

```
1 ssh://root@103.254.67.181:10006/usr/bin/  
python -u /home/sunfengzhen/pycharm/  
Encoder/Encoder.py  
2 WARNING: tensorflow: From /home/  
sunfengzhen/pycharm/Encoder/Encoder.py:  
20: read_data_sets (from tensorflow.  
contrib.learn.python.learn.datasets.  
mnist) is deprecated and will be removed  
in a future version.  
3 Instructions for updating:  
4 Please use alternatives such as official  
/mnist/dataset.py from tensorflow/models  
.   
5 WARNING: tensorflow: From /usr/local/lib/  
python2.7/dist-packages/tensorflow/  
contrib/learn/python/learn/datasets/  
mnist.py:260: maybe_download (from  
tensorflow.contrib.learn.python.learn.  
datasets.base) is deprecated and will be  
removed in a future version.  
6 Instructions for updating:  
7 Please write your own downloading logic.  
8 WARNING: tensorflow: From /usr/local/lib/  
python2.7/dist-packages/tensorflow/
```

```
8 contrib/learn/python/learn/datasets/  
mnist.py:262: extract_images (from  
tensorflow.contrib.learn.python.learn.  
datasets.mnist) is deprecated and will  
be removed in a future version.  
9 Instructions for updating:  
10 Please use tf.data to implement this  
functionality.  
11 Extracting data/train-images-idx3-ubyte.  
gz  
12 WARNING: tensorflow: From /usr/local/lib/  
python2.7/dist-packages/tensorflow/  
contrib/learn/python/learn/datasets/  
mnist.py:267: extract_labels (from  
tensorflow.contrib.learn.python.learn.  
datasets.mnist) is deprecated and will  
be removed in a future version.  
13 Instructions for updating:  
14 Please use tf.data to implement this  
functionality.  
15 Extracting data/train-labels-idx1-ubyte.  
gz  
16 Extracting data/t10k-images-idx3-ubyte.  
gz
```

```
17 Extracting data/t10k-labels-idx1-ubyte.  
   gz  
18 WARNING: tensorflow: From /usr/local/lib/  
   python2.7/dist-packages/tensorflow/  
   contrib/learn/python/learn/datasets/  
   mnist.py:290: __init__ (from tensorflow.  
   contrib.learn.python.learn.datasets.  
   mnist) is deprecated and will be removed  
   in a future version.  
19 Instructions for updating:  
20 Please use alternatives such as official  
   /mnist/dataset.py from tensorflow/models  
   .  
21 2019-04-16 10:07:24.166869: I tensorflow  
   /core/platform/cpu_feature_guard.cc:141  
   [ Your CPU supports instructions that  
   this TensorFlow binary was not compiled  
   to use: AVX2 FMA  
22 2019-04-16 10:07:24.424321: I tensorflow  
   /core/common_runtime/gpu/gpu_device.cc:  
   1432] Found device 0 with properties:  
23 name: GeForce GTX 1080 Ti major: 6 minor:  
   : 1 memoryClockRate(GHz): 1.582  
24 pciBusID: 0000:02:00.0
```

```
25 totalMemory: 10.92GiB freeMemory: 5.40GiB
26 2019-04-16 10:07:24.637591: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1432] Found device 1 with properties:
27 name: GeForce GTX 1080 Ti major: 6 minor
: 1 memoryClockRate(GHz): 1.582
28 pciBusID: 0000:82:00.0
29 totalMemory: 10.92GiB freeMemory: 10.76GiB
30 2019-04-16 10:07:24.637700: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1511] Adding visible gpu devices: 0, 1
31 2019-04-16 10:07:25.461573: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
982] Device interconnect StreamExecutor
with strength 1 edge matrix:
32 2019-04-16 10:07:25.461658: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
988]      0 1
33 2019-04-16 10:07:25.461671: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1001] 0:      N N
34 2019-04-16 10:07:25.461678: I tensorflow
```

```
34 /core/common_runtime/gpu/gpu_device.cc:
1001] 1:  N N
35 2019-04-16 10:07:25.462345: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1115] Created TensorFlow device (/job:
localhost/replica:0/task:0/device:GPU:0
with 5162 MB memory) -> physical GPU (
device: 0, name: GeForce GTX 1080 Ti,
pci bus id: 0000:02:00.0, compute
capability: 6.1)
36 2019-04-16 10:07:25.463556: I tensorflow
/core/common_runtime/gpu/gpu_device.cc:
1115] Created TensorFlow device (/job:
localhost/replica:0/task:0/device:GPU:1
with 10409 MB memory) -> physical GPU (
device: 1, name: GeForce GTX 1080 Ti,
pci bus id: 0000:82:00.0, compute
capability: 6.1)
37 Epoch: 0001 cost= 0.067289077
38 Epoch: 0002 cost= 0.059227068
39 Epoch: 0003 cost= 0.056805100
40 Epoch: 0004 cost= 0.050245062
41 Epoch: 0005 cost= 0.047627214
42 Epoch: 0006 cost= 0.044431098
```

```
43 Epoch: 0007 cost= 0.046189323
44 Epoch: 0008 cost= 0.044263668
45 Epoch: 0009 cost= 0.042960782
46 Epoch: 0010 cost= 0.042008702
47 Epoch: 0011 cost= 0.043217022
48 Epoch: 0012 cost= 0.041917495
49 Epoch: 0013 cost= 0.042214490
50 Epoch: 0014 cost= 0.040889233
51 Epoch: 0015 cost= 0.038375504
52 Epoch: 0016 cost= 0.040238257
53 Epoch: 0017 cost= 0.038769759
54 Epoch: 0018 cost= 0.040530447
55 Epoch: 0019 cost= 0.040696550
56 Epoch: 0020 cost= 0.038760539
57 Epoch: 0021 cost= 0.040772971
58 Epoch: 0022 cost= 0.038955964
59 Epoch: 0023 cost= 0.039650042
60 Epoch: 0024 cost= 0.039044783
61 Epoch: 0025 cost= 0.036224332
62 Epoch: 0026 cost= 0.040961124
63 Epoch: 0027 cost= 0.039451078
64 Epoch: 0028 cost= 0.038582932
65 Epoch: 0029 cost= 0.039121300
66 Epoch: 0030 cost= 0.038951907
```

```
67 Epoch: 0031 cost= 0.036087487
68 Epoch: 0032 cost= 0.037226729
69 Epoch: 0033 cost= 0.038497355
70 Epoch: 0034 cost= 0.037651885
71 Epoch: 0035 cost= 0.037105724
72 Epoch: 0036 cost= 0.039267052
73 Epoch: 0037 cost= 0.039712343
74 Epoch: 0038 cost= 0.037062962
75 Epoch: 0039 cost= 0.037954453
76 Epoch: 0040 cost= 0.035462122
77 Epoch: 0041 cost= 0.036505852
78 Epoch: 0042 cost= 0.037170116
79 Epoch: 0043 cost= 0.037209481
80 Epoch: 0044 cost= 0.036213011
81 Epoch: 0045 cost= 0.036158603
82 Epoch: 0046 cost= 0.037569258
83 Epoch: 0047 cost= 0.037551511
84 Epoch: 0048 cost= 0.036680888
85 Epoch: 0049 cost= 0.036659911
86 Epoch: 0050 cost= 0.037458006
87 Epoch: 0051 cost= 0.036804277
88 Epoch: 0052 cost= 0.039997231
89 Epoch: 0053 cost= 0.036115184
90 Epoch: 0054 cost= 0.034102533
```

```
91 Epoch: 0055 cost= 0.038465690
92 Epoch: 0056 cost= 0.036301084
93 Epoch: 0057 cost= 0.036559947
94 Epoch: 0058 cost= 0.037490554
95 Epoch: 0059 cost= 0.033954475
96 Epoch: 0060 cost= 0.036258232
97 Epoch: 0061 cost= 0.035795469
98 Epoch: 0062 cost= 0.035682026
99 Epoch: 0063 cost= 0.037171789
100 Epoch: 0064 cost= 0.037070364
101 Epoch: 0065 cost= 0.036227636
102 Epoch: 0066 cost= 0.034401555
103 Epoch: 0067 cost= 0.035308857
104 Epoch: 0068 cost= 0.035280392
105 Epoch: 0069 cost= 0.036342449
106 Epoch: 0070 cost= 0.037079815
107 Epoch: 0071 cost= 0.035927862
108 Epoch: 0072 cost= 0.036340240
109 Epoch: 0073 cost= 0.037544213
110 Epoch: 0074 cost= 0.035684794
111 Epoch: 0075 cost= 0.036256220
112 Epoch: 0076 cost= 0.037187897
113 Epoch: 0077 cost= 0.035736900
114 Epoch: 0078 cost= 0.034647625
```



```
115 Epoch: 0079 cost= 0.035444919
116 Epoch: 0080 cost= 0.036310345
117 Epoch: 0081 cost= 0.036811624
118 Epoch: 0082 cost= 0.036180113
119 Epoch: 0083 cost= 0.036581405
120 Epoch: 0084 cost= 0.036309570
121 Epoch: 0085 cost= 0.036675092
122 Epoch: 0086 cost= 0.033435605
123 Epoch: 0087 cost= 0.034924518
124 Epoch: 0088 cost= 0.035337247
125 Epoch: 0089 cost= 0.039097916
126 Epoch: 0090 cost= 0.036673501
127 Epoch: 0091 cost= 0.034910809
128 Epoch: 0092 cost= 0.034930453
129 Epoch: 0093 cost= 0.033861857
130 Epoch: 0094 cost= 0.036457628
131 Epoch: 0095 cost= 0.035833653
132 Epoch: 0096 cost= 0.036442596
133 Epoch: 0097 cost= 0.035344090
134 Epoch: 0098 cost= 0.036819387
135 Epoch: 0099 cost= 0.035666820
136 Epoch: 0100 cost= 0.035938170
137 Epoch: 0101 cost= 0.034371909
138 Epoch: 0102 cost= 0.033102401
```

```
139 Epoch: 0103 cost= 0.035787228
140 Epoch: 0104 cost= 0.035140708
141 Epoch: 0105 cost= 0.036514588
142 Epoch: 0106 cost= 0.036200039
143 Epoch: 0107 cost= 0.036802821
144 Epoch: 0108 cost= 0.034290168
145 Epoch: 0109 cost= 0.035508487
146 Epoch: 0110 cost= 0.035921589
147 Epoch: 0111 cost= 0.035222359
148 Epoch: 0112 cost= 0.036601335
149 Epoch: 0113 cost= 0.034963597
150 Epoch: 0114 cost= 0.035570208
151 Epoch: 0115 cost= 0.035772461
152 Epoch: 0116 cost= 0.034913003
153 Epoch: 0117 cost= 0.037303243
154 Epoch: 0118 cost= 0.035695516
155 Epoch: 0119 cost= 0.035096947
156 Epoch: 0120 cost= 0.035637740
157 Epoch: 0121 cost= 0.033941828
158 Epoch: 0122 cost= 0.036783367
159 Epoch: 0123 cost= 0.035808418
160 Epoch: 0124 cost= 0.034866821
161 Epoch: 0125 cost= 0.034487158
162 Epoch: 0126 cost= 0.033898603
```

```
163 Epoch: 0127 cost= 0.037250731
164 Epoch: 0128 cost= 0.037712760
165 Epoch: 0129 cost= 0.035775229
166 Epoch: 0130 cost= 0.033955369
167 Epoch: 0131 cost= 0.036454730
168 Epoch: 0132 cost= 0.035374343
169 Epoch: 0133 cost= 0.037038345
170 Epoch: 0134 cost= 0.035415780
171 Epoch: 0135 cost= 0.035273980
172 Epoch: 0136 cost= 0.035777576
173 Epoch: 0137 cost= 0.035721131
174 Epoch: 0138 cost= 0.035992175
175 Epoch: 0139 cost= 0.036595233
176 Epoch: 0140 cost= 0.035713550
177 Epoch: 0141 cost= 0.034615379
178 Epoch: 0142 cost= 0.032915618
179 Epoch: 0143 cost= 0.035819117
180 Epoch: 0144 cost= 0.033715807
181 Epoch: 0145 cost= 0.035739295
182 Epoch: 0146 cost= 0.034927189
183 Epoch: 0147 cost= 0.035914727
184 Epoch: 0148 cost= 0.033783618
185 Epoch: 0149 cost= 0.036071148
186 Epoch: 0150 cost= 0.034458309
```

```
187 Epoch: 0151 cost= 0.034672957
188 Epoch: 0152 cost= 0.034707747
189 Epoch: 0153 cost= 0.035663228
190 Epoch: 0154 cost= 0.036743373
191 Epoch: 0155 cost= 0.036191903
192 Epoch: 0156 cost= 0.036250740
193 Epoch: 0157 cost= 0.037072394
194 Epoch: 0158 cost= 0.035222303
195 Epoch: 0159 cost= 0.035688814
196 Epoch: 0160 cost= 0.036011960
197 Epoch: 0161 cost= 0.035084110
198 Epoch: 0162 cost= 0.036020514
199 Epoch: 0163 cost= 0.034141894
200 Epoch: 0164 cost= 0.036912646
201 Epoch: 0165 cost= 0.035256743
202 Epoch: 0166 cost= 0.036230974
203 Epoch: 0167 cost= 0.036437992
204 Epoch: 0168 cost= 0.035876580
205 Epoch: 0169 cost= 0.035685208
206 Epoch: 0170 cost= 0.034463894
207 Epoch: 0171 cost= 0.035294525
208 Epoch: 0172 cost= 0.034949794
209 Epoch: 0173 cost= 0.034990422
210 Epoch: 0174 cost= 0.035075810
```

```
211 Epoch: 0175 cost= 0.035324823
212 Epoch: 0176 cost= 0.035339002
213 Epoch: 0177 cost= 0.035034083
214 Epoch: 0178 cost= 0.035356920
215 Epoch: 0179 cost= 0.034157783
216 Epoch: 0180 cost= 0.034154307
217 Epoch: 0181 cost= 0.035770468
218 Epoch: 0182 cost= 0.035628941
219 Epoch: 0183 cost= 0.034688018
220 Epoch: 0184 cost= 0.037246868
221 Epoch: 0185 cost= 0.032943934
222 Epoch: 0186 cost= 0.032964505
223 Epoch: 0187 cost= 0.034950569
224 Epoch: 0188 cost= 0.034473766
225 Epoch: 0189 cost= 0.034195557
226 Epoch: 0190 cost= 0.036597375
227 Epoch: 0191 cost= 0.035492703
228 Epoch: 0192 cost= 0.034971606
229 Epoch: 0193 cost= 0.035243299
230 Epoch: 0194 cost= 0.034093861
231 Epoch: 0195 cost= 0.036144879
232 Epoch: 0196 cost= 0.034333576
233 Epoch: 0197 cost= 0.034851309
234 Epoch: 0198 cost= 0.035372164
```

```
235 Epoch: 0199 cost= 0.036436554
236 Epoch: 0200 cost= 0.033842966
237 Epoch: 0201 cost= 0.035357978
238 Epoch: 0202 cost= 0.034442749
239 Epoch: 0203 cost= 0.033656809
240 Epoch: 0204 cost= 0.034618292
241 Epoch: 0205 cost= 0.035964478
242 Epoch: 0206 cost= 0.035309792
243 Epoch: 0207 cost= 0.034988329
244 Epoch: 0208 cost= 0.033456787
245 Epoch: 0209 cost= 0.033177763
246 Epoch: 0210 cost= 0.034615967
