining: 1.86s
180: learn: 0.2734771 total: 410ms remaining: 1.85s
181: learn: 0.2731902 total: 412ms remaining: 1.85s
182: learn: 0.2729470 total: 415ms remaining: 1.85s
183: learn: 0.2726500 total: 417ms remaining: 1.85s
184: learn: 0.2718273 total: 419ms remaining: 1.85s
185: learn: 0.2711493 total: 421ms remaining: 1.84s
186: learn: 0.2702334 total: 424ms remaining: 1.84s
187: learn: 0.2699341 total: 426ms remaining: 1.84s
188: learn: 0.2691911 total: 428ms remaining: 1.84s
189: learn: 0.2689479 total: 430ms remaining: 1.83s
190: learn: 0.2684070 total: 433ms remaining: 1.83s
191: learn: 0.2681361 total: 435ms remaining: 1.83s
192: learn: 0.2679503 total: 437ms remaining: 1.83s
193: learn: 0.2676820 total: 439ms remaining: 1.82s
194: learn: 0.2665620 total: 442ms remaining: 1.82s
195: learn: 0.2660126 total: 444ms remaining: 1.82s
196: learn: 0.2652709 total: 446ms remaining: 1.82s
197: learn: 0.2647013 total: 448ms remaining: 1.81s
198: learn: 0.2642415 total: 451ms remaining: 1.81s
199: learn: 0.2640385 total: 453ms remaining: 1.81s
200: learn: 0.2635823 total: 455ms remaining: 1.81s
201: learn: 0.2633258 total: 457ms remaining: 1.81s
202: learn: 0.2625418 total: 460ms remaining: 1.8s
203: learn: 0.2622032 total: 462ms remaining: 1.8s
204: learn: 0.2614445 total: 464ms remaining: 1.8s
205: learn: 0.2607470 total: 466ms remaining: 1.8s
206: learn: 0.2602720 total: 469ms remaining: 1.79s
207: learn: 0.2597306 total: 471ms remaining: 1.79s
208: learn: 0.2589741 total: 473ms remaining: 1.79s
209: learn: 0.2581065 total: 476ms remaining: 1.79s
210: learn: 0.2578172 total: 478ms remaining: 1.79s
211: learn: 0.2574396 total: 480ms remaining: 1.78s
212: learn: 0.2570344 total: 482ms remaining: 1.78s
213: learn: 0.2563798 total: 485ms remaining: 1.78s
214: learn: 0.2561485 total: 487ms remaining: 1.78s
215: learn: 0.2559370 total: 489ms remaining: 1.77s
216: learn: 0.2549945 total: 491ms remaining: 1.77s
217: learn: 0.2546759 total: 494ms remaining: 1.77s
218: learn: 0.2544599 total: 496ms remaining: 1.77s
219: learn: 0.2541553 total: 498ms remaining: 1.77s
220: learn: 0.2539595 total: 500ms remaining: 1.76s
221: learn: 0.2536747 total: 503ms remaining: 1.76s
222: learn: 0.2531786 total: 505ms remaining: 1.76s
223: learn: 0.2526139 total: 507ms remaining: 1.76s
224: learn: 0.2524293 total: 509ms remaining: 1.75s
```

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225: learn: 0.2518501 total: 512ms remaining: 1.75s
226: learn: 0.2513627 total: 514ms remaining: 1.75s
227: learn: 0.2511575 total: 516ms remaining: 1.75s
228: learn: 0.2510366 total: 519ms remaining: 1.75s
229: learn: 0.2506843 total: 521ms remaining: 1.74s
230: learn: 0.2499931 total: 523ms remaining: 1.74s
231: learn: 0.2497021 total: 525ms remaining: 1.74s
232: learn: 0.2495942 total: 528ms remaining: 1.74s
233: learn: 0.2492251 total: 530ms remaining: 1.73s
234: learn: 0.2491392 total: 532ms remaining: 1.73s
235: learn: 0.2486914 total: 534ms remaining: 1.73s
236: learn: 0.2486151 total: 536ms remaining: 1.73s
237: learn: 0.2479065 total: 539ms remaining: 1.73s
238: learn: 0.2477048 total: 541ms remaining: 1.72s
239: learn: 0.2476296 total: 543ms remaining: 1.72s
240: learn: 0.2473903 total: 545ms remaining: 1.72s
241: learn: 0.2469924 total: 548ms remaining: 1.72s
242: learn: 0.2469671 total: 549ms remaining: 1.71s
243: learn: 0.2464946 total: 551ms remaining: 1.71s
244: learn: 0.2463561 total: 554ms remaining: 1.71s
245: learn: 0.2462779 total: 556ms remaining: 1.7s
246: learn: 0.2460133 total: 558ms remaining: 1.7s
247: learn: 0.2457368 total: 560ms remaining: 1.7s
248: learn: 0.2456453 total: 562ms remaining: 1.7s
249: learn: 0.2448838 total: 565ms remaining: 1.69s
250: learn: 0.2444002 total: 567ms remaining: 1.69s
251: learn: 0.2439990 total: 569ms remaining: 1.69s
252: learn: 0.2435232 total: 572ms remaining: 1.69s
253: learn: 0.2431891 total: 574ms remaining: 1.69s
254: learn: 0.2427165 total: 576ms remaining: 1.68s
255: learn: 0.2424823 total: 579ms remaining: 1.68s
256: learn: 0.2423686 total: 581ms remaining: 1.68s
257: learn: 0.2420860 total: 583ms remaining: 1.68s
258: learn: 0.2420632 total: 585ms remaining: 1.67s
259: learn: 0.2412747 total: 587ms remaining: 1.67s
260: learn: 0.2407930 total: 589ms remaining: 1.67s
261: learn: 0.2401250 total: 591ms remaining: 1.67s
262: learn: 0.2396964 total: 594ms remaining: 1.66s
263: learn: 0.2395933 total: 596ms remaining: 1.66s
264: learn: 0.2394822 total: 598ms remaining: 1.66s
265: learn: 0.2393759 total: 600ms remaining: 1.66s
266: learn: 0.2390076 total: 602ms remaining: 1.65s
267: learn: 0.2389298 total: 604ms remaining: 1.65s
268: learn: 0.2389091 total: 606ms remaining: 1.65s
269: learn: 0.2386315 total: 608ms remaining: 1.64s
270: learn: 0.2382886 total: 610ms remaining: 1.64s
271: learn: 0.2376628 total: 613ms remaining: 1.64s
272: learn: 0.2372315 total: 615ms remaining: 1.64s
273: learn: 0.2365101 total: 617ms remaining: 1.64s
274: learn: 0.2361436 total: 619ms remaining: 1.63s
275: learn: 0.2354982 total: 622ms remaining: 1.63s
276: learn: 0.2350487 total: 624ms remaining: 1.63s
277: learn: 0.2345199 total: 626ms remaining: 1.63s
278: learn: 0.2342421 total: 628ms remaining: 1.62s
279: learn: 0.2336588 total: 631ms remaining: 1.62s
280: learn: 0.2336385 total: 632ms remaining: 1.62s
281: learn: 0.2331909 total: 634ms remaining: 1.61s
282: learn: 0.2327995 total: 637ms remaining: 1.61s