247 Epoch: 0211 cost= 0.033586338
248 Epoch: 0212 cost= 0.034382731
249 Epoch: 0213 cost= 0.034068611
250 Epoch: 0214 cost= 0.033907313
251 Epoch: 0215 cost= 0.034519129
252 Epoch: 0216 cost= 0.034550704
253 Epoch: 0217 cost= 0.034737825
254 Epoch: 0218 cost= 0.035243772
255 Epoch: 0219 cost= 0.035082009
256 Epoch: 0220 cost= 0.034413032
257 Epoch: 0221 cost= 0.035756972
258 Epoch: 0222 cost= 0.034313142
```

```
259 Epoch: 0223 cost= 0.034714703
260 Epoch: 0224 cost= 0.034667872
261 Epoch: 0225 cost= 0.035814755
262 Epoch: 0226 cost= 0.035055991
263 Epoch: 0227 cost= 0.033515677
264 Epoch: 0228 cost= 0.035293147
265 Epoch: 0229 cost= 0.034898777
266 Epoch: 0230 cost= 0.036047723
267 Epoch: 0231 cost= 0.032807194
268 Epoch: 0232 cost= 0.034416527
269 Epoch: 0233 cost= 0.036007408
270 Epoch: 0234 cost= 0.034453914
271 Epoch: 0235 cost= 0.034817010
272 Epoch: 0236 cost= 0.033843625
273 Epoch: 0237 cost= 0.033603970
274 Epoch: 0238 cost= 0.036107037
275 Epoch: 0239 cost= 0.035339702
276 Epoch: 0240 cost= 0.035770763
277 Epoch: 0241 cost= 0.033448007
278 Epoch: 0242 cost= 0.034290079
279 Epoch: 0243 cost= 0.035942651
280 Epoch: 0244 cost= 0.034165893
281 Epoch: 0245 cost= 0.034215502
282 Epoch: 0246 cost= 0.034785166
```

```
283 Epoch: 0247 cost= 0.034234639
284 Epoch: 0248 cost= 0.034756016
285 Epoch: 0249 cost= 0.035352163
286 Epoch: 0250 cost= 0.034341473
287 Epoch: 0251 cost= 0.035411760
288 Epoch: 0252 cost= 0.033912886
289 Epoch: 0253 cost= 0.036821142
290 Epoch: 0254 cost= 0.035942804
291 Epoch: 0255 cost= 0.033824075
292 Epoch: 0256 cost= 0.033582952
293 Epoch: 0257 cost= 0.034408763
294 Epoch: 0258 cost= 0.036215033
295 Epoch: 0259 cost= 0.034778200
296 Epoch: 0260 cost= 0.035001900
297 Epoch: 0261 cost= 0.033365536
298 Epoch: 0262 cost= 0.034471411
299 Epoch: 0263 cost= 0.035028428
300 Epoch: 0264 cost= 0.034752414
301 Epoch: 0265 cost= 0.033919379
302 Epoch: 0266 cost= 0.038283829
303 Epoch: 0267 cost= 0.034921840
304 Epoch: 0268 cost= 0.036001150
305 Epoch: 0269 cost= 0.034599137
306 Epoch: 0270 cost= 0.035466425
```



```
307 Epoch: 0271 cost= 0.034317967
308 Epoch: 0272 cost= 0.033156112
309 Epoch: 0273 cost= 0.036162570
310 Epoch: 0274 cost= 0.034931242
311 Epoch: 0275 cost= 0.034726746
312 Epoch: 0276 cost= 0.034078680
313 Epoch: 0277 cost= 0.034107782
314 Epoch: 0278 cost= 0.033488713
315 Epoch: 0279 cost= 0.036448147
316 Epoch: 0280 cost= 0.034889113
317 Epoch: 0281 cost= 0.033145528
318 Epoch: 0282 cost= 0.033631377
319 Epoch: 0283 cost= 0.034445509
320 Epoch: 0284 cost= 0.034889668
321 Epoch: 0285 cost= 0.036736388
322 Epoch: 0286 cost= 0.035906076
323 Epoch: 0287 cost= 0.036004581
324 Epoch: 0288 cost= 0.035698488
325 Epoch: 0289 cost= 0.036179934
326 Epoch: 0290 cost= 0.033062898
327 Epoch: 0291 cost= 0.035349388
328 Epoch: 0292 cost= 0.034650024
329 Epoch: 0293 cost= 0.035099272
330 Epoch: 0294 cost= 0.033626258
```

```
331 Epoch: 0295 cost= 0.033496350
332 Epoch: 0296 cost= 0.032814838
333 Epoch: 0297 cost= 0.033571634
334 Epoch: 0298 cost= 0.037074503
335 Epoch: 0299 cost= 0.034308102
336 Epoch: 0300 cost= 0.034068000
337 Epoch: 0301 cost= 0.034025609
338 Epoch: 0302 cost= 0.036340471
339 Epoch: 0303 cost= 0.034737505
340 Epoch: 0304 cost= 0.033981524
341 Epoch: 0305 cost= 0.035647031
342 Epoch: 0306 cost= 0.036180340
343 Epoch: 0307 cost= 0.035455447
344 Epoch: 0308 cost= 0.036874130
345 Epoch: 0309 cost= 0.035238128
346 Epoch: 0310 cost= 0.035255514
347 Epoch: 0311 cost= 0.034389120
348 Epoch: 0312 cost= 0.034804080
349 Epoch: 0313 cost= 0.036958236
350 Epoch: 0314 cost= 0.035398129
351 Epoch: 0315 cost= 0.034976885
352 Epoch: 0316 cost= 0.034226481
353 Epoch: 0317 cost= 0.033283692
354 Epoch: 0318 cost= 0.034886897
```

```
355 Epoch: 0319 cost= 0.032746743
356 Epoch: 0320 cost= 0.034657259
357 Epoch: 0321 cost= 0.035297066
358 Epoch: 0322 cost= 0.035816036
359 Epoch: 0323 cost= 0.032484822
360 Epoch: 0324 cost= 0.033749100
361 Epoch: 0325 cost= 0.034466270
362 Epoch: 0326 cost= 0.036297478
363 Epoch: 0327 cost= 0.036981266
364 Epoch: 0328 cost= 0.032298803
365 Epoch: 0329 cost= 0.035970896
366 Epoch: 0330 cost= 0.036018874
367 Epoch: 0331 cost= 0.034588214
368 Epoch: 0332 cost= 0.035090417
369 Epoch: 0333 cost= 0.037195846
370 Epoch: 0334 cost= 0.034263987
371 Epoch: 0335 cost= 0.036849894
372 Epoch: 0336 cost= 0.034637433
373 Epoch: 0337 cost= 0.036111601
374 Epoch: 0338 cost= 0.034551524
375 Epoch: 0339 cost= 0.035896990
376 Epoch: 0340 cost= 0.035784539
377 Epoch: 0341 cost= 0.033686787
378 Epoch: 0342 cost= 0.034580544
```

```
379 Epoch: 0343 cost= 0.033958741
380 Epoch: 0344 cost= 0.034056857
381 Epoch: 0345 cost= 0.035198979
382 Epoch: 0346 cost= 0.035025828
383 Epoch: 0347 cost= 0.036369413
384 Epoch: 0348 cost= 0.035291247
385 Epoch: 0349 cost= 0.035345137
386 Epoch: 0350 cost= 0.033155408
387 Epoch: 0351 cost= 0.035051484
388 Epoch: 0352 cost= 0.035088141
389 Epoch: 0353 cost= 0.034940921
390 Epoch: 0354 cost= 0.034170635
391 Epoch: 0355 cost= 0.036894340
392 Epoch: 0356 cost= 0.035022669
393 Epoch: 0357 cost= 0.035504155
394 Epoch: 0358 cost= 0.034109812
395 Epoch: 0359 cost= 0.034639783
396 Epoch: 0360 cost= 0.033677064
397 Epoch: 0361 cost= 0.036508851
398 Epoch: 0362 cost= 0.034477279
399 Epoch: 0363 cost= 0.035891097
400 Epoch: 0364 cost= 0.035182916
401 Epoch: 0365 cost= 0.036350805
402 Epoch: 0366 cost= 0.033574663
```

```
403 Epoch: 0367 cost= 0.034329958
404 Epoch: 0368 cost= 0.034030311
405 Epoch: 0369 cost= 0.036991976
406 Epoch: 0370 cost= 0.035050523
407 Epoch: 0371 cost= 0.035544302
408 Epoch: 0372 cost= 0.034241728
409 Epoch: 0373 cost= 0.034370687
410 Epoch: 0374 cost= 0.035062324
411 Epoch: 0375 cost= 0.032792013
412 Epoch: 0376 cost= 0.034255300
413 Epoch: 0377 cost= 0.034508709
414 Epoch: 0378 cost= 0.033077881
415 Epoch: 0379 cost= 0.036099628
416 Epoch: 0380 cost= 0.034179591
417 Epoch: 0381 cost= 0.033560637
418 Epoch: 0382 cost= 0.034323964
419 Epoch: 0383 cost= 0.034289852
420 Epoch: 0384 cost= 0.033329774
421 Epoch: 0385 cost= 0.033438411
422 Epoch: 0386 cost= 0.035373889
423 Epoch: 0387 cost= 0.033821195
424 Epoch: 0388 cost= 0.033948693
425 Epoch: 0389 cost= 0.033287585
426 Epoch: 0390 cost= 0.032810800
```

```
427 Epoch: 0391 cost= 0.035746939
428 Epoch: 0392 cost= 0.033130061
429 Epoch: 0393 cost= 0.033433467
430 Epoch: 0394 cost= 0.034975480
431 Epoch: 0395 cost= 0.036743868
432 Epoch: 0396 cost= 0.034347232
433 Epoch: 0397 cost= 0.035035059
434 Epoch: 0398 cost= 0.036477458
435 Epoch: 0399 cost= 0.033226747
436 Epoch: 0400 cost= 0.034273494
437 Epoch: 0401 cost= 0.035523225
438 Epoch: 0402 cost= 0.034672748
439 Epoch: 0403 cost= 0.034154214
440 Epoch: 0404 cost= 0.035455953
441 Epoch: 0405 cost= 0.034598384
442 Epoch: 0406 cost= 0.035130490
443 Epoch: 0407 cost= 0.035066701
444 Epoch: 0408 cost= 0.033258639
445 Epoch: 0409 cost= 0.035027396
446 Epoch: 0410 cost= 0.036065739
447 Epoch: 0411 cost= 0.034467302
448 Epoch: 0412 cost= 0.033816714
449 Epoch: 0413 cost= 0.033577763
450 Epoch: 0414 cost= 0.038710136
```

```
451 Epoch: 0415 cost= 0.036264829
452 Epoch: 0416 cost= 0.035540849
453 Epoch: 0417 cost= 0.036036663
454 Epoch: 0418 cost= 0.032610606
455 Epoch: 0419 cost= 0.033377476
456 Epoch: 0420 cost= 0.034311771
457 Epoch: 0421 cost= 0.035650916
458 Epoch: 0422 cost= 0.033943731
459 Epoch: 0423 cost= 0.034605522
460 Epoch: 0424 cost= 0.034436844
461 Epoch: 0425 cost= 0.034719680
462 Epoch: 0426 cost= 0.034967843
463 Epoch: 0427 cost= 0.034848623
464 Epoch: 0428 cost= 0.034384809
465 Epoch: 0429 cost= 0.034605976
466 Epoch: 0430 cost= 0.035022143
467 Epoch: 0431 cost= 0.034745537
468 Epoch: 0432 cost= 0.033863582
469 Epoch: 0433 cost= 0.034096822
470 Epoch: 0434 cost= 0.035656601
471 Epoch: 0435 cost= 0.034263775
472 Epoch: 0436 cost= 0.034135170
473 Epoch: 0437 cost= 0.032636195
474 Epoch: 0438 cost= 0.035479341
```

```
475 Epoch: 0439 cost= 0.035973139
476 Epoch: 0440 cost= 0.033824783
477 Epoch: 0441 cost= 0.033882480
478 Epoch: 0442 cost= 0.032479532
479 Epoch: 0443 cost= 0.034327511
480 Epoch: 0444 cost= 0.031980783
481 Epoch: 0445 cost= 0.033788662
482 Epoch: 0446 cost= 0.034437105
483 Epoch: 0447 cost= 0.035164859
484 Epoch: 0448 cost= 0.032923196
485 Epoch: 0449 cost= 0.032595035
486 Epoch: 0450 cost= 0.034091230
487 Epoch: 0451 cost= 0.034078192
488 Epoch: 0452 cost= 0.035509568
489 Epoch: 0453 cost= 0.031737104
490 Epoch: 0454 cost= 0.033530142
491 Epoch: 0455 cost= 0.033361889
492 Epoch: 0456 cost= 0.033860050
493 Epoch: 0457 cost= 0.033325315
494 Epoch: 0458 cost= 0.034191389
495 Epoch: 0459 cost= 0.035248805
496 Epoch: 0460 cost= 0.033252474
497 Epoch: 0461 cost= 0.035118945
498 Epoch: 0462 cost= 0.035257254
```



```
499 Epoch: 0463 cost= 0.034841478
500 Epoch: 0464 cost= 0.036214843
501 Epoch: 0465 cost= 0.034034617
502 Epoch: 0466 cost= 0.033994317
503 Epoch: 0467 cost= 0.034970660
504 Epoch: 0468 cost= 0.033232089
505 Epoch: 0469 cost= 0.034224108
506 Epoch: 0470 cost= 0.031971332
507 Epoch: 0471 cost= 0.033493333
508 Epoch: 0472 cost= 0.035546664
509 Epoch: 0473 cost= 0.034045294
510 Epoch: 0474 cost= 0.036838308
511 Epoch: 0475 cost= 0.034457065
512 Epoch: 0476 cost= 0.035375584
513 Epoch: 0477 cost= 0.033325221
514 Epoch: 0478 cost= 0.034386598
515 Epoch: 0479 cost= 0.035774425
516 Epoch: 0480 cost= 0.035707511
517 Epoch: 0481 cost= 0.035206459
518 Epoch: 0482 cost= 0.035967812
519 Epoch: 0483 cost= 0.033572223
520 Epoch: 0484 cost= 0.034663793
521 Epoch: 0485 cost= 0.033960957
522 Epoch: 0486 cost= 0.034321383
```

```
523 Epoch: 0487 cost= 0.033562440
524 Epoch: 0488 cost= 0.035223417
525 Epoch: 0489 cost= 0.034277719
526 Epoch: 0490 cost= 0.034626551
527 Epoch: 0491 cost= 0.032324515
528 Epoch: 0492 cost= 0.033680778
529 Epoch: 0493 cost= 0.034204006
530 Epoch: 0494 cost= 0.035384472
531 Epoch: 0495 cost= 0.034278117
532 Epoch: 0496 cost= 0.035839744
533 Epoch: 0497 cost= 0.034640815
534 Epoch: 0498 cost= 0.034317795
535 Epoch: 0499 cost= 0.033776555
536 Epoch: 0500 cost= 0.032643400
537 Epoch: 0501 cost= 0.034717500
538 Epoch: 0502 cost= 0.033833120
539 Epoch: 0503 cost= 0.034332469
540 Epoch: 0504 cost= 0.032573171
541 Epoch: 0505 cost= 0.033605866
542 Epoch: 0506 cost= 0.035487927
543 Epoch: 0507 cost= 0.036130443
544 Epoch: 0508 cost= 0.034033351
545 Epoch: 0509 cost= 0.032293983
546 Epoch: 0510 cost= 0.034069147
```

```
547 Epoch: 0511 cost= 0.032793604
548 Epoch: 0512 cost= 0.036009125
549 Epoch: 0513 cost= 0.035832759
550 Epoch: 0514 cost= 0.033500116
551 Epoch: 0515 cost= 0.034527328
552 Epoch: 0516 cost= 0.032172754
553 Epoch: 0517 cost= 0.034844004
554 Epoch: 0518 cost= 0.031447489
555 Epoch: 0519 cost= 0.034325413
556 Epoch: 0520 cost= 0.033214115
557 Epoch: 0521 cost= 0.034306314
558 Epoch: 0522 cost= 0.034783777
559 Epoch: 0523 cost= 0.032981653
560 Epoch: 0524 cost= 0.034737717
561 Epoch: 0525 cost= 0.033783950
562 Epoch: 0526 cost= 0.033618119
563 Epoch: 0527 cost= 0.032336060
564 Epoch: 0528 cost= 0.034372780
565 Epoch: 0529 cost= 0.034740943
566 Epoch: 0530 cost= 0.035905540
567 Epoch: 0531 cost= 0.035633687
568 Epoch: 0532 cost= 0.032484628
569 Epoch: 0533 cost= 0.033545330
570 Epoch: 0534 cost= 0.035473917
```

```
571 Epoch: 0535 cost= 0.033838809
572 Epoch: 0536 cost= 0.034401555
573 Epoch: 0537 cost= 0.035960097
574 Epoch: 0538 cost= 0.036162339
575 Epoch: 0539 cost= 0.033446848
576 Epoch: 0540 cost= 0.034165315
577 Epoch: 0541 cost= 0.034709428
578 Epoch: 0542 cost= 0.034760598
579 Epoch: 0543 cost= 0.034760475
580 Epoch: 0544 cost= 0.032801416
581 Epoch: 0545 cost= 0.037571903
582 Epoch: 0546 cost= 0.033226609
583 Epoch: 0547 cost= 0.033933986
584 Epoch: 0548 cost= 0.034632511
585 Epoch: 0549 cost= 0.034175154
586 Epoch: 0550 cost= 0.033799775
587 Epoch: 0551 cost= 0.033490114
588 Epoch: 0552 cost= 0.033603385
589 Epoch: 0553 cost= 0.032997649
590 Epoch: 0554 cost= 0.034010466
591 Epoch: 0555 cost= 0.034535393
592 Epoch: 0556 cost= 0.034123395
593 Epoch: 0557 cost= 0.034196761
594 Epoch: 0558 cost= 0.036406074
```

```
595 Epoch: 0559 cost= 0.034283243
596 Epoch: 0560 cost= 0.035418998
597 Epoch: 0561 cost= 0.035789452
598 Epoch: 0562 cost= 0.033520527
599 Epoch: 0563 cost= 0.037185334
600 Epoch: 0564 cost= 0.033919271
601 Epoch: 0565 cost= 0.033853646
602 Epoch: 0566 cost= 0.032515284
603 Epoch: 0567 cost= 0.035855282
604 Epoch: 0568 cost= 0.033277478
605 Epoch: 0569 cost= 0.034036033
606 Epoch: 0570 cost= 0.034893814
607 Epoch: 0571 cost= 0.034494068
608 Epoch: 0572 cost= 0.034258865
609 Epoch: 0573 cost= 0.034203935
610 Epoch: 0574 cost= 0.035075549
611 Epoch: 0575 cost= 0.032317925
612 Epoch: 0576 cost= 0.036702286
613 Epoch: 0577 cost= 0.034321543
614 Epoch: 0578 cost= 0.032732803
615 Epoch: 0579 cost= 0.034649272
616 Epoch: 0580 cost= 0.033823907
617 Epoch: 0581 cost= 0.034239128
618 Epoch: 0582 cost= 0.034670565
```

```
619 Epoch: 0583 cost= 0.033829246
620 Epoch: 0584 cost= 0.035961155
621 Epoch: 0585 cost= 0.033392657
622 Epoch: 0586 cost= 0.033506684
623 Epoch: 0587 cost= 0.035381775
624 Epoch: 0588 cost= 0.035814300
625 Epoch: 0589 cost= 0.035624828
626 Epoch: 0590 cost= 0.032685481
627 Epoch: 0591 cost= 0.033396151
628 Epoch: 0592 cost= 0.035958819
629 Epoch: 0593 cost= 0.034573026
630 Epoch: 0594 cost= 0.035066299
631 Epoch: 0595 cost= 0.032463789
632 Epoch: 0596 cost= 0.034457780
633 Epoch: 0597 cost= 0.033984426
634 Epoch: 0598 cost= 0.033084612
635 Epoch: 0599 cost= 0.033827208
636 Epoch: 0600 cost= 0.034368657
637 Epoch: 0601 cost= 0.034210645
638 Epoch: 0602 cost= 0.035697319
639 Epoch: 0603 cost= 0.032552972
640 Epoch: 0604 cost= 0.033452678
641 Epoch: 0605 cost= 0.033313580
642 Epoch: 0606 cost= 0.033773560
```

```
643 Epoch: 0607 cost= 0.035718597
644 Epoch: 0608 cost= 0.033138849
645 Epoch: 0609 cost= 0.034383040
646 Epoch: 0610 cost= 0.034323115
647 Epoch: 0611 cost= 0.034527585
648 Epoch: 0612 cost= 0.034186486
649 Epoch: 0613 cost= 0.032859217
650 Epoch: 0614 cost= 0.034249399
651 Epoch: 0615 cost= 0.034335151
652 Epoch: 0616 cost= 0.035266612
653 Epoch: 0617 cost= 0.034724738
654 Epoch: 0618 cost= 0.033229619
655 Epoch: 0619 cost= 0.035325833
656 Epoch: 0620 cost= 0.034395505
657 Epoch: 0621 cost= 0.034324646
658 Epoch: 0622 cost= 0.034420528
659 Epoch: 0623 cost= 0.034335196
660 Epoch: 0624 cost= 0.032811072
661 Epoch: 0625 cost= 0.033793151
662 Epoch: 0626 cost= 0.034481976
663 Epoch: 0627 cost= 0.034362178
664 Epoch: 0628 cost= 0.033269193
665 Epoch: 0629 cost= 0.034150090
666 Epoch: 0630 cost= 0.034788303
```

```
667 Epoch: 0631 cost= 0.033970457
668 Epoch: 0632 cost= 0.036190283
669 Epoch: 0633 cost= 0.035757706
670 Epoch: 0634 cost= 0.035053987
671 Epoch: 0635 cost= 0.034853589
672 Epoch: 0636 cost= 0.033725772
673 Epoch: 0637 cost= 0.035262082
674 Epoch: 0638 cost= 0.033616032
675 Epoch: 0639 cost= 0.034676801
676 Epoch: 0640 cost= 0.033906106
677 Epoch: 0641 cost= 0.034216970
678 Epoch: 0642 cost= 0.035678972
679 Epoch: 0643 cost= 0.034454450
680 Epoch: 0644 cost= 0.034216177
681 Epoch: 0645 cost= 0.034537479
682 Epoch: 0646 cost= 0.034863826
683 Epoch: 0647 cost= 0.033946443
684 Epoch: 0648 cost= 0.034141630
685 Epoch: 0649 cost= 0.034399584
686 Epoch: 0650 cost= 0.032433651
687 Epoch: 0651 cost= 0.033703472
688 Epoch: 0652 cost= 0.033704601
689 Epoch: 0653 cost= 0.035174161
690 Epoch: 0654 cost= 0.034224179
```



```
691 Epoch: 0655 cost= 0.034046497
692 Epoch: 0656 cost= 0.035547540
693 Epoch: 0657 cost= 0.033093240
694 Epoch: 0658 cost= 0.032763485
695 Epoch: 0659 cost= 0.033577248
696 Epoch: 0660 cost= 0.033833727
697 Epoch: 0661 cost= 0.035594769
698 Epoch: 0662 cost= 0.032711271
699 Epoch: 0663 cost= 0.034279574
700 Epoch: 0664 cost= 0.034503184
701 Epoch: 0665 cost= 0.033244286
702 Epoch: 0666 cost= 0.033766855
703 Epoch: 0667 cost= 0.034368247
704 Epoch: 0668 cost= 0.033339627
705 Epoch: 0669 cost= 0.035284042
706 Epoch: 0670 cost= 0.032999076
707 Epoch: 0671 cost= 0.034044176
708 Epoch: 0672 cost= 0.034844767
709 Epoch: 0673 cost= 0.035308033
710 Epoch: 0674 cost= 0.033433687
711 Epoch: 0675 cost= 0.034952007
712 Epoch: 0676 cost= 0.034618229
713 Epoch: 0677 cost= 0.033903580
714 Epoch: 0678 cost= 0.032927491
```

```
715 Epoch: 0679 cost= 0.033809379
716 Epoch: 0680 cost= 0.034638103
717 Epoch: 0681 cost= 0.034330919
718 Epoch: 0682 cost= 0.034204584
719 Epoch: 0683 cost= 0.032712568
720 Epoch: 0684 cost= 0.033500087
721 Epoch: 0685 cost= 0.036179632
722 Epoch: 0686 cost= 0.034796506
723 Epoch: 0687 cost= 0.034776688
724 Epoch: 0688 cost= 0.036091659
725 Epoch: 0689 cost= 0.034067709
726 Epoch: 0690 cost= 0.032642156
727 Epoch: 0691 cost= 0.032567900
728 Epoch: 0692 cost= 0.034057684
729 Epoch: 0693 cost= 0.035357207
730 Epoch: 0694 cost= 0.035117663
731 Epoch: 0695 cost= 0.035124250
732 Epoch: 0696 cost= 0.033307143
733 Epoch: 0697 cost= 0.034176920
734 Epoch: 0698 cost= 0.034738109
735 Epoch: 0699 cost= 0.034666836
736 Epoch: 0700 cost= 0.034236692
737 Epoch: 0701 cost= 0.034970261
738 Epoch: 0702 cost= 0.035503898
```

```
739 Epoch: 0703 cost= 0.035023067
740 Epoch: 0704 cost= 0.035088263
741 Epoch: 0705 cost= 0.033344932
742 Epoch: 0706 cost= 0.034294795
743 Epoch: 0707 cost= 0.034451764
744 Epoch: 0708 cost= 0.033954464
745 Epoch: 0709 cost= 0.035580065
746 Epoch: 0710 cost= 0.034234099
747 Epoch: 0711 cost= 0.032296851
748 Epoch: 0712 cost= 0.034501407
749 Epoch: 0713 cost= 0.033810459
750 Epoch: 0714 cost= 0.034068089
751 Epoch: 0715 cost= 0.034456015
752 Epoch: 0716 cost= 0.033154041
753 Epoch: 0717 cost= 0.035403285
754 Epoch: 0718 cost= 0.033923928
755 Epoch: 0719 cost= 0.033374455
756 Epoch: 0720 cost= 0.034804817
757 Epoch: 0721 cost= 0.033581797
758 Epoch: 0722 cost= 0.035187483
759 Epoch: 0723 cost= 0.034134086
760 Epoch: 0724 cost= 0.034372833
761 Epoch: 0725 cost= 0.034618523
762 Epoch: 0726 cost= 0.034549598
```

```
763 Epoch: 0727 cost= 0.033928238
764 Epoch: 0728 cost= 0.034934271
765 Epoch: 0729 cost= 0.033246208
766 Epoch: 0730 cost= 0.034025021
767 Epoch: 0731 cost= 0.032781571
768 Epoch: 0732 cost= 0.033557627
769 Epoch: 0733 cost= 0.034809094
770 Epoch: 0734 cost= 0.035531860
771 Epoch: 0735 cost= 0.032305215
772 Epoch: 0736 cost= 0.035869312
773 Epoch: 0737 cost= 0.035397653
774 Epoch: 0738 cost= 0.033849005
775 Epoch: 0739 cost= 0.035214152
776 Epoch: 0740 cost= 0.034546569
777 Epoch: 0741 cost= 0.035389483
778 Epoch: 0742 cost= 0.033598609
779 Epoch: 0743 cost= 0.035607435
780 Epoch: 0744 cost= 0.033050913
781 Epoch: 0745 cost= 0.032749321
782 Epoch: 0746 cost= 0.035291057
783 Epoch: 0747 cost= 0.034884721
784 Epoch: 0748 cost= 0.034299672
785 Epoch: 0749 cost= 0.033852678
786 Epoch: 0750 cost= 0.034617189
```

```
787 Epoch: 0751 cost= 0.036049861
788 Epoch: 0752 cost= 0.032026749
789 Epoch: 0753 cost= 0.032823034
790 Epoch: 0754 cost= 0.035498239
791 Epoch: 0755 cost= 0.035122406
792 Epoch: 0756 cost= 0.034910992
793 Epoch: 0757 cost= 0.034755617
794 Epoch: 0758 cost= 0.034083307
795 Epoch: 0759 cost= 0.034645222
796 Epoch: 0760 cost= 0.036266025
797 Epoch: 0761 cost= 0.035018321
798 Epoch: 0762 cost= 0.033845689
799 Epoch: 0763 cost= 0.033811212
800 Epoch: 0764 cost= 0.032997213
801 Epoch: 0765 cost= 0.033652112
802 Epoch: 0766 cost= 0.036655605
803 Epoch: 0767 cost= 0.034425329
804 Epoch: 0768 cost= 0.034862023
805 Epoch: 0769 cost= 0.034079965
806 Epoch: 0770 cost= 0.034489319
807 Epoch: 0771 cost= 0.034943674
808 Epoch: 0772 cost= 0.032922525
809 Epoch: 0773 cost= 0.031889100
810 Epoch: 0774 cost= 0.033638101
```

```
811 Epoch: 0775 cost= 0.033711590
812 Epoch: 0776 cost= 0.033448596
813 Epoch: 0777 cost= 0.033407293
814 Epoch: 0778 cost= 0.033773132
815 Epoch: 0779 cost= 0.034793559
816 Epoch: 0780 cost= 0.032809578
817 Epoch: 0781 cost= 0.032597642
818 Epoch: 0782 cost= 0.036730841
819 Epoch: 0783 cost= 0.034712017
820 Epoch: 0784 cost= 0.033978458
821 Epoch: 0785 cost= 0.036348846
822 Epoch: 0786 cost= 0.035396229
823 Epoch: 0787 cost= 0.034546211
824 Epoch: 0788 cost= 0.034450315
825 Epoch: 0789 cost= 0.034778245
826 Epoch: 0790 cost= 0.033796165
827 Epoch: 0791 cost= 0.034194935
828 Epoch: 0792 cost= 0.036554459
829 Epoch: 0793 cost= 0.033448845
830 Epoch: 0794 cost= 0.034166321
831 Epoch: 0795 cost= 0.034462146
832 Epoch: 0796 cost= 0.035104364
833 Epoch: 0797 cost= 0.035152636
834 Epoch: 0798 cost= 0.033626359
```

```
835 Epoch: 0799 cost= 0.035855435
836 Epoch: 0800 cost= 0.035718881
837 Epoch: 0801 cost= 0.030897865
838 Epoch: 0802 cost= 0.033844996
839 Epoch: 0803 cost= 0.034232143
840 Epoch: 0804 cost= 0.036455192
841 Epoch: 0805 cost= 0.033669196
842 Epoch: 0806 cost= 0.034983207
843 Epoch: 0807 cost= 0.035702445
844 Epoch: 0808 cost= 0.033633802
845 Epoch: 0809 cost= 0.034517374
846 Epoch: 0810 cost= 0.034324110
847 Epoch: 0811 cost= 0.034092199
848 Epoch: 0812 cost= 0.036489170
849 Epoch: 0813 cost= 0.035484929
850 Epoch: 0814 cost= 0.033888306
851 Epoch: 0815 cost= 0.036938593
852 Epoch: 0816 cost= 0.035738345
853 Epoch: 0817 cost= 0.033616684
854 Epoch: 0818 cost= 0.032805454
855 Epoch: 0819 cost= 0.034922257
856 Epoch: 0820 cost= 0.034389108
857 Epoch: 0821 cost= 0.034808498
858 Epoch: 0822 cost= 0.034119781
```

```
859 Epoch: 0823 cost= 0.033327166
860 Epoch: 0824 cost= 0.035381783
861 Epoch: 0825 cost= 0.031841535
862 Epoch: 0826 cost= 0.033705674
863 Epoch: 0827 cost= 0.034337807
864 Epoch: 0828 cost= 0.033725951
865 Epoch: 0829 cost= 0.035407692
866 Epoch: 0830 cost= 0.033729289
867 Epoch: 0831 cost= 0.033667948
868 Epoch: 0832 cost= 0.034744736
869 Epoch: 0833 cost= 0.035541344
870 Epoch: 0834 cost= 0.034060054
871 Epoch: 0835 cost= 0.031201687
872 Epoch: 0836 cost= 0.034072906
873 Epoch: 0837 cost= 0.034756832
874 Epoch: 0838 cost= 0.035148483
875 Epoch: 0839 cost= 0.036218703
876 Epoch: 0840 cost= 0.034957912
877 Epoch: 0841 cost= 0.033753965
878 Epoch: 0842 cost= 0.033389430
879 Epoch: 0843 cost= 0.034905802
880 Epoch: 0844 cost= 0.034628835
881 Epoch: 0845 cost= 0.036133416
882 Epoch: 0846 cost= 0.033980086
```



```
883 Epoch: 0847 cost= 0.035974100
884 Epoch: 0848 cost= 0.033147976
885 Epoch: 0849 cost= 0.034652013
886 Epoch: 0850 cost= 0.034419555
887 Epoch: 0851 cost= 0.033560183
888 Epoch: 0852 cost= 0.034750730
889 Epoch: 0853 cost= 0.032839730
890 Epoch: 0854 cost= 0.034682747
891 Epoch: 0855 cost= 0.034180041
892 Epoch: 0856 cost= 0.035184078
893 Epoch: 0857 cost= 0.034365222
894 Epoch: 0858 cost= 0.032826331
895 Epoch: 0859 cost= 0.035693772
896 Epoch: 0860 cost= 0.033308703
897 Epoch: 0861 cost= 0.032060210
898 Epoch: 0862 cost= 0.034538377
899 Epoch: 0863 cost= 0.034585807
900 Epoch: 0864 cost= 0.034976199
901 Epoch: 0865 cost= 0.035515886