283: learn: 0.2325985 total: 639ms remaining: 1.61s
284: learn: 0.2323186 total: 641ms remaining: 1.61s
285: learn: 0.2320100 total: 644ms remaining: 1.61s
286: learn: 0.2319904 total: 645ms remaining: 1.6s
287: learn: 0.2315886 total: 647ms remaining: 1.6s
288: learn: 0.2313007 total: 649ms remaining: 1.6s
289: learn: 0.2308297 total: 652ms remaining: 1.59s
290: learn: 0.2305690 total: 654ms remaining: 1.59s
291: learn: 0.2303760 total: 656ms remaining: 1.59s
292: learn: 0.2303571 total: 658ms remaining: 1.59s
293: learn: 0.2298491 total: 660ms remaining: 1.58s
294: learn: 0.2296271 total: 662ms remaining: 1.58s
295: learn: 0.2294041 total: 665ms remaining: 1.58s
296: learn: 0.2290134 total: 667ms remaining: 1.58s
297: learn: 0.2289955 total: 668ms remaining: 1.57s
298: learn: 0.2288940 total: 670ms remaining: 1.57s
299: learn: 0.2283817 total: 673ms remaining: 1.57s
300: learn: 0.2281226 total: 675ms remaining: 1.57s
301: learn: 0.2278530 total: 677ms remaining: 1.56s
```

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301: learn: 0.2279090 total: 677ms remaining: 1.56s
302: learn: 0.2274867 total: 680ms remaining: 1.56s
303: learn: 0.2270861 total: 682ms remaining: 1.56s
304: learn: 0.2269008 total: 684ms remaining: 1.56s
305: learn: 0.2266812 total: 686ms remaining: 1.56s
306: learn: 0.2263448 total: 689ms remaining: 1.55s
307: learn: 0.2259370 total: 691ms remaining: 1.55s
308: learn: 0.2259203 total: 692ms remaining: 1.55s
309: learn: 0.2256836 total: 695ms remaining: 1.55s
310: learn: 0.2255875 total: 697ms remaining: 1.54s
311: learn: 0.2253901 total: 699ms remaining: 1.54s
312: learn: 0.2250375 total: 701ms remaining: 1.54s
313: learn: 0.2245536 total: 704ms remaining: 1.54s
314: learn: 0.2244676 total: 706ms remaining: 1.53s
315: learn: 0.2240856 total: 708ms remaining: 1.53s
316: learn: 0.2237651 total: 710ms remaining: 1.53s
317: learn: 0.2233125 total: 713ms remaining: 1.53s
318: learn: 0.2232971 total: 714ms remaining: 1.52s
319: learn: 0.2229998 total: 716ms remaining: 1.52s
320: learn: 0.2226214 total: 719ms remaining: 1.52s
321: learn: 0.2223750 total: 721ms remaining: 1.52s
322: learn: 0.2221246 total: 723ms remaining: 1.51s
323: learn: 0.2218277 total: 726ms remaining: 1.51s
324: learn: 0.2216573 total: 728ms remaining: 1.51s
325: learn: 0.2214115 total: 730ms remaining: 1.51s
326: learn: 0.2209631 total: 732ms remaining: 1.51s
327: learn: 0.2207479 total: 735ms remaining: 1.5s
328: learn: 0.2204258 total: 737ms remaining: 1.5s
329: learn: 0.2201988 total: 739ms remaining: 1.5s
330: learn: 0.2200051 total: 742ms remaining: 1.5s
331: learn: 0.2197762 total: 744ms remaining: 1.5s
332: learn: 0.2195630 total: 746ms remaining: 1.49s
333: learn: 0.2193640 total: 748ms remaining: 1.49s
334: learn: 0.2191508 total: 751ms remaining: 1.49s
335: learn: 0.2190295 total: 753ms remaining: 1.49s
336: learn: 0.2187672 total: 755ms remaining: 1.49s
337: learn: 0.2184334 total: 757ms remaining: 1.48s
338: learn: 0.2181347 total: 760ms remaining: 1.48s
339: learn: 0.2178662 total: 762ms remaining: 1.48s
340: learn: 0.2174363 total: 764ms remaining: 1.48s
341: learn: 0.2173032 total: 766ms remaining: 1.47s
342: learn: 0.2171423 total: 769ms remaining: 1.47s
343: learn: 0.2170086 total: 771ms remaining: 1.47s
344: learn: 0.2168032 total: 773ms remaining: 1.47s
345: learn: 0.2163918 total: 775ms remaining: 1.47s
346: learn: 0.2162322 total: 778ms remaining: 1.46s
347: learn: 0.2160731 total: 780ms remaining: 1.46s
348: learn: 0.2157128 total: 782ms remaining: 1.46s
349: learn: 0.2155883 total: 784ms remaining: 1.46s
350: learn: 0.2153862 total: 787ms remaining: 1.45s
351: learn: 0.2152312 total: 789ms remaining: 1.45s
352: learn: 0.2148534 total: 791ms remaining: 1.45s
353: learn: 0.2146299 total: 794ms remaining: 1.45s
354: learn: 0.2142484 total: 796ms remaining: 1.45s
355: learn: 0.2142338 total: 798ms remaining: 1.44s
356: learn: 0.2140472 total: 800ms remaining: 1.44s
357: learn: 0.2138582 total: 808ms remaining: 1.45s
358: learn: 0.2134650 total: 810ms remaining: 1.45s
359: learn: 0.2131151 total: 813ms remaining: 1.44s
360: learn: 0.2131013 total: 814ms remaining: 1.44s
361: learn: 0.2128547 total: 817ms remaining: 1.44s
362: learn: 0.2123576 total: 819ms remaining: 1.44s
363: learn: 0.2121002 total: 821ms remaining: 1.44s
364: learn: 0.2118425 total: 824ms remaining: 1.43s
365: learn: 0.2114653 total: 826ms remaining: 1.43s
366: learn: 0.2113018 total: 828ms remaining: 1.43s
367: learn: 0.2112875 total: 830ms remaining: 1.43s
368: learn: 0.2112745 total: 832ms remaining: 1.42s
369: learn: 0.2109419 total: 834ms remaining: 1.42s
370: learn: 0.2106024 total: 836ms remaining: 1.42s
371: learn: 0.2105898 total: 838ms remaining: 1.41s
372: learn: 0.2102121 total: 840ms remaining: 1.41s
373: learn: 0.2101624 total: 842ms remaining: 1.41s
374: learn: 0.2099147 total: 845ms remaining: 1.41s
375: learn: 0.2096053 total: 847ms remaining: 1.41s
376: learn: 0.2094690 total: 849ms remaining: 1.4s
377: learn: 0.2091496 total: 852ms remaining: 1.4s
378: learn: 0.2090276 total: 854ms remaining: 1.4s
```

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378: learn: 0.2090276 total: 854ms remaining: 1.4s
379: learn: 0.2090161 total: 856ms remaining: 1.4s
380: learn: 0.2086828 total: 858ms remaining: 1.39s
381: learn: 0.2083701 total: 860ms remaining: 1.39s
382: learn: 0.2081445 total: 863ms remaining: 1.39s
383: learn: 0.2081335 total: 864ms remaining: 1.39s