902 Epoch: 0866 cost= 0.033115175
903 Epoch: 0867 cost= 0.033979677
904 Epoch: 0868 cost= 0.033267956
905 Epoch: 0869 cost= 0.034371991
906 Epoch: 0870 cost= 0.034166202
```

```
907 Epoch: 0871 cost= 0.034663722
908 Epoch: 0872 cost= 0.033666629
909 Epoch: 0873 cost= 0.034818146
910 Epoch: 0874 cost= 0.034693785
911 Epoch: 0875 cost= 0.034942348
912 Epoch: 0876 cost= 0.034644913
913 Epoch: 0877 cost= 0.034324717
914 Epoch: 0878 cost= 0.032385405
915 Epoch: 0879 cost= 0.035212696
916 Epoch: 0880 cost= 0.034315877
917 Epoch: 0881 cost= 0.034697935
918 Epoch: 0882 cost= 0.033402618
919 Epoch: 0883 cost= 0.033982694
920 Epoch: 0884 cost= 0.035105057
921 Epoch: 0885 cost= 0.034185912
922 Epoch: 0886 cost= 0.035122536
923 Epoch: 0887 cost= 0.034641869
924 Epoch: 0888 cost= 0.034107663
925 Epoch: 0889 cost= 0.034779724
926 Epoch: 0890 cost= 0.033055793
927 Epoch: 0891 cost= 0.034398321
928 Epoch: 0892 cost= 0.034742624
929 Epoch: 0893 cost= 0.033888757
930 Epoch: 0894 cost= 0.035010427
```

```
931 Epoch: 0895 cost= 0.036154378
932 Epoch: 0896 cost= 0.032623652
933 Epoch: 0897 cost= 0.031239325
934 Epoch: 0898 cost= 0.034200586
935 Epoch: 0899 cost= 0.035300165
936 Epoch: 0900 cost= 0.032189190
937 Epoch: 0901 cost= 0.033391584
938 Epoch: 0902 cost= 0.034984414
939 Epoch: 0903 cost= 0.033727329
940 Epoch: 0904 cost= 0.034800917
941 Epoch: 0905 cost= 0.033743966
942 Epoch: 0906 cost= 0.034069266
943 Epoch: 0907 cost= 0.035544217
944 Epoch: 0908 cost= 0.033928216
945 Epoch: 0909 cost= 0.034854479
946 Epoch: 0910 cost= 0.035401810
947 Epoch: 0911 cost= 0.032986615
948 Epoch: 0912 cost= 0.034417920
949 Epoch: 0913 cost= 0.033080246
950 Epoch: 0914 cost= 0.035348125
951 Epoch: 0915 cost= 0.033085763
952 Epoch: 0916 cost= 0.035798177
953 Epoch: 0917 cost= 0.033436008
954 Epoch: 0918 cost= 0.033400413
```

```
955 Epoch: 0919 cost= 0.033617076
956 Epoch: 0920 cost= 0.035048306
957 Epoch: 0921 cost= 0.033971250
958 Epoch: 0922 cost= 0.034841094
959 Epoch: 0923 cost= 0.034781318
960 Epoch: 0924 cost= 0.035313856
961 Epoch: 0925 cost= 0.033623714
962 Epoch: 0926 cost= 0.035144318
963 Epoch: 0927 cost= 0.031752799
964 Epoch: 0928 cost= 0.034171883
965 Epoch: 0929 cost= 0.032902304
966 Epoch: 0930 cost= 0.033376738
967 Epoch: 0931 cost= 0.032470621
968 Epoch: 0932 cost= 0.032524724
969 Epoch: 0933 cost= 0.033139020
970 Epoch: 0934 cost= 0.036089838
971 Epoch: 0935 cost= 0.033882517
972 Epoch: 0936 cost= 0.033651475
973 Epoch: 0937 cost= 0.034825806
974 Epoch: 0938 cost= 0.034773871
975 Epoch: 0939 cost= 0.033247214
976 Epoch: 0940 cost= 0.034514438
977 Epoch: 0941 cost= 0.035343513
978 Epoch: 0942 cost= 0.034180798
```

```
979 Epoch: 0943 cost= 0.034537543
980 Epoch: 0944 cost= 0.034013245
981 Epoch: 0945 cost= 0.033996910
982 Epoch: 0946 cost= 0.035673425
983 Epoch: 0947 cost= 0.033571277
984 Epoch: 0948 cost= 0.033043373
985 Epoch: 0949 cost= 0.034323938
986 Epoch: 0950 cost= 0.033640150
987 Epoch: 0951 cost= 0.034152903
988 Epoch: 0952 cost= 0.031893209
989 Epoch: 0953 cost= 0.031865772
990 Epoch: 0954 cost= 0.034159310
991 Epoch: 0955 cost= 0.035447791
992 Epoch: 0956 cost= 0.034153525
993 Epoch: 0957 cost= 0.032979663
994 Epoch: 0958 cost= 0.035767697
995 Epoch: 0959 cost= 0.033806581
996 Epoch: 0960 cost= 0.033657949
997 Epoch: 0961 cost= 0.032745890
998 Epoch: 0962 cost= 0.034747589
999 Epoch: 0963 cost= 0.033121649
1000 Epoch: 0964 cost= 0.033632394
1001 Epoch: 0965 cost= 0.032476582
1002 Epoch: 0966 cost= 0.033739474
```

```
1003 Epoch: 0967 cost= 0.032771684
1004 Epoch: 0968 cost= 0.033412077
1005 Epoch: 0969 cost= 0.035278071
1006 Epoch: 0970 cost= 0.033216517
1007 Epoch: 0971 cost= 0.032695647
1008 Epoch: 0972 cost= 0.034259204
1009 Epoch: 0973 cost= 0.032228515
1010 Epoch: 0974 cost= 0.034597799
1011 Epoch: 0975 cost= 0.035699770
1012 Epoch: 0976 cost= 0.030796221
1013 Epoch: 0977 cost= 0.034970772
1014 Epoch: 0978 cost= 0.033338867
1015 Epoch: 0979 cost= 0.035987120
1016 Epoch: 0980 cost= 0.032714956
1017 Epoch: 0981 cost= 0.033940185
1018 Epoch: 0982 cost= 0.032975797
1019 Epoch: 0983 cost= 0.033831611
1020 Epoch: 0984 cost= 0.034037173
1021 Epoch: 0985 cost= 0.035711989
1022 Epoch: 0986 cost= 0.034538385
1023 Epoch: 0987 cost= 0.034544315
1024 Epoch: 0988 cost= 0.034387864
1025 Epoch: 0989 cost= 0.034717675
1026 Epoch: 0990 cost= 0.033386517
```

```
1027 Epoch: 0991 cost= 0.033194181
1028 Epoch: 0992 cost= 0.034180418
1029 Epoch: 0993 cost= 0.034557402
1030 Epoch: 0994 cost= 0.035542570
1031 Epoch: 0995 cost= 0.034551952
1032 Epoch: 0996 cost= 0.035445075
1033 Epoch: 0997 cost= 0.032094527
1034 Epoch: 0998 cost= 0.033063080
1035 Epoch: 0999 cost= 0.033692580
1036 Epoch: 1000 cost= 0.034050845
1037 Epoch: 1001 cost= 0.035108302
1038 Epoch: 1002 cost= 0.034317829
1039 Epoch: 1003 cost= 0.035618078
1040 Epoch: 1004 cost= 0.033648144
1041 Epoch: 1005 cost= 0.035560220
1042 Epoch: 1006 cost= 0.032264985
1043 Epoch: 1007 cost= 0.034483969
1044 Epoch: 1008 cost= 0.034692101
1045 Epoch: 1009 cost= 0.033797879
1046 Epoch: 1010 cost= 0.032847710
1047 Epoch: 1011 cost= 0.034089338
1048 Epoch: 1012 cost= 0.033545054
1049 Epoch: 1013 cost= 0.031805653
1050 Epoch: 1014 cost= 0.033342112
```

```
1051 Epoch: 1015 cost= 0.034651838
1052 Epoch: 1016 cost= 0.033587571
1053 Epoch: 1017 cost= 0.034555707
1054 Epoch: 1018 cost= 0.035572182
1055 Epoch: 1019 cost= 0.034547612
1056 Epoch: 1020 cost= 0.033692576
1057 Epoch: 1021 cost= 0.033895474
1058 Epoch: 1022 cost= 0.034126081
1059 Epoch: 1023 cost= 0.035197664
1060 Epoch: 1024 cost= 0.033522971
1061 Epoch: 1025 cost= 0.033570912
1062 Epoch: 1026 cost= 0.035839401
1063 Epoch: 1027 cost= 0.033858001
1064 Epoch: 1028 cost= 0.033722818
1065 Epoch: 1029 cost= 0.032897644
1066 Epoch: 1030 cost= 0.034253668
1067 Epoch: 1031 cost= 0.034550697
1068 Epoch: 1032 cost= 0.032955315
1069 Epoch: 1033 cost= 0.034053896
1070 Epoch: 1034 cost= 0.033794075
1071 Epoch: 1035 cost= 0.034592561
1072 Epoch: 1036 cost= 0.033268735
1073 Epoch: 1037 cost= 0.033008974
1074 Epoch: 1038 cost= 0.031908076
```



```
1075 Epoch: 1039 cost= 0.033566821
1076 Epoch: 1040 cost= 0.033304241
1077 Epoch: 1041 cost= 0.036037918
1078 Epoch: 1042 cost= 0.034254704
1079 Epoch: 1043 cost= 0.036106940
1080 Epoch: 1044 cost= 0.034438446
1081 Epoch: 1045 cost= 0.033689987
1082 Epoch: 1046 cost= 0.035259288
1083 Epoch: 1047 cost= 0.032483645
1084 Epoch: 1048 cost= 0.035417806
1085 Epoch: 1049 cost= 0.035046384
1086 Epoch: 1050 cost= 0.034629259
1087 Epoch: 1051 cost= 0.033788286
1088 Epoch: 1052 cost= 0.034820974
1089 Epoch: 1053 cost= 0.033336692
1090 Epoch: 1054 cost= 0.033916391
1091 Epoch: 1055 cost= 0.032735296
1092 Epoch: 1056 cost= 0.034265060
1093 Epoch: 1057 cost= 0.034594439
1094 Epoch: 1058 cost= 0.034363940
1095 Epoch: 1059 cost= 0.033431731
1096 Epoch: 1060 cost= 0.035469819
1097 Epoch: 1061 cost= 0.034800068
1098 Epoch: 1062 cost= 0.034471899
```

```
1099 Epoch: 1063 cost= 0.033703215
1100 Epoch: 1064 cost= 0.034649055
1101 Epoch: 1065 cost= 0.035993125
1102 Epoch: 1066 cost= 0.032891016
1103 Epoch: 1067 cost= 0.033382047
1104 Epoch: 1068 cost= 0.033406358
1105 Epoch: 1069 cost= 0.034291122
1106 Epoch: 1070 cost= 0.032122456
1107 Epoch: 1071 cost= 0.032570664
1108 Epoch: 1072 cost= 0.032308597
1109 Epoch: 1073 cost= 0.033116564
1110 Epoch: 1074 cost= 0.034898292
1111 Epoch: 1075 cost= 0.033177674
1112 Epoch: 1076 cost= 0.034115776
1113 Epoch: 1077 cost= 0.034057312
1114 Epoch: 1078 cost= 0.036863897
1115 Epoch: 1079 cost= 0.033858731
1116 Epoch: 1080 cost= 0.034671247
1117 Epoch: 1081 cost= 0.033810310
1118 Epoch: 1082 cost= 0.032587416
1119 Epoch: 1083 cost= 0.033139884
1120 Epoch: 1084 cost= 0.035001844
1121 Epoch: 1085 cost= 0.036041703
1122 Epoch: 1086 cost= 0.034770835
```

```
1123 Epoch: 1087 cost= 0.035017919
1124 Epoch: 1088 cost= 0.033070542
1125 Epoch: 1089 cost= 0.035342894
1126 Epoch: 1090 cost= 0.033549748
1127 Epoch: 1091 cost= 0.034454767
1128 Epoch: 1092 cost= 0.032960892
1129 Epoch: 1093 cost= 0.036315553
1130 Epoch: 1094 cost= 0.034577142
1131 Epoch: 1095 cost= 0.032614384
1132 Epoch: 1096 cost= 0.035162974
1133 Epoch: 1097 cost= 0.034734286
1134 Epoch: 1098 cost= 0.034157820
1135 Epoch: 1099 cost= 0.032604191
1136 Epoch: 1100 cost= 0.033740703
1137 Epoch: 1101 cost= 0.033692982
1138 Epoch: 1102 cost= 0.035628196
1139 Epoch: 1103 cost= 0.033465993
1140 Epoch: 1104 cost= 0.034750316
1141 Epoch: 1105 cost= 0.034917653
1142 Epoch: 1106 cost= 0.035147000
1143 Epoch: 1107 cost= 0.034390360
1144 Epoch: 1108 cost= 0.033836536
1145 Epoch: 1109 cost= 0.033049121
1146 Epoch: 1110 cost= 0.033245265
```

```
1147 Epoch: 1111 cost= 0.034387536
1148 Epoch: 1112 cost= 0.034183342
1149 Epoch: 1113 cost= 0.034523882
1150 Epoch: 1114 cost= 0.035831716
1151 Epoch: 1115 cost= 0.034399785
1152 Epoch: 1116 cost= 0.034894336
1153 Epoch: 1117 cost= 0.034344215
1154 Epoch: 1118 cost= 0.035155840
1155 Epoch: 1119 cost= 0.034377888
1156 Epoch: 1120 cost= 0.033549074
1157 Epoch: 1121 cost= 0.034858048
1158 Epoch: 1122 cost= 0.034544691
1159 Epoch: 1123 cost= 0.034515187
1160 Epoch: 1124 cost= 0.034984700
1161 Epoch: 1125 cost= 0.034785286
1162 Epoch: 1126 cost= 0.035230175
1163 Epoch: 1127 cost= 0.034921966
1164 Epoch: 1128 cost= 0.034851044
1165 Epoch: 1129 cost= 0.031893879
1166 Epoch: 1130 cost= 0.033179026
1167 Epoch: 1131 cost= 0.034009699
1168 Epoch: 1132 cost= 0.033614516
1169 Epoch: 1133 cost= 0.034547843
1170 Epoch: 1134 cost= 0.034247588
```

```
1171 Epoch: 1135 cost= 0.035012916
1172 Epoch: 1136 cost= 0.033798486
1173 Epoch: 1137 cost= 0.033898305
1174 Epoch: 1138 cost= 0.033507410
1175 Epoch: 1139 cost= 0.034407582
1176 Epoch: 1140 cost= 0.033814140
1177 Epoch: 1141 cost= 0.034545068
1178 Epoch: 1142 cost= 0.034500856
1179 Epoch: 1143 cost= 0.035051469
1180 Epoch: 1144 cost= 0.034929980
1181 Epoch: 1145 cost= 0.033791132
1182 Epoch: 1146 cost= 0.037091687
1183 Epoch: 1147 cost= 0.037961435
1184 Epoch: 1148 cost= 0.036379576
1185 Epoch: 1149 cost= 0.036049116
1186 Epoch: 1150 cost= 0.034136675
1187 Epoch: 1151 cost= 0.033497140
1188 Epoch: 1152 cost= 0.035272509
1189 Epoch: 1153 cost= 0.033990242
1190 Epoch: 1154 cost= 0.036161013
1191 Epoch: 1155 cost= 0.033058465
1192 Epoch: 1156 cost= 0.034186836
1193 Epoch: 1157 cost= 0.034272492
1194 Epoch: 1158 cost= 0.032092985
```

```
1195 Epoch: 1159 cost= 0.033402696
1196 Epoch: 1160 cost= 0.032942753
1197 Epoch: 1161 cost= 0.033040289
1198 Epoch: 1162 cost= 0.032861754
1199 Epoch: 1163 cost= 0.033199608
1200 Epoch: 1164 cost= 0.036614753
1201 Epoch: 1165 cost= 0.033767942
1202 Epoch: 1166 cost= 0.034245711
1203 Epoch: 1167 cost= 0.035285689
1204 Epoch: 1168 cost= 0.033395786
1205 Epoch: 1169 cost= 0.035429008
1206 Epoch: 1170 cost= 0.034255952
1207 Epoch: 1171 cost= 0.036084872
1208 Epoch: 1172 cost= 0.033190258
1209 Epoch: 1173 cost= 0.033149648
1210 Epoch: 1174 cost= 0.035174079
1211 Epoch: 1175 cost= 0.034495860
1212 Epoch: 1176 cost= 0.034633867
1213 Epoch: 1177 cost= 0.033863526
1214 Epoch: 1178 cost= 0.033913758
1215 Epoch: 1179 cost= 0.036320318
1216 Epoch: 1180 cost= 0.034092870
1217 Epoch: 1181 cost= 0.033279639
1218 Epoch: 1182 cost= 0.034206942
```

```
1219 Epoch: 1183 cost= 0.034306709
1220 Epoch: 1184 cost= 0.033232398
1221 Epoch: 1185 cost= 0.032609034
1222 Epoch: 1186 cost= 0.035083514