384: learn: 0.2079361 total: 867ms remaining: 1.38s
385: learn: 0.2077700 total: 869ms remaining: 1.38s
386: learn: 0.2075310 total: 871ms remaining: 1.38s
387: learn: 0.2072798 total: 873ms remaining: 1.38s
388: learn: 0.2072342 total: 876ms remaining: 1.38s
389: learn: 0.2071901 total: 878ms remaining: 1.37s
390: learn: 0.2068843 total: 880ms remaining: 1.37s
391: learn: 0.2068698 total: 882ms remaining: 1.37s
392: learn: 0.2063818 total: 885ms remaining: 1.37s
393: learn: 0.2060290 total: 887ms remaining: 1.36s
394: learn: 0.2059534 total: 889ms remaining: 1.36s
395: learn: 0.2055553 total: 891ms remaining: 1.36s
396: learn: 0.2053356 total: 894ms remaining: 1.36s
397: learn: 0.2050530 total: 896ms remaining: 1.35s
398: learn: 0.2049173 total: 898ms remaining: 1.35s
399: learn: 0.2046455 total: 900ms remaining: 1.35s
400: learn: 0.2043251 total: 903ms remaining: 1.35s
401: learn: 0.2041209 total: 905ms remaining: 1.35s
402: learn: 0.2038804 total: 907ms remaining: 1.34s
403: learn: 0.2035148 total: 909ms remaining: 1.34s
404: learn: 0.2032147 total: 912ms remaining: 1.34s
405: learn: 0.2028935 total: 914ms remaining: 1.34s
406: learn: 0.2028392 total: 916ms remaining: 1.33s
407: learn: 0.2027546 total: 918ms remaining: 1.33s
408: learn: 0.2024664 total: 921ms remaining: 1.33s
409: learn: 0.2021920 total: 923ms remaining: 1.33s
410: learn: 0.2021815 total: 925ms remaining: 1.32s
411: learn: 0.2020177 total: 927ms remaining: 1.32s
412: learn: 0.2017769 total: 930ms remaining: 1.32s
413: learn: 0.2014594 total: 932ms remaining: 1.32s
414: learn: 0.2011610 total: 934ms remaining: 1.32s
415: learn: 0.2010747 total: 937ms remaining: 1.31s
416: learn: 0.2009573 total: 939ms remaining: 1.31s
417: learn: 0.2008527 total: 941ms remaining: 1.31s
418: learn: 0.2006757 total: 943ms remaining: 1.31s
419: learn: 0.2006661 total: 945ms remaining: 1.3s
420: learn: 0.2005130 total: 948ms remaining: 1.3s
421: learn: 0.2004566 total: 950ms remaining: 1.3s
422: learn: 0.2001399 total: 952ms remaining: 1.3s
423: learn: 0.1998860 total: 954ms remaining: 1.3s
424: learn: 0.1997199 total: 957ms remaining: 1.29s
425: learn: 0.1994622 total: 959ms remaining: 1.29s
426: learn: 0.1991729 total: 961ms remaining: 1.29s
427: learn: 0.1989114 total: 964ms remaining: 1.29s
428: learn: 0.1987239 total: 966ms remaining: 1.28s
429: learn: 0.1985386 total: 968ms remaining: 1.28s
430: learn: 0.1982257 total: 971ms remaining: 1.28s
431: learn: 0.1977155 total: 973ms remaining: 1.28s
432: learn: 0.1977064 total: 975ms remaining: 1.28s
433: learn: 0.1974223 total: 977ms remaining: 1.27s
434: learn: 0.1970877 total: 980ms remaining: 1.27s
435: learn: 0.1969955 total: 982ms remaining: 1.27s
436: learn: 0.1967157 total: 984ms remaining: 1.27s
437: learn: 0.1964780 total: 987ms remaining: 1.26s
438: learn: 0.1963372 total: 989ms remaining: 1.26s
439: learn: 0.1960616 total: 991ms remaining: 1.26s
440: learn: 0.1957872 total: 993ms remaining: 1.26s
441: learn: 0.1955396 total: 996ms remaining: 1.26s
442: learn: 0.1955332 total: 998ms remaining: 1.25s
443: learn: 0.1954545 total: 1000ms remaining: 1.25s
444: learn: 0.1951808 total: 1s remaining: 1.25s
445: learn: 0.1948009 total: 1s remaining: 1.25s
446: learn: 0.1947925 total: 1.01s remaining: 1.25s
447: learn: 0.1947857 total: 1.01s remaining: 1.24s
448: learn: 0.1945437 total: 1.01s remaining: 1.24s
449: learn: 0.1942319 total: 1.01s remaining: 1.24s
450: learn: 0.1940948 total: 1.01s remaining: 1.24s
451: learn: 0.1939209 total: 1.02s remaining: 1.23s
452: learn: 0.1936066 total: 1.02s remaining: 1.23s
453: learn: 0.1933660 total: 1.02s remaining: 1.23s
454: learn: 0.1932270 total: 1.02s remaining: 1.23s
455: learn: 0.1931275 total: 1.03s remaining: 1.23s
```

```
455: learn: 0.1931279 total: 1.03s remaining: 1.23s
456: learn: 0.1928358 total: 1.03s remaining: 1.22s
457: learn: 0.1926116 total: 1.03s remaining: 1.22s
458: learn: 0.1926040 total: 1.03s remaining: 1.22s
459: learn: 0.1925214 total: 1.04s remaining: 1.22s
460: learn: 0.1922956 total: 1.04s remaining: 1.21s
461: learn: 0.1920127 total: 1.04s remaining: 1.21s
462: learn: 0.1919269 total: 1.04s remaining: 1.21s
463: learn: 0.1917620 total: 1.04s remaining: 1.21s
464: learn: 0.1914620 total: 1.05s remaining: 1.21s
465: learn: 0.1912512 total: 1.05s remaining: 1.2s
466: learn: 0.1912448 total: 1.05s remaining: 1.2s
467: learn: 0.1911676 total: 1.05s remaining: 1.2s
468: learn: 0.1910013 total: 1.06s remaining: 1.2s
469: learn: 0.1906096 total: 1.06s remaining: 1.19s
470: learn: 0.1904555 total: 1.06s remaining: 1.19s
471: learn: 0.1903997 total: 1.06s remaining: 1.19s
472: learn: 0.1902153 total: 1.06s remaining: 1.19s
473: learn: 0.1900072 total: 1.07s remaining: 1.19s
474: learn: 0.1897328 total: 1.07s remaining: 1.18s
475: learn: 0.1895350 total: 1.07s remaining: 1.18s
476: learn: 0.1892977 total: 1.07s remaining: 1.18s
477: learn: 0.1891122 total: 1.08s remaining: 1.18s
478: learn: 0.1889996 total: 1.08s remaining: 1.17s
479: learn: 0.1887360 total: 1.08s remaining: 1.17s
480: learn: 0.1885638 total: 1.08s remaining: 1.17s
481: learn: 0.1883618 total: 1.09s remaining: 1.17s
482: learn: 0.1880709 total: 1.09s remaining: 1.17s
483: learn: 0.1880200 total: 1.09s remaining: 1.16s
484: learn: 0.1877008 total: 1.09s remaining: 1.16s
485: learn: 0.1875854 total: 1.09s remaining: 1.16s
486: learn: 0.1873292 total: 1.1s remaining: 1.16s
487: learn: 0.1871709 total: 1.1s remaining: 1.15s