1223 Epoch: 1187 cost= 0.033955004
1224 Epoch: 1188 cost= 0.034105804
1225 Epoch: 1189 cost= 0.035308357
1226 Epoch: 1190 cost= 0.035471268
1227 Epoch: 1191 cost= 0.035582293
1228 Epoch: 1192 cost= 0.034647834
1229 Epoch: 1193 cost= 0.034293640
1230 Epoch: 1194 cost= 0.033346571
1231 Epoch: 1195 cost= 0.033964813
1232 Epoch: 1196 cost= 0.034901712
1233 Epoch: 1197 cost= 0.032816995
1234 Epoch: 1198 cost= 0.035997108
1235 Epoch: 1199 cost= 0.033701420
1236 Epoch: 1200 cost= 0.034605466
1237 Epoch: 1201 cost= 0.032631308
1238 Epoch: 1202 cost= 0.032779317
1239 Epoch: 1203 cost= 0.034141354
1240 Epoch: 1204 cost= 0.033054665
1241 Epoch: 1205 cost= 0.033891059
1242 Epoch: 1206 cost= 0.034046825
```

```
1243 Epoch: 1207 cost= 0.033007108
1244 Epoch: 1208 cost= 0.034331754
1245 Epoch: 1209 cost= 0.034529824
1246 Epoch: 1210 cost= 0.036219247
1247 Epoch: 1211 cost= 0.036425352
1248 Epoch: 1212 cost= 0.033927605
1249 Epoch: 1213 cost= 0.033048201
1250 Epoch: 1214 cost= 0.032562409
1251 Epoch: 1215 cost= 0.033561327
1252 Epoch: 1216 cost= 0.034898475
1253 Epoch: 1217 cost= 0.035230976
1254 Epoch: 1218 cost= 0.035184365
1255 Epoch: 1219 cost= 0.034138102
1256 Epoch: 1220 cost= 0.035059050
1257 Epoch: 1221 cost= 0.033928413
1258 Epoch: 1222 cost= 0.036855061
1259 Epoch: 1223 cost= 0.032021657
1260 Epoch: 1224 cost= 0.034268558
1261 Epoch: 1225 cost= 0.034586348
1262 Epoch: 1226 cost= 0.033722222
1263 Epoch: 1227 cost= 0.033310346
1264 Epoch: 1228 cost= 0.032717839
1265 Epoch: 1229 cost= 0.036515109
1266 Epoch: 1230 cost= 0.032999251
```



```
1267 Epoch: 1231 cost= 0.034846567
1268 Epoch: 1232 cost= 0.034022182
1269 Epoch: 1233 cost= 0.034913719
1270 Epoch: 1234 cost= 0.034408811
1271 Epoch: 1235 cost= 0.035829149
1272 Epoch: 1236 cost= 0.034295835
1273 Epoch: 1237 cost= 0.034251455
1274 Epoch: 1238 cost= 0.033272889
1275 Epoch: 1239 cost= 0.032991521
1276 Epoch: 1240 cost= 0.033514041
1277 Epoch: 1241 cost= 0.034287352
1278 Epoch: 1242 cost= 0.035081726
1279 Epoch: 1243 cost= 0.033095170
1280 Epoch: 1244 cost= 0.035936452
1281 Epoch: 1245 cost= 0.035432197
1282 Epoch: 1246 cost= 0.033197191
1283 Epoch: 1247 cost= 0.035397556
1284 Epoch: 1248 cost= 0.035066999
1285 Epoch: 1249 cost= 0.033484112
1286 Epoch: 1250 cost= 0.033316836
1287 Epoch: 1251 cost= 0.034493569
1288 Epoch: 1252 cost= 0.033867333
1289 Epoch: 1253 cost= 0.032803234
1290 Epoch: 1254 cost= 0.034661386
```

```
1291 Epoch: 1255 cost= 0.035093546
1292 Epoch: 1256 cost= 0.034760922
1293 Epoch: 1257 cost= 0.034819301
1294 Epoch: 1258 cost= 0.034438308
1295 Epoch: 1259 cost= 0.034457944
1296 Epoch: 1260 cost= 0.032171451
1297 Epoch: 1261 cost= 0.034540359
1298 Epoch: 1262 cost= 0.034781091
1299 Epoch: 1263 cost= 0.033527296
1300 Epoch: 1264 cost= 0.033465650
1301 Epoch: 1265 cost= 0.033636220
1302 Epoch: 1266 cost= 0.034451105
1303 Epoch: 1267 cost= 0.033694040
1304 Epoch: 1268 cost= 0.032961905
1305 Epoch: 1269 cost= 0.033271484
1306 Epoch: 1270 cost= 0.035353865
1307 Epoch: 1271 cost= 0.035551585
1308 Epoch: 1272 cost= 0.034351893
1309 Epoch: 1273 cost= 0.032057099
1310 Epoch: 1274 cost= 0.033830374
1311 Epoch: 1275 cost= 0.035619415
1312 Epoch: 1276 cost= 0.034969136
1313 Epoch: 1277 cost= 0.034889232
1314 Epoch: 1278 cost= 0.033596870
```

```
1315 Epoch: 1279 cost= 0.034835070
1316 Epoch: 1280 cost= 0.033417046
1317 Epoch: 1281 cost= 0.033146888
1318 Epoch: 1282 cost= 0.034602851
1319 Epoch: 1283 cost= 0.033463791
1320 Epoch: 1284 cost= 0.035556398
1321 Epoch: 1285 cost= 0.033403449
1322 Epoch: 1286 cost= 0.035010323
1323 Epoch: 1287 cost= 0.034361869
1324 Epoch: 1288 cost= 0.034475397
1325 Epoch: 1289 cost= 0.032451253
1326 Epoch: 1290 cost= 0.035819106
1327 Epoch: 1291 cost= 0.035874255
1328 Epoch: 1292 cost= 0.035162155
1329 Epoch: 1293 cost= 0.035810791
1330 Epoch: 1294 cost= 0.033756301
1331 Epoch: 1295 cost= 0.034006596
1332 Epoch: 1296 cost= 0.034796078
1333 Epoch: 1297 cost= 0.034177277
1334 Epoch: 1298 cost= 0.034237344
1335 Epoch: 1299 cost= 0.034813322
1336 Epoch: 1300 cost= 0.034438025
1337 Epoch: 1301 cost= 0.033478681
1338 Epoch: 1302 cost= 0.035811186
```

```
1339 Epoch: 1303 cost= 0.035437196
1340 Epoch: 1304 cost= 0.035727829
1341 Epoch: 1305 cost= 0.035604067
1342 Epoch: 1306 cost= 0.035918284
1343 Epoch: 1307 cost= 0.034327205
1344 Epoch: 1308 cost= 0.033634849
1345 Epoch: 1309 cost= 0.034620807
1346 Epoch: 1310 cost= 0.036039341
1347 Epoch: 1311 cost= 0.035404801
1348 Epoch: 1312 cost= 0.034135766
1349 Epoch: 1313 cost= 0.032218028
1350 Epoch: 1314 cost= 0.032656316
1351 Epoch: 1315 cost= 0.032652296
1352 Epoch: 1316 cost= 0.035039779
1353 Epoch: 1317 cost= 0.032658879
1354 Epoch: 1318 cost= 0.033510808
1355 Epoch: 1319 cost= 0.036477044
1356 Epoch: 1320 cost= 0.033878013
1357 Epoch: 1321 cost= 0.033905748
1358 Epoch: 1322 cost= 0.035078593
1359 Epoch: 1323 cost= 0.032542232
1360 Epoch: 1324 cost= 0.036285065
1361 Epoch: 1325 cost= 0.032887589
1362 Epoch: 1326 cost= 0.034571905
```

```
1363 Epoch: 1327 cost= 0.032717403
1364 Epoch: 1328 cost= 0.033562388
1365 Epoch: 1329 cost= 0.035762209
1366 Epoch: 1330 cost= 0.034979016
1367 Epoch: 1331 cost= 0.033291735
1368 Epoch: 1332 cost= 0.034034319
1369 Epoch: 1333 cost= 0.033678159
1370 Epoch: 1334 cost= 0.035511162
1371 Epoch: 1335 cost= 0.034177341
1372 Epoch: 1336 cost= 0.036141552
1373 Epoch: 1337 cost= 0.033784013
1374 Epoch: 1338 cost= 0.035212751
1375 Epoch: 1339 cost= 0.034790970
1376 Epoch: 1340 cost= 0.034677062
1377 Epoch: 1341 cost= 0.033180080
1378 Epoch: 1342 cost= 0.032755960
1379 Epoch: 1343 cost= 0.033263914
1380 Epoch: 1344 cost= 0.034806948
1381 Epoch: 1345 cost= 0.035439577
1382 Epoch: 1346 cost= 0.034556452
1383 Epoch: 1347 cost= 0.034425046
1384 Epoch: 1348 cost= 0.034877475
1385 Epoch: 1349 cost= 0.034856100
1386 Epoch: 1350 cost= 0.033751920
```

```
1387 Epoch: 1351 cost= 0.034510512
1388 Epoch: 1352 cost= 0.033760767
1389 Epoch: 1353 cost= 0.034640089
1390 Epoch: 1354 cost= 0.033040743
1391 Epoch: 1355 cost= 0.033548068
1392 Epoch: 1356 cost= 0.033990007
1393 Epoch: 1357 cost= 0.032879554
1394 Epoch: 1358 cost= 0.034660354
1395 Epoch: 1359 cost= 0.036843456
1396 Epoch: 1360 cost= 0.035168327
1397 Epoch: 1361 cost= 0.033450685
1398 Epoch: 1362 cost= 0.033289462
1399 Epoch: 1363 cost= 0.033382863
1400 Epoch: 1364 cost= 0.032265630
1401 Epoch: 1365 cost= 0.034056872
1402 Epoch: 1366 cost= 0.033963509
1403 Epoch: 1367 cost= 0.034617729
1404 Epoch: 1368 cost= 0.034275848
1405 Epoch: 1369 cost= 0.034680147
1406 Epoch: 1370 cost= 0.034902751
1407 Epoch: 1371 cost= 0.035102054
1408 Epoch: 1372 cost= 0.033994462
1409 Epoch: 1373 cost= 0.035370551
1410 Epoch: 1374 cost= 0.034729466
```

```
1411 Epoch: 1375 cost= 0.034495037
1412 Epoch: 1376 cost= 0.036269337
1413 Epoch: 1377 cost= 0.035299599
1414 Epoch: 1378 cost= 0.035155058
1415 Epoch: 1379 cost= 0.032362968
1416 Epoch: 1380 cost= 0.035832338
1417 Epoch: 1381 cost= 0.032596529
1418 Epoch: 1382 cost= 0.034093823
1419 Epoch: 1383 cost= 0.036124956
1420 Epoch: 1384 cost= 0.033964351
1421 Epoch: 1385 cost= 0.037430976
1422 Epoch: 1386 cost= 0.035112631
1423 Epoch: 1387 cost= 0.035084903
1424 Epoch: 1388 cost= 0.033742346
1425 Epoch: 1389 cost= 0.035045136
1426 Epoch: 1390 cost= 0.034368388
1427 Epoch: 1391 cost= 0.033576299
1428 Epoch: 1392 cost= 0.035135139
1429 Epoch: 1393 cost= 0.034502011
1430 Epoch: 1394 cost= 0.034734156
1431 Epoch: 1395 cost= 0.033504158
1432 Epoch: 1396 cost= 0.034930121
1433 Epoch: 1397 cost= 0.035368882
1434 Epoch: 1398 cost= 0.033053279
```

```
1435 Epoch: 1399 cost= 0.035724949
1436 Epoch: 1400 cost= 0.033566382
1437 Epoch: 1401 cost= 0.033451568
1438 Epoch: 1402 cost= 0.036358941
1439 Epoch: 1403 cost= 0.035706609
1440 Epoch: 1404 cost= 0.036170740
1441 Epoch: 1405 cost= 0.033883177
1442 Epoch: 1406 cost= 0.034484129
1443 Epoch: 1407 cost= 0.033799596
1444 Epoch: 1408 cost= 0.034382537
1445 Epoch: 1409 cost= 0.032463394
1446 Epoch: 1410 cost= 0.034607176
1447 Epoch: 1411 cost= 0.032438964
1448 Epoch: 1412 cost= 0.032814469
1449 Epoch: 1413 cost= 0.033695221
1450 Epoch: 1414 cost= 0.032992199
1451 Epoch: 1415 cost= 0.033796273
1452 Epoch: 1416 cost= 0.036307767
1453 Epoch: 1417 cost= 0.034931324
1454 Epoch: 1418 cost= 0.034509845
1455 Epoch: 1419 cost= 0.031555887
1456 Epoch: 1420 cost= 0.035346143
1457 Epoch: 1421 cost= 0.033936631
1458 Epoch: 1422 cost= 0.035571888
```



```
1459 Epoch: 1423 cost= 0.034252711
1460 Epoch: 1424 cost= 0.033840716
1461 Epoch: 1425 cost= 0.033604655
1462 Epoch: 1426 cost= 0.035163961
1463 Epoch: 1427 cost= 0.035255119
1464 Epoch: 1428 cost= 0.035684444
1465 Epoch: 1429 cost= 0.034635175
1466 Epoch: 1430 cost= 0.035218060
1467 Epoch: 1431 cost= 0.031986248
1468 Epoch: 1432 cost= 0.034699831
1469 Epoch: 1433 cost= 0.035054602
1470 Epoch: 1434 cost= 0.036618516
1471 Epoch: 1435 cost= 0.033654649
1472 Epoch: 1436 cost= 0.034437526
1473 Epoch: 1437 cost= 0.033259079
1474 Epoch: 1438 cost= 0.034786303
1475 Epoch: 1439 cost= 0.035304494
1476 Epoch: 1440 cost= 0.033801645
1477 Epoch: 1441 cost= 0.035255168
1478 Epoch: 1442 cost= 0.035170421
1479 Epoch: 1443 cost= 0.032935254
1480 Epoch: 1444 cost= 0.034520861
1481 Epoch: 1445 cost= 0.031719290
1482 Epoch: 1446 cost= 0.034763519
```

```
1483 Epoch: 1447 cost= 0.032809548
1484 Epoch: 1448 cost= 0.033878054
1485 Epoch: 1449 cost= 0.032985177
1486 Epoch: 1450 cost= 0.034183089
1487 Epoch: 1451 cost= 0.034290481
1488 Epoch: 1452 cost= 0.033816222
1489 Epoch: 1453 cost= 0.033758543
1490 Epoch: 1454 cost= 0.034818556
1491 Epoch: 1455 cost= 0.035249922
1492 Epoch: 1456 cost= 0.034351513
1493 Epoch: 1457 cost= 0.035115436
1494 Epoch: 1458 cost= 0.034382086
1495 Epoch: 1459 cost= 0.034638971
1496 Epoch: 1460 cost= 0.034766849
1497 Epoch: 1461 cost= 0.036143459
1498 Epoch: 1462 cost= 0.034329005
1499 Epoch: 1463 cost= 0.034001850
1500 Epoch: 1464 cost= 0.036654994
1501 Epoch: 1465 cost= 0.035058670
1502 Epoch: 1466 cost= 0.034217689
1503 Epoch: 1467 cost= 0.033557132
1504 Epoch: 1468 cost= 0.032947239
1505 Epoch: 1469 cost= 0.034415647
1506 Epoch: 1470 cost= 0.033806022
```

```
1507 Epoch: 1471 cost= 0.033586081
1508 Epoch: 1472 cost= 0.035026409
1509 Epoch: 1473 cost= 0.035303403
1510 Epoch: 1474 cost= 0.034425721
1511 Epoch: 1475 cost= 0.035933208
1512 Epoch: 1476 cost= 0.034632370
1513 Epoch: 1477 cost= 0.034501787
1514 Epoch: 1478 cost= 0.035557091
1515 Epoch: 1479 cost= 0.035938770
1516 Epoch: 1480 cost= 0.035611596
1517 Epoch: 1481 cost= 0.035683073
1518 Epoch: 1482 cost= 0.034649108
1519 Epoch: 1483 cost= 0.036011048
1520 Epoch: 1484 cost= 0.035058793
1521 Epoch: 1485 cost= 0.035430714
1522 Epoch: 1486 cost= 0.035050176
1523 Epoch: 1487 cost= 0.035293162
1524 Epoch: 1488 cost= 0.035423372
1525 Epoch: 1489 cost= 0.034030311
1526 Epoch: 1490 cost= 0.035259664
1527 Epoch: 1491 cost= 0.035115968
1528 Epoch: 1492 cost= 0.036645401
1529 Epoch: 1493 cost= 0.034492385
1530 Epoch: 1494 cost= 0.034043834
```

```
1531 Epoch: 1495 cost= 0.032598231
1532 Epoch: 1496 cost= 0.035513770
1533 Epoch: 1497 cost= 0.032757446
1534 Epoch: 1498 cost= 0.033248991
1535 Epoch: 1499 cost= 0.033548135
1536 Epoch: 1500 cost= 0.035994757
1537 Epoch: 1501 cost= 0.034597814
1538 Epoch: 1502 cost= 0.035646841
1539 Epoch: 1503 cost= 0.034441158
1540 Epoch: 1504 cost= 0.033005625
1541 Epoch: 1505 cost= 0.033938620