488: learn: 0.1868984 total: 1.1s remaining: 1.15s
489: learn: 0.1866946 total: 1.1s remaining: 1.15s
490: learn: 0.1865390 total: 1.11s remaining: 1.15s
491: learn: 0.1865325 total: 1.11s remaining: 1.14s
492: learn: 0.1864073 total: 1.11s remaining: 1.14s
493: learn: 0.1863003 total: 1.11s remaining: 1.14s
494: learn: 0.1861649 total: 1.11s remaining: 1.14s
495: learn: 0.1860062 total: 1.12s remaining: 1.14s
496: learn: 0.1858893 total: 1.12s remaining: 1.13s
497: learn: 0.1855580 total: 1.12s remaining: 1.13s
498: learn: 0.1855519 total: 1.12s remaining: 1.13s
499: learn: 0.1853613 total: 1.13s remaining: 1.13s
500: learn: 0.1851736 total: 1.13s remaining: 1.12s
501: learn: 0.1850313 total: 1.13s remaining: 1.12s
502: learn: 0.1847973 total: 1.13s remaining: 1.12s
503: learn: 0.1846609 total: 1.14s remaining: 1.12s
504: learn: 0.1845510 total: 1.14s remaining: 1.11s
505: learn: 0.1843167 total: 1.14s remaining: 1.11s
506: learn: 0.1840561 total: 1.14s remaining: 1.11s
507: learn: 0.1839467 total: 1.15s remaining: 1.11s
508: learn: 0.1839008 total: 1.15s remaining: 1.11s
509: learn: 0.1836615 total: 1.15s remaining: 1.1s
510: learn: 0.1834042 total: 1.15s remaining: 1.1s
511: learn: 0.1832844 total: 1.15s remaining: 1.1s
512: learn: 0.1832791 total: 1.16s remaining: 1.1s
513: learn: 0.1830734 total: 1.16s remaining: 1.09s
514: learn: 0.1829164 total: 1.16s remaining: 1.09s
515: learn: 0.1826229 total: 1.16s remaining: 1.09s
516: learn: 0.1824898 total: 1.17s remaining: 1.09s
517: learn: 0.1823653 total: 1.17s remaining: 1.09s
518: learn: 0.1821591 total: 1.17s remaining: 1.08s
519: learn: 0.1820726 total: 1.17s remaining: 1.08s
520: learn: 0.1818493 total: 1.17s remaining: 1.08s
521: learn: 0.1816897 total: 1.18s remaining: 1.08s
522: learn: 0.1814829 total: 1.18s remaining: 1.07s
523: learn: 0.1812738 total: 1.18s remaining: 1.07s
524: learn: 0.1811685 total: 1.18s remaining: 1.07s
525: learn: 0.1810347 total: 1.19s remaining: 1.07s
526: learn: 0.1808409 total: 1.19s remaining: 1.07s
527: learn: 0.1806861 total: 1.19s remaining: 1.06s
528: learn: 0.1805059 total: 1.19s remaining: 1.06s
529: learn: 0.1804497 total: 1.19s remaining: 1.06s
530: learn: 0.1802211 total: 1.2s remaining: 1.06s
531: learn: 0.1801805 total: 1.2s remaining: 1.05s
532: learn: 0.1799653 total: 1.2s remaining: 1.05s
```

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532: learn: 0.1799655 total: 1.2s remaining: 1.05s
533: learn: 0.1796974 total: 1.2s remaining: 1.05s
534: learn: 0.1793683 total: 1.21s remaining: 1.05s
535: learn: 0.1792474 total: 1.21s remaining: 1.05s
536: learn: 0.1791310 total: 1.21s remaining: 1.04s
537: learn: 0.1789028 total: 1.21s remaining: 1.04s
538: learn: 0.1787369 total: 1.22s remaining: 1.04s
539: learn: 0.1787310 total: 1.22s remaining: 1.04s
540: learn: 0.1785349 total: 1.22s remaining: 1.03s
541: learn: 0.1783341 total: 1.22s remaining: 1.03s
542: learn: 0.1782124 total: 1.22s remaining: 1.03s
543: learn: 0.1780141 total: 1.23s remaining: 1.03s
544: learn: 0.1778531 total: 1.23s remaining: 1.02s
545: learn: 0.1776283 total: 1.23s remaining: 1.02s
546: learn: 0.1772825 total: 1.23s remaining: 1.02s
547: learn: 0.1771938 total: 1.24s remaining: 1.02s
548: learn: 0.1770089 total: 1.24s remaining: 1.02s
549: learn: 0.1768000 total: 1.24s remaining: 1.01s
550: learn: 0.1765767 total: 1.24s remaining: 1.01s
551: learn: 0.1764707 total: 1.24s remaining: 1.01s
552: learn: 0.1763211 total: 1.25s remaining: 1.01s
553: learn: 0.1762041 total: 1.25s remaining: 1s
554: learn: 0.1759798 total: 1.25s remaining: 1s
555: learn: 0.1758802 total: 1.25s remaining: 1s
556: learn: 0.1757674 total: 1.26s remaining: 999ms
557: learn: 0.1755530 total: 1.26s remaining: 997ms
558: learn: 0.1754420 total: 1.26s remaining: 995ms
559: learn: 0.1752396 total: 1.26s remaining: 992ms
560: learn: 0.1749858 total: 1.26s remaining: 990ms
561: learn: 0.1748777 total: 1.27s remaining: 988ms
562: learn: 0.1747748 total: 1.27s remaining: 986ms
563: learn: 0.1745860 total: 1.27s remaining: 983ms
564: learn: 0.1744625 total: 1.27s remaining: 981ms
565: learn: 0.1743039 total: 1.28s remaining: 979ms
566: learn: 0.1741431 total: 1.28s remaining: 977ms
567: learn: 0.1740825 total: 1.28s remaining: 974ms
568: learn: 0.1738595 total: 1.28s remaining: 972ms
569: learn: 0.1737645 total: 1.28s remaining: 970ms
570: learn: 0.1735702 total: 1.29s remaining: 968ms
571: learn: 0.1734441 total: 1.29s remaining: 966ms
572: learn: 0.1731419 total: 1.29s remaining: 963ms
573: learn: 0.1729610 total: 1.29s remaining: 961ms
574: learn: 0.1728146 total: 1.3s remaining: 959ms
575: learn: 0.1726516 total: 1.3s remaining: 957ms
576: learn: 0.1726267 total: 1.3s remaining: 954ms
577: learn: 0.1724649 total: 1.3s remaining: 952ms
578: learn: 0.1723341 total: 1.31s remaining: 950ms
579: learn: 0.1721243 total: 1.31s remaining: 948ms
580: learn: 0.1719231 total: 1.31s remaining: 945ms
581: learn: 0.1717877 total: 1.31s remaining: 943ms
582: learn: 0.1716881 total: 1.31s remaining: 941ms
583: learn: 0.1716234 total: 1.32s remaining: 939ms
584: learn: 0.1714100 total: 1.32s remaining: 936ms
585: learn: 0.1712760 total: 1.32s remaining: 934ms
586: learn: 0.1711235 total: 1.32s remaining: 932ms
587: learn: 0.1709682 total: 1.33s remaining: 930ms
588: learn: 0.1707667 total: 1.33s remaining: 928ms
589: learn: 0.1705744 total: 1.33s remaining: 925ms
590: learn: 0.1705217 total: 1.33s remaining: 923ms
591: learn: 0.1703500 total: 1.34s remaining: 921ms
592: learn: 0.1700469 total: 1.34s remaining: 919ms
593: learn: 0.1699661 total: 1.34s remaining: 916ms
594: learn: 0.1698411 total: 1.34s remaining: 914ms
595: learn: 0.1697096 total: 1.34s remaining: 912ms
596: learn: 0.1695893 total: 1.35s remaining: 910ms
597: learn: 0.1694476 total: 1.35s remaining: 907ms
598: learn: 0.1692666 total: 1.35s remaining: 905ms
599: learn: 0.1690895 total: 1.35s remaining: 903ms
600: learn: 0.1688316 total: 1.36s remaining: 901ms
601: learn: 0.1686367 total: 1.36s remaining: 898ms
602: learn: 0.1685340 total: 1.36s remaining: 896ms
603: learn: 0.1684151 total: 1.36s remaining: 894ms
604: learn: 0.1682179 total: 1.36s remaining: 892ms
605: learn: 0.1679640 total: 1.37s remaining: 889ms
606: learn: 0.1678819 total: 1.37s remaining: 887ms
607: learn: 0.1676935 total: 1.37s remaining: 885ms
608: learn: 0.1675789 total: 1.37s remaining: 883ms
609: learn: 0.1675939 total: 1.38s remaining: 880ms
```

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609: learn: 0.1675029 total: 1.38s remaining: 880ms
610: learn: 0.1672389 total: 1.38s remaining: 878ms
611: learn: 0.1671550 total: 1.38s remaining: 876ms
612: learn: 0.1669526 total: 1.38s remaining: 874ms
613: learn: 0.1668250 total: 1.39s remaining: 871ms
614: learn: 0.1667237 total: 1.39s remaining: 869ms
615: learn: 0.1666538 total: 1.39s remaining: 867ms
616: learn: 0.1665266 total: 1.39s remaining: 865ms
617: learn: 0.1663074 total: 1.4s  remaining: 862ms
618: learn: 0.1662266 total: 1.4s  remaining: 860ms
619: learn: 0.1660588 total: 1.4s  remaining: 858ms
620: learn: 0.1659054 total: 1.4s  remaining: 856ms
621: learn: 0.1656909 total: 1.4s  remaining: 854ms
622: learn: 0.1656458 total: 1.41s remaining: 851ms
623: learn: 0.1655785 total: 1.41s remaining: 849ms
624: learn: 0.1654813 total: 1.41s remaining: 847ms
625: learn: 0.1654513 total: 1.41s remaining: 844ms
626: learn: 0.1654229 total: 1.42s remaining: 842ms
627: learn: 0.1653401 total: 1.42s remaining: 840ms
628: learn: 0.1652122 total: 1.42s remaining: 838ms
629: learn: 0.1649619 total: 1.42s remaining: 835ms
630: learn: 0.1646283 total: 1.42s remaining: 833ms
631: learn: 0.1644290 total: 1.43s remaining: 831ms
632: learn: 0.1642480 total: 1.43s remaining: 829ms
633: learn: 0.1640681 total: 1.43s remaining: 826ms
634: learn: 0.1639742 total: 1.43s remaining: 824ms
635: learn: 0.1638582 total: 1.44s remaining: 822ms
636: learn: 0.1636511 total: 1.44s remaining: 820ms
637: learn: 0.1635581 total: 1.44s remaining: 817ms
638: learn: 0.1633138 total: 1.44s remaining: 815ms
639: learn: 0.1631572 total: 1.45s remaining: 813ms
640: learn: 0.1630672 total: 1.45s remaining: 811ms
641: learn: 0.1629818 total: 1.45s remaining: 808ms
642: learn: 0.1627140 total: 1.45s remaining: 806ms
643: learn: 0.1625455 total: 1.45s remaining: 804ms
644: learn: 0.1624450 total: 1.46s remaining: 802ms
645: learn: 0.1623158 total: 1.46s remaining: 800ms
646: learn: 0.1621638 total: 1.46s remaining: 797ms
647: learn: 0.1620834 total: 1.46s remaining: 795ms
648: learn: 0.1619940 total: 1.47s remaining: 793ms
649: learn: 0.1619050 total: 1.47s remaining: 791ms
650: learn: 0.1616319 total: 1.47s remaining: 788ms
651: learn: 0.1615072 total: 1.47s remaining: 786ms
652: learn: 0.1613488 total: 1.48s remaining: 784ms
653: learn: 0.1612363 total: 1.48s remaining: 782ms
654: learn: 0.1611051 total: 1.48s remaining: 779ms
655: learn: 0.1609600 total: 1.48s remaining: 777ms
656: learn: 0.1608337 total: 1.48s remaining: 775ms
657: learn: 0.1607483 total: 1.49s remaining: 773ms
658: learn: 0.1605424 total: 1.49s remaining: 771ms
659: learn: 0.1604348 total: 1.49s remaining: 768ms
660: learn: 0.1602847 total: 1.49s remaining: 766ms
661: learn: 0.1601492 total: 1.5s  remaining: 764ms
662: learn: 0.1600491 total: 1.5s  remaining: 762ms
663: learn: 0.1598866 total: 1.5s  remaining: 759ms
664: learn: 0.1596721 total: 1.5s  remaining: 757ms
665: learn: 0.1594579 total: 1.5s  remaining: 755ms
666: learn: 0.1593610 total: 1.51s remaining: 753ms
667: learn: 0.1592055 total: 1.51s remaining: 751ms
668: learn: 0.1590642 total: 1.51s remaining: 748ms
669: learn: 0.1589584 total: 1.51s remaining: 746ms
670: learn: 0.1587310 total: 1.52s remaining: 744ms
671: learn: 0.1586173 total: 1.52s remaining: 742ms
672: learn: 0.1585076 total: 1.52s remaining: 739ms
673: learn: 0.1583540 total: 1.52s remaining: 737ms
674: learn: 0.1582018 total: 1.53s remaining: 735ms
675: learn: 0.1580447 total: 1.53s remaining: 733ms
676: learn: 0.1578911 total: 1.53s remaining: 730ms
677: learn: 0.1577791 total: 1.53s remaining: 728ms
678: learn: 0.1576557 total: 1.53s remaining: 726ms
679: learn: 0.1574646 total: 1.54s remaining: 724ms
680: learn: 0.1573639 total: 1.54s remaining: 721ms
681: learn: 0.1572229 total: 1.54s remaining: 719ms
682: learn: 0.1570927 total: 1.54s remaining: 717ms
683: learn: 0.1569514 total: 1.55s remaining: 715ms
684: learn: 0.1568918 total: 1.55s remaining: 713ms
685: learn: 0.1568077 total: 1.55s remaining: 710ms
686: learn: 0.1567509 total: 1.55s remaining: 708ms
```

```
686: learn: 0.1567509 total: 1.55s remaining: 708ms
687: learn: 0.1567061 total: 1.56s remaining: 706ms
688: learn: 0.1565078 total: 1.56s remaining: 704ms
689: learn: 0.1564908 total: 1.56s remaining: 701ms
690: learn: 0.1563961 total: 1.56s remaining: 699ms
691: learn: 0.1562550 total: 1.56s remaining: 697ms
692: learn: 0.1561360 total: 1.57s remaining: 695ms