1542 Epoch: 1506 cost= 0.035566345
1543 Epoch: 1507 cost= 0.035051998
1544 Epoch: 1508 cost= 0.034882810
1545 Epoch: 1509 cost= 0.032880597
1546 Epoch: 1510 cost= 0.032446660
1547 Epoch: 1511 cost= 0.033930089
1548 Epoch: 1512 cost= 0.035918061
1549 Epoch: 1513 cost= 0.034098700
1550 Epoch: 1514 cost= 0.033889290
1551 Epoch: 1515 cost= 0.035820831
1552 Epoch: 1516 cost= 0.033694111
1553 Epoch: 1517 cost= 0.034459334
1554 Epoch: 1518 cost= 0.033204693
```

```
1555 Epoch: 1519 cost= 0.036206543
1556 Epoch: 1520 cost= 0.033310790
1557 Epoch: 1521 cost= 0.035298791
1558 Epoch: 1522 cost= 0.033767778
1559 Epoch: 1523 cost= 0.037125833
1560 Epoch: 1524 cost= 0.036188122
1561 Epoch: 1525 cost= 0.034459926
1562 Epoch: 1526 cost= 0.035551615
1563 Epoch: 1527 cost= 0.033351138
1564 Epoch: 1528 cost= 0.034022979
1565 Epoch: 1529 cost= 0.034188036
1566 Epoch: 1530 cost= 0.034695826
1567 Epoch: 1531 cost= 0.034459922
1568 Epoch: 1532 cost= 0.035957523
1569 Epoch: 1533 cost= 0.035969313
1570 Epoch: 1534 cost= 0.035801381
1571 Epoch: 1535 cost= 0.035452720
1572 Epoch: 1536 cost= 0.034537073
1573 Epoch: 1537 cost= 0.037249401
1574 Epoch: 1538 cost= 0.034353442
1575 Epoch: 1539 cost= 0.033324625
1576 Epoch: 1540 cost= 0.035650026
1577 Epoch: 1541 cost= 0.035728648
1578 Epoch: 1542 cost= 0.034885481
```

```
1579 Epoch: 1543 cost= 0.030481532
1580 Epoch: 1544 cost= 0.034739975
1581 Epoch: 1545 cost= 0.036285922
1582 Epoch: 1546 cost= 0.034136176
1583 Epoch: 1547 cost= 0.033779021
1584 Epoch: 1548 cost= 0.031963646
1585 Epoch: 1549 cost= 0.035170630
1586 Epoch: 1550 cost= 0.034829535
1587 Epoch: 1551 cost= 0.033607677
1588 Epoch: 1552 cost= 0.034886811
1589 Epoch: 1553 cost= 0.036544964
1590 Epoch: 1554 cost= 0.034395788
1591 Epoch: 1555 cost= 0.034181129
1592 Epoch: 1556 cost= 0.034644041
1593 Epoch: 1557 cost= 0.036342442
1594 Epoch: 1558 cost= 0.034622189
1595 Epoch: 1559 cost= 0.035924066
1596 Epoch: 1560 cost= 0.033796769
1597 Epoch: 1561 cost= 0.034329370
1598 Epoch: 1562 cost= 0.037005711
1599 Epoch: 1563 cost= 0.034460984
1600 Epoch: 1564 cost= 0.036026284
1601 Epoch: 1565 cost= 0.036157757
1602 Epoch: 1566 cost= 0.034027126
```

```
1603 Epoch: 1567 cost= 0.035039406
1604 Epoch: 1568 cost= 0.035817835
1605 Epoch: 1569 cost= 0.037282158
1606 Epoch: 1570 cost= 0.032749761
1607 Epoch: 1571 cost= 0.034856290
1608 Epoch: 1572 cost= 0.035257779
1609 Epoch: 1573 cost= 0.032107234
1610 Epoch: 1574 cost= 0.036107935
1611 Epoch: 1575 cost= 0.034069344
1612 Epoch: 1576 cost= 0.034889147
1613 Epoch: 1577 cost= 0.036563970
1614 Epoch: 1578 cost= 0.033779334
1615 Epoch: 1579 cost= 0.034598447
1616 Epoch: 1580 cost= 0.034313768
1617 Epoch: 1581 cost= 0.032623038
1618 Epoch: 1582 cost= 0.035593316
1619 Epoch: 1583 cost= 0.033143852
1620 Epoch: 1584 cost= 0.034358513
1621 Epoch: 1585 cost= 0.034631588
1622 Epoch: 1586 cost= 0.035603572
1623 Epoch: 1587 cost= 0.034489263
1624 Epoch: 1588 cost= 0.035020474
1625 Epoch: 1589 cost= 0.034091171
1626 Epoch: 1590 cost= 0.036101431
```

```
1627 Epoch: 1591 cost= 0.034432512
1628 Epoch: 1592 cost= 0.035117265
1629 Epoch: 1593 cost= 0.034049463
1630 Epoch: 1594 cost= 0.032874439
1631 Epoch: 1595 cost= 0.037438981
1632 Epoch: 1596 cost= 0.034279481
1633 Epoch: 1597 cost= 0.033977591
1634 Epoch: 1598 cost= 0.032608651
1635 Epoch: 1599 cost= 0.033535793
1636 Epoch: 1600 cost= 0.034812670
1637 Epoch: 1601 cost= 0.034534063
1638 Epoch: 1602 cost= 0.035111234
1639 Epoch: 1603 cost= 0.033353858
1640 Epoch: 1604 cost= 0.036004972
1641 Epoch: 1605 cost= 0.035040397
1642 Epoch: 1606 cost= 0.032709293
1643 Epoch: 1607 cost= 0.037031125
1644 Epoch: 1608 cost= 0.032924980
1645 Epoch: 1609 cost= 0.034391884
1646 Epoch: 1610 cost= 0.032528508
1647 Epoch: 1611 cost= 0.035550337
1648 Epoch: 1612 cost= 0.034742206
1649 Epoch: 1613 cost= 0.034480479
1650 Epoch: 1614 cost= 0.034853872
```



```
1651 Epoch: 1615 cost= 0.032790098
1652 Epoch: 1616 cost= 0.034942865
1653 Epoch: 1617 cost= 0.036133278
1654 Epoch: 1618 cost= 0.035216868
1655 Epoch: 1619 cost= 0.031821072
1656 Epoch: 1620 cost= 0.035057947
1657 Epoch: 1621 cost= 0.033519465
1658 Epoch: 1622 cost= 0.036440738
1659 Epoch: 1623 cost= 0.035382252
1660 Epoch: 1624 cost= 0.035071708
1661 Epoch: 1625 cost= 0.034151439
1662 Epoch: 1626 cost= 0.033736911
1663 Epoch: 1627 cost= 0.036452163
1664 Epoch: 1628 cost= 0.033257693
1665 Epoch: 1629 cost= 0.035009161
1666 Epoch: 1630 cost= 0.032840826
1667 Epoch: 1631 cost= 0.035718340
1668 Epoch: 1632 cost= 0.034898721
1669 Epoch: 1633 cost= 0.035354502
1670 Epoch: 1634 cost= 0.034714870
1671 Epoch: 1635 cost= 0.035741251
1672 Epoch: 1636 cost= 0.033929281
1673 Epoch: 1637 cost= 0.035515673
1674 Epoch: 1638 cost= 0.034902800
```

```
1675 Epoch: 1639 cost= 0.035875823
1676 Epoch: 1640 cost= 0.034853809
1677 Epoch: 1641 cost= 0.032922179
1678 Epoch: 1642 cost= 0.033368148
1679 Epoch: 1643 cost= 0.033967111
1680 Epoch: 1644 cost= 0.036453649
1681 Epoch: 1645 cost= 0.034914512
1682 Epoch: 1646 cost= 0.037050724
1683 Epoch: 1647 cost= 0.035098311
1684 Epoch: 1648 cost= 0.034857310
1685 Epoch: 1649 cost= 0.036536548
1686 Epoch: 1650 cost= 0.035648365
1687 Epoch: 1651 cost= 0.034074608
1688 Epoch: 1652 cost= 0.033757195
1689 Epoch: 1653 cost= 0.035606649
1690 Epoch: 1654 cost= 0.034051307
1691 Epoch: 1655 cost= 0.035982151
1692 Epoch: 1656 cost= 0.033633858
1693 Epoch: 1657 cost= 0.035264634
1694 Epoch: 1658 cost= 0.034222588
1695 Epoch: 1659 cost= 0.035787012
1696 Epoch: 1660 cost= 0.034196414
1697 Epoch: 1661 cost= 0.035463266
1698 Epoch: 1662 cost= 0.034385733
```

```
1699 Epoch: 1663 cost= 0.034980793
1700 Epoch: 1664 cost= 0.035917439
1701 Epoch: 1665 cost= 0.036052611
1702 Epoch: 1666 cost= 0.035803646
1703 Epoch: 1667 cost= 0.036037281
1704 Epoch: 1668 cost= 0.036160756
1705 Epoch: 1669 cost= 0.034844745
1706 Epoch: 1670 cost= 0.037054762
1707 Epoch: 1671 cost= 0.035303429
1708 Epoch: 1672 cost= 0.031855039
1709 Epoch: 1673 cost= 0.033057947
1710 Epoch: 1674 cost= 0.032864410
1711 Epoch: 1675 cost= 0.035480946
1712 Epoch: 1676 cost= 0.035038792
1713 Epoch: 1677 cost= 0.033652656
1714 Epoch: 1678 cost= 0.035204276
1715 Epoch: 1679 cost= 0.034896873
1716 Epoch: 1680 cost= 0.035109278
1717 Epoch: 1681 cost= 0.035288140
1718 Epoch: 1682 cost= 0.036112327
1719 Epoch: 1683 cost= 0.037393443
1720 Epoch: 1684 cost= 0.034487665
1721 Epoch: 1685 cost= 0.035338510
1722 Epoch: 1686 cost= 0.034274839
```

```
1723 Epoch: 1687 cost= 0.036160048
1724 Epoch: 1688 cost= 0.034225065
1725 Epoch: 1689 cost= 0.036312696
1726 Epoch: 1690 cost= 0.033890978
1727 Epoch: 1691 cost= 0.037143640
1728 Epoch: 1692 cost= 0.034542706
1729 Epoch: 1693 cost= 0.035012674
1730 Epoch: 1694 cost= 0.035414647
1731 Epoch: 1695 cost= 0.033466727
1732 Epoch: 1696 cost= 0.036376394
1733 Epoch: 1697 cost= 0.036012225
1734 Epoch: 1698 cost= 0.034626972
1735 Epoch: 1699 cost= 0.034557268
1736 Epoch: 1700 cost= 0.035006490
1737 Epoch: 1701 cost= 0.034718953
1738 Epoch: 1702 cost= 0.037886064
1739 Epoch: 1703 cost= 0.034134291
1740 Epoch: 1704 cost= 0.034653798
1741 Epoch: 1705 cost= 0.035225313
1742 Epoch: 1706 cost= 0.033609685
1743 Epoch: 1707 cost= 0.033682253
1744 Epoch: 1708 cost= 0.034065951
1745 Epoch: 1709 cost= 0.034934390
1746 Epoch: 1710 cost= 0.033190854
```

```
1747 Epoch: 1711 cost= 0.033829544
1748 Epoch: 1712 cost= 0.034952175
1749 Epoch: 1713 cost= 0.034160491
1750 Epoch: 1714 cost= 0.034592681
1751 Epoch: 1715 cost= 0.034700956
1752 Epoch: 1716 cost= 0.033952840
1753 Epoch: 1717 cost= 0.033691019
1754 Epoch: 1718 cost= 0.036040667
1755 Epoch: 1719 cost= 0.034586392
1756 Epoch: 1720 cost= 0.035091996
1757 Epoch: 1721 cost= 0.034712646
1758 Epoch: 1722 cost= 0.034170449
1759 Epoch: 1723 cost= 0.034718689
1760 Epoch: 1724 cost= 0.033975765
1761 Epoch: 1725 cost= 0.033638187
1762 Epoch: 1726 cost= 0.033917781
1763 Epoch: 1727 cost= 0.033803530
1764 Epoch: 1728 cost= 0.034989145
1765 Epoch: 1729 cost= 0.034526274
1766 Epoch: 1730 cost= 0.036098480
1767 Epoch: 1731 cost= 0.034462433
1768 Epoch: 1732 cost= 0.035903834
1769 Epoch: 1733 cost= 0.034348622
1770 Epoch: 1734 cost= 0.034584869
```

```
1771 Epoch: 1735 cost= 0.037262827
1772 Epoch: 1736 cost= 0.037201378
1773 Epoch: 1737 cost= 0.034823097
1774 Epoch: 1738 cost= 0.034658626
1775 Epoch: 1739 cost= 0.035073984
1776 Epoch: 1740 cost= 0.032924592
1777 Epoch: 1741 cost= 0.036018744
1778 Epoch: 1742 cost= 0.035436768
1779 Epoch: 1743 cost= 0.034809235
1780 Epoch: 1744 cost= 0.034142792
1781 Epoch: 1745 cost= 0.034499515
1782 Epoch: 1746 cost= 0.035209682
1783 Epoch: 1747 cost= 0.034340672
1784 Epoch: 1748 cost= 0.036040422
1785 Epoch: 1749 cost= 0.033211377
1786 Epoch: 1750 cost= 0.034434043
1787 Epoch: 1751 cost= 0.035286412
1788 Epoch: 1752 cost= 0.037258130
1789 Epoch: 1753 cost= 0.037034277
1790 Epoch: 1754 cost= 0.036476221
1791 Epoch: 1755 cost= 0.037146818
1792 Epoch: 1756 cost= 0.035383251
1793 Epoch: 1757 cost= 0.033948053
1794 Epoch: 1758 cost= 0.035709661
```

```
1795 Epoch: 1759 cost= 0.034334693
1796 Epoch: 1760 cost= 0.034698315
1797 Epoch: 1761 cost= 0.033930849
1798 Epoch: 1762 cost= 0.033719972
1799 Epoch: 1763 cost= 0.034743875
1800 Epoch: 1764 cost= 0.035688769
1801 Epoch: 1765 cost= 0.034502760
1802 Epoch: 1766 cost= 0.036029246
1803 Epoch: 1767 cost= 0.037300479
1804 Epoch: 1768 cost= 0.035078723
1805 Epoch: 1769 cost= 0.033437129
1806 Epoch: 1770 cost= 0.034030911
1807 Epoch: 1771 cost= 0.033552635
1808 Epoch: 1772 cost= 0.033924051
1809 Epoch: 1773 cost= 0.035005726
1810 Epoch: 1774 cost= 0.034871876
1811 Epoch: 1775 cost= 0.034646910
1812 Epoch: 1776 cost= 0.034491174
1813 Epoch: 1777 cost= 0.036186248
1814 Epoch: 1778 cost= 0.034100819
1815 Epoch: 1779 cost= 0.034942593
1816 Epoch: 1780 cost= 0.035061080
1817 Epoch: 1781 cost= 0.034009803
1818 Epoch: 1782 cost= 0.035533980
```

```
1819 Epoch: 1783 cost= 0.033341572
1820 Epoch: 1784 cost= 0.033808250
1821 Epoch: 1785 cost= 0.036402076
1822 Epoch: 1786 cost= 0.035119038
1823 Epoch: 1787 cost= 0.037529759
1824 Epoch: 1788 cost= 0.034612376
1825 Epoch: 1789 cost= 0.036087643
1826 Epoch: 1790 cost= 0.036343277
1827 Epoch: 1791 cost= 0.034415875
1828 Epoch: 1792 cost= 0.035045866
1829 Epoch: 1793 cost= 0.034873489
1830 Epoch: 1794 cost= 0.034850664
1831 Epoch: 1795 cost= 0.036234707
1832 Epoch: 1796 cost= 0.034974083
1833 Epoch: 1797 cost= 0.034662865
1834 Epoch: 1798 cost= 0.035042632
1835 Epoch: 1799 cost= 0.035874221
1836 Epoch: 1800 cost= 0.034556948
1837 Epoch: 1801 cost= 0.037863377
1838 Epoch: 1802 cost= 0.035329472
1839 Epoch: 1803 cost= 0.035871319
1840 Epoch: 1804 cost= 0.034189444
1841 Epoch: 1805 cost= 0.035630278
1842 Epoch: 1806 cost= 0.033694424
```



```
1843 Epoch: 1807 cost= 0.033271778
1844 Epoch: 1808 cost= 0.036029946
1845 Epoch: 1809 cost= 0.038385365
1846 Epoch: 1810 cost= 0.035042316
1847 Epoch: 1811 cost= 0.037743080
1848 Epoch: 1812 cost= 0.035414457
1849 Epoch: 1813 cost= 0.035017796
1850 Epoch: 1814 cost= 0.036488131
1851 Epoch: 1815 cost= 0.033821188
1852 Epoch: 1816 cost= 0.033897720
1853 Epoch: 1817 cost= 0.035413753
1854 Epoch: 1818 cost= 0.034472052
1855 Epoch: 1819 cost= 0.035904981
1856 Epoch: 1820 cost= 0.034967758
1857 Epoch: 1821 cost= 0.034112882
1858 Epoch: 1822 cost= 0.033938196
1859 Epoch: 1823 cost= 0.035275433