693: learn: 0.1559893 total: 1.57s remaining: 692ms
694: learn: 0.1559260 total: 1.57s remaining: 690ms
695: learn: 0.1557599 total: 1.57s remaining: 688ms
696: learn: 0.1556727 total: 1.58s remaining: 685ms
697: learn: 0.1555405 total: 1.58s remaining: 683ms
698: learn: 0.1553536 total: 1.58s remaining: 681ms
699: learn: 0.1553376 total: 1.58s remaining: 679ms
700: learn: 0.1552145 total: 1.58s remaining: 676ms
701: learn: 0.1550396 total: 1.59s remaining: 674ms
702: learn: 0.1549872 total: 1.59s remaining: 672ms
703: learn: 0.1549151 total: 1.59s remaining: 670ms
704: learn: 0.1547858 total: 1.59s remaining: 667ms
705: learn: 0.1546071 total: 1.6s remaining: 665ms
706: learn: 0.1545202 total: 1.6s remaining: 663ms
707: learn: 0.1544182 total: 1.6s remaining: 661ms
708: learn: 0.1543100 total: 1.6s remaining: 658ms
709: learn: 0.1542284 total: 1.61s remaining: 656ms
710: learn: 0.1540912 total: 1.61s remaining: 654ms
711: learn: 0.1539890 total: 1.61s remaining: 652ms
712: learn: 0.1538270 total: 1.61s remaining: 649ms
713: learn: 0.1537264 total: 1.61s remaining: 647ms
714: learn: 0.1536487 total: 1.62s remaining: 645ms
715: learn: 0.1535258 total: 1.62s remaining: 643ms
716: learn: 0.1533678 total: 1.62s remaining: 641ms
717: learn: 0.1532132 total: 1.63s remaining: 638ms
718: learn: 0.1530628 total: 1.63s remaining: 636ms
719: learn: 0.1530030 total: 1.63s remaining: 634ms
720: learn: 0.1528873 total: 1.63s remaining: 631ms
721: learn: 0.1528307 total: 1.63s remaining: 629ms
722: learn: 0.1527134 total: 1.64s remaining: 627ms
723: learn: 0.1526296 total: 1.64s remaining: 625ms
724: learn: 0.1524661 total: 1.64s remaining: 622ms
725: learn: 0.1523658 total: 1.64s remaining: 620ms
726: learn: 0.1523118 total: 1.65s remaining: 618ms
727: learn: 0.1522889 total: 1.65s remaining: 616ms
728: learn: 0.1522375 total: 1.65s remaining: 613ms
729: learn: 0.1520908 total: 1.65s remaining: 611ms
730: learn: 0.1519429 total: 1.66s remaining: 609ms
731: learn: 0.1518611 total: 1.66s remaining: 607ms
732: learn: 0.1516877 total: 1.66s remaining: 605ms
733: learn: 0.1516120 total: 1.66s remaining: 602ms
734: learn: 0.1514478 total: 1.66s remaining: 600ms
735: learn: 0.1513440 total: 1.67s remaining: 598ms
736: learn: 0.1512514 total: 1.67s remaining: 596ms
737: learn: 0.1509916 total: 1.67s remaining: 593ms
738: learn: 0.1509099 total: 1.67s remaining: 591ms
739: learn: 0.1507883 total: 1.68s remaining: 589ms
740: learn: 0.1506218 total: 1.68s remaining: 587ms
741: learn: 0.1505042 total: 1.68s remaining: 584ms
742: learn: 0.1504236 total: 1.68s remaining: 582ms
743: learn: 0.1503187 total: 1.69s remaining: 580ms
744: learn: 0.1501588 total: 1.69s remaining: 578ms
745: learn: 0.1500636 total: 1.69s remaining: 575ms
746: learn: 0.1499755 total: 1.69s remaining: 573ms
747: learn: 0.1498232 total: 1.69s remaining: 571ms
748: learn: 0.1497684 total: 1.7s remaining: 569ms
749: learn: 0.1497163 total: 1.7s remaining: 566ms
750: learn: 0.1496956 total: 1.7s remaining: 564ms
751: learn: 0.1495889 total: 1.7s remaining: 562ms
752: learn: 0.1494272 total: 1.71s remaining: 560ms
753: learn: 0.1493143 total: 1.71s remaining: 557ms
754: learn: 0.1491675 total: 1.71s remaining: 555ms
755: learn: 0.1491013 total: 1.71s remaining: 553ms
756: learn: 0.1489860 total: 1.71s remaining: 551ms
757: learn: 0.1489171 total: 1.72s remaining: 548ms
758: learn: 0.1488838 total: 1.72s remaining: 546ms
759: learn: 0.1487154 total: 1.72s remaining: 544ms
760: learn: 0.1486170 total: 1.72s remaining: 541ms
761: learn: 0.1485695 total: 1.73s remaining: 539ms
762: learn: 0.1484546 total: 1.73s remaining: 537ms
```

```
763: learn: 0.1482906 total: 1.73s remaining: 535ms
764: learn: 0.1481854 total: 1.73s remaining: 532ms
765: learn: 0.1480730 total: 1.74s remaining: 530ms
766: learn: 0.1479273 total: 1.74s remaining: 528ms
767: learn: 0.1478611 total: 1.74s remaining: 526ms
768: learn: 0.1478156 total: 1.74s remaining: 523ms
769: learn: 0.1476576 total: 1.74s remaining: 521ms
770: learn: 0.1475764 total: 1.75s remaining: 519ms
771: learn: 0.1474350 total: 1.75s remaining: 517ms
772: learn: 0.1472614 total: 1.75s remaining: 514ms
773: learn: 0.1471538 total: 1.75s remaining: 512ms
774: learn: 0.1471053 total: 1.75s remaining: 510ms
775: learn: 0.1469915 total: 1.76s remaining: 508ms
776: learn: 0.1468699 total: 1.76s remaining: 505ms
777: learn: 0.1467769 total: 1.76s remaining: 503ms
778: learn: 0.1466351 total: 1.76s remaining: 501ms
779: learn: 0.1465046 total: 1.77s remaining: 498ms
780: learn: 0.1464868 total: 1.77s remaining: 496ms
781: learn: 0.1464632 total: 1.77s remaining: 494ms
782: learn: 0.1463732 total: 1.77s remaining: 492ms
783: learn: 0.1463433 total: 1.78s remaining: 489ms
784: learn: 0.1462824 total: 1.78s remaining: 487ms
785: learn: 0.1461596 total: 1.78s remaining: 485ms
786: learn: 0.1460489 total: 1.78s remaining: 483ms
787: learn: 0.1458543 total: 1.78s remaining: 480ms
788: learn: 0.1457304 total: 1.79s remaining: 478ms
789: learn: 0.1456635 total: 1.79s remaining: 476ms
790: learn: 0.1455858 total: 1.79s remaining: 474ms
791: learn: 0.1454673 total: 1.79s remaining: 471ms
792: learn: 0.1454467 total: 1.8s  remaining: 469ms
793: learn: 0.1453867 total: 1.8s  remaining: 467ms
794: learn: 0.1452936 total: 1.8s  remaining: 464ms
795: learn: 0.1451447 total: 1.8s  remaining: 462ms
796: learn: 0.1450502 total: 1.8s  remaining: 460ms
797: learn: 0.1449712 total: 1.81s remaining: 458ms
798: learn: 0.1449152 total: 1.81s remaining: 455ms
799: learn: 0.1448449 total: 1.81s remaining: 453ms
800: learn: 0.1446653 total: 1.81s remaining: 451ms
801: learn: 0.1445012 total: 1.82s remaining: 449ms
802: learn: 0.1442884 total: 1.82s remaining: 446ms
803: learn: 0.1441971 total: 1.82s remaining: 444ms
804: learn: 0.1441442 total: 1.82s remaining: 442ms
805: learn: 0.1440003 total: 1.83s remaining: 440ms
806: learn: 0.1439027 total: 1.83s remaining: 437ms
807: learn: 0.1438594 total: 1.83s remaining: 435ms
808: learn: 0.1437919 total: 1.83s remaining: 433ms
809: learn: 0.1437321 total: 1.83s remaining: 431ms
810: learn: 0.1436722 total: 1.84s remaining: 428ms
811: learn: 0.1436057 total: 1.84s remaining: 426ms
812: learn: 0.1435140 total: 1.84s remaining: 424ms
813: learn: 0.1434243 total: 1.84s remaining: 421ms
814: learn: 0.1433524 total: 1.85s remaining: 419ms
815: learn: 0.1432993 total: 1.85s remaining: 417ms
816: learn: 0.1432512 total: 1.85s remaining: 415ms
817: learn: 0.1432102 total: 1.85s remaining: 412ms
818: learn: 0.1430259 total: 1.85s remaining: 410ms
819: learn: 0.1429369 total: 1.86s remaining: 408ms
820: learn: 0.1428331 total: 1.86s remaining: 406ms
821: learn: 0.1426841 total: 1.86s remaining: 403ms
822: learn: 0.1425475 total: 1.86s remaining: 401ms
823: learn: 0.1424733 total: 1.87s remaining: 399ms
824: learn: 0.1423930 total: 1.87s remaining: 397ms
825: learn: 0.1422649 total: 1.87s remaining: 394ms
826: learn: 0.1422049 total: 1.87s remaining: 392ms
827: learn: 0.1420862 total: 1.88s remaining: 390ms
828: learn: 0.1419764 total: 1.88s remaining: 388ms
829: learn: 0.1418876 total: 1.88s remaining: 385ms
830: learn: 0.1418337 total: 1.88s remaining: 383ms
831: learn: 0.1417274 total: 1.89s remaining: 381ms
832: learn: 0.1416602 total: 1.89s remaining: 379ms
833: learn: 0.1415853 total: 1.89s remaining: 376ms
834: learn: 0.1414802 total: 1.89s remaining: 374ms
835: learn: 0.1413973 total: 1.9s  remaining: 372ms
836: learn: 0.1413184 total: 1.9s  remaining: 370ms
837: learn: 0.1412625 total: 1.9s  remaining: 367ms
838: learn: 0.1411656 total: 1.9s  remaining: 365ms
839: learn: 0.1411420 total: 1.9s  remaining: 363ms
```

```
840: learn: 0.1410231 total: 1.91s remaining: 361ms
841: learn: 0.1409376 total: 1.91s remaining: 358ms
842: learn: 0.1408243 total: 1.91s remaining: 356ms
843: learn: 0.1407119 total: 1.91s remaining: 354ms
844: learn: 0.1406459 total: 1.92s remaining: 351ms
845: learn: 0.1406114 total: 1.92s remaining: 349ms
846: learn: 0.1405007 total: 1.92s remaining: 347ms
847: learn: 0.1404767 total: 1.92s remaining: 345ms
848: learn: 0.1404264 total: 1.93s remaining: 342ms
849: learn: 0.1404070 total: 1.93s remaining: 340ms
850: learn: 0.1403071 total: 1.93s remaining: 338ms
851: learn: 0.1402342 total: 1.93s remaining: 336ms
852: learn: 0.1401249 total: 1.93s remaining: 333ms
853: learn: 0.1400467 total: 1.94s remaining: 331ms
854: learn: 0.1399380 total: 1.94s remaining: 329ms
855: learn: 0.1398665 total: 1.94s remaining: 327ms
856: learn: 0.1398303 total: 1.94s remaining: 324ms
857: learn: 0.1398188 total: 1.95s remaining: 322ms
858: learn: 0.1396738 total: 1.95s remaining: 320ms
859: learn: 0.1396120 total: 1.95s remaining: 317ms
860: learn: 0.1395013 total: 1.95s remaining: 315ms
861: learn: 0.1394134 total: 1.95s remaining: 313ms
862: learn: 0.1393163 total: 1.96s remaining: 311ms
863: learn: 0.1392005 total: 1.96s remaining: 308ms
864: learn: 0.1391378 total: 1.96s remaining: 306ms
865: learn: 0.1389838 total: 1.96s remaining: 304ms
866: learn: 0.1388837 total: 1.97s remaining: 302ms
867: learn: 0.1387778 total: 1.97s remaining: 299ms
868: learn: 0.1387173 total: 1.97s remaining: 297ms
869: learn: 0.1386469 total: 1.97s remaining: 295ms
870: learn: 0.1385629 total: 1.98s remaining: 293ms
871: learn: 0.1384686 total: 1.98s remaining: 290ms
872: learn: 0.1383443 total: 1.98s remaining: 288ms
873: learn: 0.1382519 total: 1.98s remaining: 286ms
874: learn: 0.1381112 total: 1.98s remaining: 284ms
875: learn: 0.1380020 total: 1.99s remaining: 281ms
876: learn: 0.1379234 total: 1.99s remaining: 279ms
877: learn: 0.1378454 total: 1.99s remaining: 277ms
878: learn: 0.1377088 total: 1.99s remaining: 274ms
879: learn: 0.1376383 total: 2s remaining: 272ms
880: learn: 0.1374992 total: 2s remaining: 270ms
881: learn: 0.1374525 total: 2s remaining: 268ms
882: learn: 0.1373874 total: 2s remaining: 265ms
883: learn: 0.1372849 total: 2s remaining: 263ms
884: learn: 0.1371550 total: 2.01s remaining: 261ms
885: learn: 0.1370305 total: 2.01s remaining: 259ms
886: learn: 0.1369457 total: 2.01s remaining: 256ms
887: learn: 0.1368840 total: 2.01s remaining: 254ms
888: learn: 0.1368084 total: 2.02s remaining: 252ms
889: learn: 0.1367624 total: 2.02s remaining: 250ms
890: learn: 0.1366302 total: 2.02s remaining: 247ms
891: learn: 0.1365805 total: 2.02s remaining: 245ms
892: learn: 0.1365197 total: 2.03s remaining: 243ms
893: learn: 0.1364458 total: 2.03s remaining: 241ms
894: learn: 0.1363444 total: 2.03s remaining: 238ms
895: learn: 0.1361945 total: 2.03s remaining: 236ms
896: learn: 0.1361387 total: 2.04s remaining: 234ms
897: learn: 0.1360524 total: 2.04s remaining: 231ms
898: learn: 0.1359946 total: 2.04s remaining: 229ms
899: learn: 0.1359171 total: 2.04s remaining: 227ms
900: learn: 0.1358177 total: 2.04s remaining: 225ms
901: learn: 0.1356717 total: 2.05s remaining: 222ms