1860 Epoch: 1824 cost= 0.034418792
1861 Epoch: 1825 cost= 0.033607703
1862 Epoch: 1826 cost= 0.034425445
1863 Epoch: 1827 cost= 0.035887372
1864 Epoch: 1828 cost= 0.036764316
1865 Epoch: 1829 cost= 0.035645835
1866 Epoch: 1830 cost= 0.033068035
```

```
1867 Epoch: 1831 cost= 0.035237044
1868 Epoch: 1832 cost= 0.035387885
1869 Epoch: 1833 cost= 0.032998547
1870 Epoch: 1834 cost= 0.036090456
1871 Epoch: 1835 cost= 0.034404662
1872 Epoch: 1836 cost= 0.035715386
1873 Epoch: 1837 cost= 0.033176988
1874 Epoch: 1838 cost= 0.036522981
1875 Epoch: 1839 cost= 0.034049351
1876 Epoch: 1840 cost= 0.036664426
1877 Epoch: 1841 cost= 0.033949245
1878 Epoch: 1842 cost= 0.033883117
1879 Epoch: 1843 cost= 0.035318609
1880 Epoch: 1844 cost= 0.033967871
1881 Epoch: 1845 cost= 0.034439515
1882 Epoch: 1846 cost= 0.034543280
1883 Epoch: 1847 cost= 0.036482394
1884 Epoch: 1848 cost= 0.034892909
1885 Epoch: 1849 cost= 0.036295839
1886 Epoch: 1850 cost= 0.034416679
1887 Epoch: 1851 cost= 0.035768826
1888 Epoch: 1852 cost= 0.034348633
1889 Epoch: 1853 cost= 0.035543911
1890 Epoch: 1854 cost= 0.033720061
```

```
1891 Epoch: 1855 cost= 0.032919593
1892 Epoch: 1856 cost= 0.034360442
1893 Epoch: 1857 cost= 0.033584751
1894 Epoch: 1858 cost= 0.035040632
1895 Epoch: 1859 cost= 0.033912290
1896 Epoch: 1860 cost= 0.036348488
1897 Epoch: 1861 cost= 0.033764057
1898 Epoch: 1862 cost= 0.035701960
1899 Epoch: 1863 cost= 0.034990299
1900 Epoch: 1864 cost= 0.035408858
1901 Epoch: 1865 cost= 0.035773467
1902 Epoch: 1866 cost= 0.036809474
1903 Epoch: 1867 cost= 0.035005920
1904 Epoch: 1868 cost= 0.032980695
1905 Epoch: 1869 cost= 0.032066599
1906 Epoch: 1870 cost= 0.037760843
1907 Epoch: 1871 cost= 0.034529977
1908 Epoch: 1872 cost= 0.033989422
1909 Epoch: 1873 cost= 0.034172028
1910 Epoch: 1874 cost= 0.033874966
1911 Epoch: 1875 cost= 0.035268079
1912 Epoch: 1876 cost= 0.033941813
1913 Epoch: 1877 cost= 0.033536177
1914 Epoch: 1878 cost= 0.036561791
```

```
1915 Epoch: 1879 cost= 0.034777727
1916 Epoch: 1880 cost= 0.034637783
1917 Epoch: 1881 cost= 0.031767510
1918 Epoch: 1882 cost= 0.032562762
1919 Epoch: 1883 cost= 0.034131061
1920 Epoch: 1884 cost= 0.034041662
1921 Epoch: 1885 cost= 0.034884289
1922 Epoch: 1886 cost= 0.033796933
1923 Epoch: 1887 cost= 0.034442559
1924 Epoch: 1888 cost= 0.035994638
1925 Epoch: 1889 cost= 0.034240890
1926 Epoch: 1890 cost= 0.035254743
1927 Epoch: 1891 cost= 0.034242339
1928 Epoch: 1892 cost= 0.032253530
1929 Epoch: 1893 cost= 0.034180645
1930 Epoch: 1894 cost= 0.034475457
1931 Epoch: 1895 cost= 0.036726553
1932 Epoch: 1896 cost= 0.034778848
1933 Epoch: 1897 cost= 0.034552112
1934 Epoch: 1898 cost= 0.035204802
1935 Epoch: 1899 cost= 0.033392854
1936 Epoch: 1900 cost= 0.034980416
1937 Epoch: 1901 cost= 0.035565570
1938 Epoch: 1902 cost= 0.035850339
```

1939	Epoch: 1903	cost= 0.034230676
1940	Epoch: 1904	cost= 0.034024306
1941	Epoch: 1905	cost= 0.033817559
1942	Epoch: 1906	cost= 0.034323841
1943	Epoch: 1907	cost= 0.034742877
1944	Epoch: 1908	cost= 0.034067199
1945	Epoch: 1909	cost= 0.036139429
1946	Epoch: 1910	cost= 0.032952290
1947	Epoch: 1911	cost= 0.034994476
1948	Epoch: 1912	cost= 0.034066271
1949	Epoch: 1913	cost= 0.033773519
1950	Epoch: 1914	cost= 0.034664419
1951	Epoch: 1915	cost= 0.033800457
1952	Epoch: 1916	cost= 0.034182183
1953	Epoch: 1917	cost= 0.035600211
1954	Epoch: 1918	cost= 0.035647940
1955	Epoch: 1919	cost= 0.035299256
1956	Epoch: 1920	cost= 0.036376275
1957	Epoch: 1921	cost= 0.034244925
1958	Epoch: 1922	cost= 0.033780348
1959	Epoch: 1923	cost= 0.035723146
1960	Epoch: 1924	cost= 0.033571191
1961	Epoch: 1925	cost= 0.036053751
1962	Epoch: 1926	cost= 0.036065277

1963	Epoch: 1927	cost= 0.035344843
1964	Epoch: 1928	cost= 0.037160713
1965	Epoch: 1929	cost= 0.035575129
1966	Epoch: 1930	cost= 0.033992216
1967	Epoch: 1931	cost= 0.033767067
1968	Epoch: 1932	cost= 0.035946578
1969	Epoch: 1933	cost= 0.034027182
1970	Epoch: 1934	cost= 0.034177750
1971	Epoch: 1935	cost= 0.036284797
1972	Epoch: 1936	cost= 0.034615710
1973	Epoch: 1937	cost= 0.033261392
1974	Epoch: 1938	cost= 0.035093240
1975	Epoch: 1939	cost= 0.035581775
1976	Epoch: 1940	cost= 0.036105979
1977	Epoch: 1941	cost= 0.035029925
1978	Epoch: 1942	cost= 0.034846939
1979	Epoch: 1943	cost= 0.034332577
1980	Epoch: 1944	cost= 0.033541437
1981	Epoch: 1945	cost= 0.035707280
1982	Epoch: 1946	cost= 0.035368700
1983	Epoch: 1947	cost= 0.033578511
1984	Epoch: 1948	cost= 0.035418838
1985	Epoch: 1949	cost= 0.034031842
1986	Epoch: 1950	cost= 0.034500238

1987	Epoch: 1951	cost= 0.035932016
1988	Epoch: 1952	cost= 0.034100641
1989	Epoch: 1953	cost= 0.036361482
1990	Epoch: 1954	cost= 0.034551155
1991	Epoch: 1955	cost= 0.034603786
1992	Epoch: 1956	cost= 0.034311589
1993	Epoch: 1957	cost= 0.035229623
1994	Epoch: 1958	cost= 0.035432514
1995	Epoch: 1959	cost= 0.033378772
1996	Epoch: 1960	cost= 0.032440096
1997	Epoch: 1961	cost= 0.034950245
1998	Epoch: 1962	cost= 0.034381352
1999	Epoch: 1963	cost= 0.035492808
2000	Epoch: 1964	cost= 0.034962982
2001	Epoch: 1965	cost= 0.033927262
2002	Epoch: 1966	cost= 0.035138778
2003	Epoch: 1967	cost= 0.036529604
2004	Epoch: 1968	cost= 0.033909891
2005	Epoch: 1969	cost= 0.034568768
2006	Epoch: 1970	cost= 0.034278709
2007	Epoch: 1971	cost= 0.035177447
2008	Epoch: 1972	cost= 0.033474982
2009	Epoch: 1973	cost= 0.035487209
2010	Epoch: 1974	cost= 0.033298414

2011	Epoch: 1975	cost= 0.033146713
2012	Epoch: 1976	cost= 0.035040442
2013	Epoch: 1977	cost= 0.034937292
2014	Epoch: 1978	cost= 0.035274480
2015	Epoch: 1979	cost= 0.036860593
2016	Epoch: 1980	cost= 0.032803692
2017	Epoch: 1981	cost= 0.034398399
2018	Epoch: 1982	cost= 0.034755994
2019	Epoch: 1983	cost= 0.036085173
2020	Epoch: 1984	cost= 0.035356585
2021	Epoch: 1985	cost= 0.035215613
2022	Epoch: 1986	cost= 0.034694523
2023	Epoch: 1987	cost= 0.032736450
2024	Epoch: 1988	cost= 0.033824548
2025	Epoch: 1989	cost= 0.033286255
2026	Epoch: 1990	cost= 0.034590133
2027	Epoch: 1991	cost= 0.033852741
2028	Epoch: 1992	cost= 0.034273427
2029	Epoch: 1993	cost= 0.033065584
2030	Epoch: 1994	cost= 0.034913592
2031	Epoch: 1995	cost= 0.034781523
2032	Epoch: 1996	cost= 0.034936931
2033	Epoch: 1997	cost= 0.035659678
2034	Epoch: 1998	cost= 0.034743488



```
2035 Epoch: 1999 cost= 0.037790596
2036 Epoch: 2000 cost= 0.032474078
2037 Epoch: 2001 cost= 0.033752315
2038 Epoch: 2002 cost= 0.033662867
2039 Epoch: 2003 cost= 0.035608608
2040 Epoch: 2004 cost= 0.036966447
2041 Epoch: 2005 cost= 0.034189124
2042 Epoch: 2006 cost= 0.036183234
2043 Epoch: 2007 cost= 0.032740366
2044 Epoch: 2008 cost= 0.034091070
2045 Epoch: 2009 cost= 0.033788621
2046 Epoch: 2010 cost= 0.034007091
2047 Epoch: 2011 cost= 0.034127455
2048 Epoch: 2012 cost= 0.034849681
2049 Epoch: 2013 cost= 0.036078416
2050 Epoch: 2014 cost= 0.034255300
2051 Epoch: 2015 cost= 0.034528371
2052 Epoch: 2016 cost= 0.034046449
2053 Epoch: 2017 cost= 0.031933129
2054 Epoch: 2018 cost= 0.035938647
2055 Epoch: 2019 cost= 0.036510829
2056 Epoch: 2020 cost= 0.035711393
2057 Epoch: 2021 cost= 0.032266621
2058 Epoch: 2022 cost= 0.036471125
```

```
2059 Epoch: 2023 cost= 0.034305856
2060 Epoch: 2024 cost= 0.034822743
2061 Epoch: 2025 cost= 0.032270465
2062 Epoch: 2026 cost= 0.035361178
2063 Epoch: 2027 cost= 0.036495149
2064 Epoch: 2028 cost= 0.036256608
2065 Epoch: 2029 cost= 0.035037201
2066 Epoch: 2030 cost= 0.034384318
2067 Epoch: 2031 cost= 0.037294980
2068 Epoch: 2032 cost= 0.034590933
2069 Epoch: 2033 cost= 0.034659684
2070 Epoch: 2034 cost= 0.034673445
2071 Epoch: 2035 cost= 0.034337174
2072 Epoch: 2036 cost= 0.035248574
2073 Epoch: 2037 cost= 0.036111549
2074 Epoch: 2038 cost= 0.034907132
2075 Epoch: 2039 cost= 0.034183200
2076 Epoch: 2040 cost= 0.033598974
2077 Epoch: 2041 cost= 0.036319498
2078 Epoch: 2042 cost= 0.035082906
2079 Epoch: 2043 cost= 0.033194017
2080 Epoch: 2044 cost= 0.033179421
2081 Epoch: 2045 cost= 0.034873594
2082 Epoch: 2046 cost= 0.036335658
```

```
2083 Epoch: 2047 cost= 0.034415495
2084 Epoch: 2048 cost= 0.034288798
2085 Epoch: 2049 cost= 0.033904143
2086 Epoch: 2050 cost= 0.033841699
2087 Epoch: 2051 cost= 0.034355830
2088 Epoch: 2052 cost= 0.035438728
2089 Epoch: 2053 cost= 0.033899583
2090 Epoch: 2054 cost= 0.034682464
2091 Epoch: 2055 cost= 0.035701741
2092 Epoch: 2056 cost= 0.033840295
2093 Epoch: 2057 cost= 0.036090616
2094 Epoch: 2058 cost= 0.034429450
2095 Epoch: 2059 cost= 0.033929899
2096 Epoch: 2060 cost= 0.034028415
2097 Epoch: 2061 cost= 0.034858383
2098 Epoch: 2062 cost= 0.033733457
2099 Epoch: 2063 cost= 0.034615822
2100 Epoch: 2064 cost= 0.033123206
2101 Epoch: 2065 cost= 0.034161426
2102 Epoch: 2066 cost= 0.032937888
2103 Epoch: 2067 cost= 0.035510335
2104 Epoch: 2068 cost= 0.034053687
2105 Epoch: 2069 cost= 0.034151543
2106 Epoch: 2070 cost= 0.035469681
```

```
2107 Epoch: 2071 cost= 0.034389969
2108 Epoch: 2072 cost= 0.034661863
2109 Epoch: 2073 cost= 0.034147188
2110 Epoch: 2074 cost= 0.034739491
2111 Epoch: 2075 cost= 0.035226513
2112 Epoch: 2076 cost= 0.035738051
2113 Epoch: 2077 cost= 0.033245400
2114 Epoch: 2078 cost= 0.036419354
2115 Epoch: 2079 cost= 0.035810333
2116 Epoch: 2080 cost= 0.034179419
2117 Epoch: 2081 cost= 0.034087710
2118 Epoch: 2082 cost= 0.034205191
2119 Epoch: 2083 cost= 0.034508631
2120 Epoch: 2084 cost= 0.035753459
2121 Epoch: 2085 cost= 0.034197081
2122 Epoch: 2086 cost= 0.035612881
2123 Epoch: 2087 cost= 0.033023689
2124 Epoch: 2088 cost= 0.035555668
2125 Epoch: 2089 cost= 0.033720441
2126 Epoch: 2090 cost= 0.035672359
2127 Epoch: 2091 cost= 0.036548309
2128 Epoch: 2092 cost= 0.036093231
2129 Epoch: 2093 cost= 0.035722297
2130 Epoch: 2094 cost= 0.035835177
```

```
2131 Epoch: 2095 cost= 0.034510925
2132 Epoch: 2096 cost= 0.034950241
2133 Epoch: 2097 cost= 0.033251051
2134 Epoch: 2098 cost= 0.034403861
2135 Epoch: 2099 cost= 0.033744823
2136 Epoch: 2100 cost= 0.034639258
2137 Epoch: 2101 cost= 0.034965850
2138 Epoch: 2102 cost= 0.035031840
2139 Epoch: 2103 cost= 0.034125727
2140 Epoch: 2104 cost= 0.032602411
2141 Epoch: 2105 cost= 0.036942262
2142 Epoch: 2106 cost= 0.034137629
2143 Epoch: 2107 cost= 0.034775920
2144 Epoch: 2108 cost= 0.034899443
2145 Epoch: 2109 cost= 0.033574570
2146 Epoch: 2110 cost= 0.031455807
2147 Epoch: 2111 cost= 0.033719342
2148 Epoch: 2112 cost= 0.033466198
2149 Epoch: 2113 cost= 0.032941952
2150 Epoch: 2114 cost= 0.033025961
2151 Epoch: 2115 cost= 0.034505799
2152 Epoch: 2116 cost= 0.033948030
2153 Epoch: 2117 cost= 0.035284791
2154 Epoch: 2118 cost= 0.034004588
```

```
2155 Epoch: 2119 cost= 0.034648046
2156 Epoch: 2120 cost= 0.035450771
2157 Epoch: 2121 cost= 0.033712335
2158 Epoch: 2122 cost= 0.033622395
2159 Epoch: 2123 cost= 0.035823751
2160 Epoch: 2124 cost= 0.034120988
2161 Epoch: 2125 cost= 0.036037426
2162 Epoch: 2126 cost= 0.034630518
2163 Epoch: 2127 cost= 0.035970438
2164 Epoch: 2128 cost= 0.034558661
2165 Epoch: 2129 cost= 0.034714807
2166 Epoch: 2130 cost= 0.034753416
2167 Epoch: 2131 cost= 0.035075855
2168 Epoch: 2132 cost= 0.034883384
2169 Epoch: 2133 cost= 0.034969885
2170 Epoch: 2134 cost= 0.035564538
2171 Epoch: 2135 cost= 0.033626601
2172 Epoch: 2136 cost= 0.035305455
2173 Epoch: 2137 cost= 0.036003910
2174 Epoch: 2138 cost= 0.035807513
2175 Epoch: 2139 cost= 0.034866568
2176 Epoch: 2140 cost= 0.032790106
2177 Epoch: 2141 cost= 0.034059413
2178 Epoch: 2142 cost= 0.034832422
```

```