902: learn: 0.1355831 total: 2.05s remaining: 220ms
903: learn: 0.1354955 total: 2.05s remaining: 218ms
904: learn: 0.1353576 total: 2.05s remaining: 216ms
905: learn: 0.1352896 total: 2.06s remaining: 213ms
906: learn: 0.1352346 total: 2.06s remaining: 211ms
907: learn: 0.1351634 total: 2.06s remaining: 209ms
908: learn: 0.1350699 total: 2.06s remaining: 207ms
909: learn: 0.1349769 total: 2.07s remaining: 204ms
910: learn: 0.1348939 total: 2.07s remaining: 202ms
911: learn: 0.1347478 total: 2.07s remaining: 200ms
912: learn: 0.1346940 total: 2.07s remaining: 198ms
913: learn: 0.1345811 total: 2.08s remaining: 195ms
914: learn: 0.1344872 total: 2.08s remaining: 193ms
915: learn: 0.1344286 total: 2.08s remaining: 191ms
916: learn: 0.1343672 total: 2.08s remaining: 188ms
```

```
917: learn: 0.1342620 total: 2.08s remaining: 186ms
918: learn: 0.1340817 total: 2.09s remaining: 184ms
919: learn: 0.1340236 total: 2.09s remaining: 182ms
920: learn: 0.1339504 total: 2.09s remaining: 179ms
921: learn: 0.1338926 total: 2.09s remaining: 177ms
922: learn: 0.1337198 total: 2.1s remaining: 175ms
923: learn: 0.1336654 total: 2.1s remaining: 173ms
924: learn: 0.1335869 total: 2.1s remaining: 170ms
925: learn: 0.1335675 total: 2.1s remaining: 168ms
926: learn: 0.1335157 total: 2.1s remaining: 166ms
927: learn: 0.1334690 total: 2.11s remaining: 163ms
928: learn: 0.1334402 total: 2.11s remaining: 161ms
929: learn: 0.1333986 total: 2.11s remaining: 159ms
930: learn: 0.1332748 total: 2.11s remaining: 157ms
931: learn: 0.1331793 total: 2.12s remaining: 154ms
932: learn: 0.1330500 total: 2.12s remaining: 152ms
933: learn: 0.1330052 total: 2.12s remaining: 150ms
934: learn: 0.1329641 total: 2.12s remaining: 148ms
935: learn: 0.1328952 total: 2.13s remaining: 145ms
936: learn: 0.1328671 total: 2.13s remaining: 143ms
937: learn: 0.1327939 total: 2.13s remaining: 141ms
938: learn: 0.1327300 total: 2.13s remaining: 139ms
939: learn: 0.1326765 total: 2.13s remaining: 136ms
940: learn: 0.1326066 total: 2.14s remaining: 134ms
941: learn: 0.1325540 total: 2.14s remaining: 132ms
942: learn: 0.1324464 total: 2.14s remaining: 129ms
943: learn: 0.1323681 total: 2.14s remaining: 127ms
944: learn: 0.1322807 total: 2.15s remaining: 125ms
945: learn: 0.1322107 total: 2.15s remaining: 123ms
946: learn: 0.1321132 total: 2.15s remaining: 120ms
947: learn: 0.1320803 total: 2.15s remaining: 118ms
948: learn: 0.1320234 total: 2.15s remaining: 116ms
949: learn: 0.1319674 total: 2.16s remaining: 114ms
950: learn: 0.1318693 total: 2.16s remaining: 111ms
951: learn: 0.1317391 total: 2.16s remaining: 109ms
952: learn: 0.1316646 total: 2.17s remaining: 107ms
953: learn: 0.1315181 total: 2.17s remaining: 105ms
954: learn: 0.1314871 total: 2.17s remaining: 102ms
955: learn: 0.1313894 total: 2.17s remaining: 100ms
956: learn: 0.1313217 total: 2.17s remaining: 97.7ms
957: learn: 0.1312639 total: 2.18s remaining: 95.4ms
958: learn: 0.1312184 total: 2.18s remaining: 93.2ms
959: learn: 0.1311629 total: 2.18s remaining: 90.9ms
960: learn: 0.1311214 total: 2.18s remaining: 88.6ms
961: learn: 0.1309795 total: 2.19s remaining: 86.3ms
962: learn: 0.1308777 total: 2.19s remaining: 84.1ms
963: learn: 0.1307661 total: 2.19s remaining: 81.8ms
964: learn: 0.1306930 total: 2.19s remaining: 79.5ms
965: learn: 0.1306139 total: 2.19s remaining: 77.3ms
966: learn: 0.1305346 total: 2.2s remaining: 75ms
967: learn: 0.1303602 total: 2.2s remaining: 72.7ms
968: learn: 0.1302894 total: 2.2s remaining: 70.4ms
969: learn: 0.1301995 total: 2.2s remaining: 68.2ms
970: learn: 0.1300876 total: 2.21s remaining: 65.9ms
971: learn: 0.1300437 total: 2.21s remaining: 63.6ms
972: learn: 0.1299528 total: 2.21s remaining: 61.4ms
973: learn: 0.1298632 total: 2.21s remaining: 59.1ms
974: learn: 0.1298340 total: 2.21s remaining: 56.8ms
975: learn: 0.1297883 total: 2.22s remaining: 54.5ms
976: learn: 0.1297602 total: 2.22s remaining: 52.3ms
977: learn: 0.1296778 total: 2.22s remaining: 50ms
978: learn: 0.1296250 total: 2.22s remaining: 47.7ms
979: learn: 0.1295602 total: 2.23s remaining: 45.5ms
980: learn: 0.1294981 total: 2.23s remaining: 43.2ms
981: learn: 0.1294325 total: 2.23s remaining: 40.9ms
982: learn: 0.1293050 total: 2.23s remaining: 38.6ms
983: learn: 0.1292377 total: 2.24s remaining: 36.4ms
984: learn: 0.1291680 total: 2.24s remaining: 34.1ms
985: learn: 0.1291170 total: 2.24s remaining: 31.8ms
986: learn: 0.1290476 total: 2.24s remaining: 29.5ms
987: learn: 0.1289934 total: 2.25s remaining: 27.3ms
988: learn: 0.1289636 total: 2.25s remaining: 25ms
989: learn: 0.1288647 total: 2.25s remaining: 22.7ms
990: learn: 0.1287668 total: 2.25s remaining: 20.5ms
991: learn: 0.1286794 total: 2.25s remaining: 18.2ms
992: learn: 0.1286309 total: 2.26s remaining: 15.9ms
993: learn: 0.1285902 total: 2.26s remaining: 13.6ms
```

```
994: learn: 0.1285492    total: 2.26s    remaining: 11.4ms
995: learn: 0.1284418    total: 2.26s    remaining: 9.09ms
996: learn: 0.1283908    total: 2.27s    remaining: 6.82ms
997: learn: 0.1283489    total: 2.27s    remaining: 4.55ms
998: learn: 0.1282633    total: 2.27s    remaining: 2.27ms
999: learn: 0.1281932    total: 2.27s    remaining: 0us
```

```
PrintRegressionMetrics(lab5_regr_y_test, cb_regr_prediction)
```

-Средняя абсолютная ошибка = 0.10996347236055334;
-Медианная абсолютная ошибка = 0.05227442553169892;
-Среднеквадратичная ошибка = 0.2186342447884883;
-Коэффициент детерминации = 0.9445832378384268.