2179 Epoch: 2143 cost= 0.035176784
2180 Epoch: 2144 cost= 0.035599582
2181 Epoch: 2145 cost= 0.036336236
2182 Epoch: 2146 cost= 0.033895943
2183 Epoch: 2147 cost= 0.033621237
2184 Epoch: 2148 cost= 0.033110145
2185 Epoch: 2149 cost= 0.034212951
2186 Epoch: 2150 cost= 0.033977840
2187 Epoch: 2151 cost= 0.035498220
2188 Epoch: 2152 cost= 0.033329435
2189 Epoch: 2153 cost= 0.032903463
2190 Epoch: 2154 cost= 0.034768786
2191 Epoch: 2155 cost= 0.034473740
2192 Epoch: 2156 cost= 0.037102621
2193 Epoch: 2157 cost= 0.034480173
2194 Epoch: 2158 cost= 0.035401106
2195 Epoch: 2159 cost= 0.036201175
2196 Epoch: 2160 cost= 0.036025904
2197 Epoch: 2161 cost= 0.034485098
2198 Epoch: 2162 cost= 0.035109852
2199 Epoch: 2163 cost= 0.035330426
2200 Epoch: 2164 cost= 0.033544451
2201 Epoch: 2165 cost= 0.033730868
2202 Epoch: 2166 cost= 0.035027016
```

```
2203 Epoch: 2167 cost= 0.034325596
2204 Epoch: 2168 cost= 0.033665035
2205 Epoch: 2169 cost= 0.034750361
2206 Epoch: 2170 cost= 0.036114655
2207 Epoch: 2171 cost= 0.036249489
2208 Epoch: 2172 cost= 0.035233624
2209 Epoch: 2173 cost= 0.036188509
2210 Epoch: 2174 cost= 0.035770874
2211 Epoch: 2175 cost= 0.034970682
2212 Epoch: 2176 cost= 0.034957048
2213 Epoch: 2177 cost= 0.035069089
2214 Epoch: 2178 cost= 0.035512298
2215 Epoch: 2179 cost= 0.036049969
2216 Epoch: 2180 cost= 0.033494383
2217 Epoch: 2181 cost= 0.035911564
2218 Epoch: 2182 cost= 0.033034436
2219 Epoch: 2183 cost= 0.034665298
2220 Epoch: 2184 cost= 0.033191364
2221 Epoch: 2185 cost= 0.033761337
2222 Epoch: 2186 cost= 0.034912083
2223 Epoch: 2187 cost= 0.034444969
2224 Epoch: 2188 cost= 0.035674781
2225 Epoch: 2189 cost= 0.033046935
2226 Epoch: 2190 cost= 0.036179975
```



```
2227 Epoch: 2191 cost= 0.033651303
2228 Epoch: 2192 cost= 0.035264265
2229 Epoch: 2193 cost= 0.035104755
2230 Epoch: 2194 cost= 0.035005327
2231 Epoch: 2195 cost= 0.033947345
2232 Epoch: 2196 cost= 0.033927530
2233 Epoch: 2197 cost= 0.035809718
2234 Epoch: 2198 cost= 0.034423776
2235 Epoch: 2199 cost= 0.036398366
2236 Epoch: 2200 cost= 0.034166269
2237 Epoch: 2201 cost= 0.033824097
2238 Epoch: 2202 cost= 0.033430550
2239 Epoch: 2203 cost= 0.035385970
2240 Epoch: 2204 cost= 0.034441408
2241 Epoch: 2205 cost= 0.035146065
2242 Epoch: 2206 cost= 0.034435917
2243 Epoch: 2207 cost= 0.034458186
2244 Epoch: 2208 cost= 0.033473410
2245 Epoch: 2209 cost= 0.034203876
2246 Epoch: 2210 cost= 0.034603495
2247 Epoch: 2211 cost= 0.034503996
2248 Epoch: 2212 cost= 0.033703625
2249 Epoch: 2213 cost= 0.035752106
2250 Epoch: 2214 cost= 0.034197610
```

```
2251 Epoch: 2215 cost= 0.035674307
2252 Epoch: 2216 cost= 0.035053574
2253 Epoch: 2217 cost= 0.034355626
2254 Epoch: 2218 cost= 0.034936868
2255 Epoch: 2219 cost= 0.033461012
2256 Epoch: 2220 cost= 0.034555677
2257 Epoch: 2221 cost= 0.035664942
2258 Epoch: 2222 cost= 0.032603595
2259 Epoch: 2223 cost= 0.033892587
2260 Epoch: 2224 cost= 0.035941001
2261 Epoch: 2225 cost= 0.034341481
2262 Epoch: 2226 cost= 0.033484638
2263 Epoch: 2227 cost= 0.035660587
2264 Epoch: 2228 cost= 0.033583898
2265 Epoch: 2229 cost= 0.035600428
2266 Epoch: 2230 cost= 0.034423307
2267 Epoch: 2231 cost= 0.036061034
2268 Epoch: 2232 cost= 0.034815319
2269 Epoch: 2233 cost= 0.034706011
2270 Epoch: 2234 cost= 0.033055544
2271 Epoch: 2235 cost= 0.033703849
2272 Epoch: 2236 cost= 0.035394087
2273 Epoch: 2237 cost= 0.034774426
2274 Epoch: 2238 cost= 0.034768045
```

```
2275 Epoch: 2239 cost= 0.033477578
2276 Epoch: 2240 cost= 0.036391817
2277 Epoch: 2241 cost= 0.033721078
2278 Epoch: 2242 cost= 0.036819223
2279 Epoch: 2243 cost= 0.034769610
2280 Epoch: 2244 cost= 0.037270192
2281 Epoch: 2245 cost= 0.034842286
2282 Epoch: 2246 cost= 0.037114590
2283 Epoch: 2247 cost= 0.035740726
2284 Epoch: 2248 cost= 0.036124095
2285 Epoch: 2249 cost= 0.033389255
2286 Epoch: 2250 cost= 0.033667181
2287 Epoch: 2251 cost= 0.034539528
2288 Epoch: 2252 cost= 0.035781309
2289 Epoch: 2253 cost= 0.036392249
2290 Epoch: 2254 cost= 0.035581011
2291 Epoch: 2255 cost= 0.034825344
2292 Epoch: 2256 cost= 0.033202995
2293 Epoch: 2257 cost= 0.034650989
2294 Epoch: 2258 cost= 0.035487950
2295 Epoch: 2259 cost= 0.036298841
2296 Epoch: 2260 cost= 0.035427753
2297 Epoch: 2261 cost= 0.035893228
2298 Epoch: 2262 cost= 0.036835805
```

```
2299 Epoch: 2263 cost= 0.036366984
2300 Epoch: 2264 cost= 0.035510264
2301 Epoch: 2265 cost= 0.032542028
2302 Epoch: 2266 cost= 0.033403330
2303 Epoch: 2267 cost= 0.034772087
2304 Epoch: 2268 cost= 0.036262311
2305 Epoch: 2269 cost= 0.034657970
2306 Epoch: 2270 cost= 0.034353953
2307 Epoch: 2271 cost= 0.033532102
2308 Epoch: 2272 cost= 0.035247330
2309 Epoch: 2273 cost= 0.033603009
2310 Epoch: 2274 cost= 0.035085570
2311 Epoch: 2275 cost= 0.035126254
2312 Epoch: 2276 cost= 0.034524370
2313 Epoch: 2277 cost= 0.034474187
2314 Epoch: 2278 cost= 0.033437081
2315 Epoch: 2279 cost= 0.034098268
2316 Epoch: 2280 cost= 0.034122799
2317 Epoch: 2281 cost= 0.035125386
2318 Epoch: 2282 cost= 0.035522576
2319 Epoch: 2283 cost= 0.033384349
2320 Epoch: 2284 cost= 0.033382811
2321 Epoch: 2285 cost= 0.035024289
2322 Epoch: 2286 cost= 0.036782406
```

```
2323 Epoch: 2287 cost= 0.037257485
2324 Epoch: 2288 cost= 0.032516420
2325 Epoch: 2289 cost= 0.035589170
2326 Epoch: 2290 cost= 0.033889394
2327 Epoch: 2291 cost= 0.034098789
2328 Epoch: 2292 cost= 0.034879420
2329 Epoch: 2293 cost= 0.035523050
2330 Epoch: 2294 cost= 0.034031641
2331 Epoch: 2295 cost= 0.034813646
2332 Epoch: 2296 cost= 0.034665741
2333 Epoch: 2297 cost= 0.035290763
2334 Epoch: 2298 cost= 0.035163496
2335 Epoch: 2299 cost= 0.037136812
2336 Epoch: 2300 cost= 0.033597641
2337 Epoch: 2301 cost= 0.032314867
2338 Epoch: 2302 cost= 0.034334201
2339 Epoch: 2303 cost= 0.034383554
2340 Epoch: 2304 cost= 0.033109806
2341 Epoch: 2305 cost= 0.036419455
2342 Epoch: 2306 cost= 0.035312109
2343 Epoch: 2307 cost= 0.035306484
2344 Epoch: 2308 cost= 0.032963965
2345 Epoch: 2309 cost= 0.034061950
2346 Epoch: 2310 cost= 0.033323575
```

```
2347 Epoch: 2311 cost= 0.034715049
2348 Epoch: 2312 cost= 0.036172453
2349 Epoch: 2313 cost= 0.036216307
2350 Epoch: 2314 cost= 0.036861449
2351 Epoch: 2315 cost= 0.034346420
2352 Epoch: 2316 cost= 0.034726631
2353 Epoch: 2317 cost= 0.035193283
2354 Epoch: 2318 cost= 0.034580816
2355 Epoch: 2319 cost= 0.034021392
2356 Epoch: 2320 cost= 0.034360807
2357 Epoch: 2321 cost= 0.034513436
2358 Epoch: 2322 cost= 0.033863310
2359 Epoch: 2323 cost= 0.033300620
2360 Epoch: 2324 cost= 0.034250453
2361 Epoch: 2325 cost= 0.033910256
2362 Epoch: 2326 cost= 0.036518663
2363 Epoch: 2327 cost= 0.033267554
2364 Epoch: 2328 cost= 0.034994859
2365 Epoch: 2329 cost= 0.033685990
2366 Epoch: 2330 cost= 0.035308387
2367 Epoch: 2331 cost= 0.034752924
2368 Epoch: 2332 cost= 0.035827696
2369 Epoch: 2333 cost= 0.035645481
2370 Epoch: 2334 cost= 0.035377439
```

```
2371 Epoch: 2335 cost= 0.035902511
2372 Epoch: 2336 cost= 0.034959186
2373 Epoch: 2337 cost= 0.036548473
2374 Epoch: 2338 cost= 0.035495047
2375 Epoch: 2339 cost= 0.035533573
2376 Epoch: 2340 cost= 0.035582446
2377 Epoch: 2341 cost= 0.034298368
2378 Epoch: 2342 cost= 0.033635758
2379 Epoch: 2343 cost= 0.035712931
2380 Epoch: 2344 cost= 0.035996221
2381 Epoch: 2345 cost= 0.034696214
2382 Epoch: 2346 cost= 0.037643723
2383 Epoch: 2347 cost= 0.036482491
2384 Epoch: 2348 cost= 0.034253832
2385 Epoch: 2349 cost= 0.035707362
2386 Epoch: 2350 cost= 0.036794987
2387 Epoch: 2351 cost= 0.033275228
2388 Epoch: 2352 cost= 0.034515630
2389 Epoch: 2353 cost= 0.034025282
2390 Epoch: 2354 cost= 0.036383901
2391 Epoch: 2355 cost= 0.033251788
2392 Epoch: 2356 cost= 0.032829199
2393 Epoch: 2357 cost= 0.035139754
2394 Epoch: 2358 cost= 0.034660302
```



```
2395 Epoch: 2359 cost= 0.036768597
2396 Epoch: 2360 cost= 0.035395540
2397 Epoch: 2361 cost= 0.034519691
2398 Epoch: 2362 cost= 0.034808140
2399 Epoch: 2363 cost= 0.034396008
2400 Epoch: 2364 cost= 0.032625925
2401 Epoch: 2365 cost= 0.035951767
2402 Epoch: 2366 cost= 0.034703318
2403 Epoch: 2367 cost= 0.033544201
2404 Epoch: 2368 cost= 0.034551337
2405 Epoch: 2369 cost= 0.033135720
2406 Epoch: 2370 cost= 0.034419604
2407 Epoch: 2371 cost= 0.036350474
2408 Epoch: 2372 cost= 0.035011042
2409 Epoch: 2373 cost= 0.033651173
2410 Epoch: 2374 cost= 0.035022240
2411 Epoch: 2375 cost= 0.034529984
2412 Epoch: 2376 cost= 0.036801677
2413 Epoch: 2377 cost= 0.036144588
2414 Epoch: 2378 cost= 0.034784868
2415 Epoch: 2379 cost= 0.033565871
2416 Epoch: 2380 cost= 0.035155725
2417 Epoch: 2381 cost= 0.036831982
2418 Epoch: 2382 cost= 0.035827510
```



```
2419 Epoch: 2383 cost= 0.035470773
2420 Epoch: 2384 cost= 0.034579869
2421 Epoch: 2385 cost= 0.034253854
2422 Epoch: 2386 cost= 0.036012396
2423 Epoch: 2387 cost= 0.033042643
2424 Epoch: 2388 cost= 0.036108658
2425 Epoch: 2389 cost= 0.034816951
2426 Epoch: 2390 cost= 0.035639156
2427 Epoch: 2391 cost= 0.034689814
2428 Epoch: 2392 cost= 0.035599004
2429 Epoch: 2393 cost= 0.034719661
2430 Epoch: 2394 cost= 0.035577253
2431 Epoch: 2395 cost= 0.035658453
2432 Epoch: 2396 cost= 0.036990084
2433 Epoch: 2397 cost= 0.035830818
2434 Epoch: 2398 cost= 0.035405103
2435 Epoch: 2399 cost= 0.035037026
2436 Epoch: 2400 cost= 0.037075445
2437 Epoch: 2401 cost= 0.035631914
2438 Epoch: 2402 cost= 0.035263192
2439 Epoch: 2403 cost= 0.034052022
2440 Epoch: 2404 cost= 0.035977110
2441 Epoch: 2405 cost= 0.033199769
2442 Epoch: 2406 cost= 0.035793573
```

```
2443 Epoch: 2407 cost= 0.032431703
2444 Epoch: 2408 cost= 0.034231428
2445 Epoch: 2409 cost= 0.033067685
2446 Epoch: 2410 cost= 0.033415060
2447 Epoch: 2411 cost= 0.034796812
2448 Epoch: 2412 cost= 0.034605369
2449 Epoch: 2413 cost= 0.035233185
2450 Epoch: 2414 cost= 0.036100909
2451 Epoch: 2415 cost= 0.034177370
2452 Epoch: 2416 cost= 0.034417655
2453 Epoch: 2417 cost= 0.035429783
2454 Epoch: 2418 cost= 0.035427090
2455 Epoch: 2419 cost= 0.035389338
2456 Epoch: 2420 cost= 0.032937277
2457 Epoch: 2421 cost= 0.033632066
2458 Epoch: 2422 cost= 0.034162723
2459 Epoch: 2423 cost= 0.035328243
2460 Epoch: 2424 cost= 0.032971140
2461 Epoch: 2425 cost= 0.036610335
2462 Epoch: 2426 cost= 0.036078393
2463 Epoch: 2427 cost= 0.035612538
2464 Epoch: 2428 cost= 0.033850577
2465 Epoch: 2429 cost= 0.034669571
2466 Epoch: 2430 cost= 0.036291029
```

```
2467 Epoch: 2431 cost= 0.035536431
2468 Epoch: 2432 cost= 0.033395540
2469 Epoch: 2433 cost= 0.036369700
2470 Epoch: 2434 cost= 0.034711916
2471 Epoch: 2435 cost= 0.035593923
2472 Epoch: 2436 cost= 0.036911983
2473 Epoch: 2437 cost= 0.033678908
2474 Epoch: 2438 cost= 0.036536392
2475 Epoch: 2439 cost= 0.035950866
2476 Epoch: 2440 cost= 0.034753248
2477 Epoch: 2441 cost= 0.034090851
2478 Epoch: 2442 cost= 0.033294152
2479 Epoch: 2443 cost= 0.035868846
2480 Epoch: 2444 cost= 0.034050267
2481 Epoch: 2445 cost= 0.034639664
2482 Epoch: 2446 cost= 0.034722984
2483 Epoch: 2447 cost= 0.035128787
2484 Epoch: 2448 cost= 0.035536252
2485 Epoch: 2449 cost= 0.035017684
2486 Epoch: 2450 cost= 0.034133762
2487 Epoch: 2451 cost= 0.033413574
2488 Epoch: 2452 cost= 0.033031430
2489 Epoch: 2453 cost= 0.035170216
2490 Epoch: 2454 cost= 0.035467692
```

```
2491 Epoch: 2455 cost= 0.035119705
2492 Epoch: 2456 cost= 0.035838306
2493 Epoch: 2457 cost= 0.035650216
2494 Epoch: 2458 cost= 0.034869876
2495 Epoch: 2459 cost= 0.035472475
2496 Epoch: 2460 cost= 0.033143152
2497 Epoch: 2461 cost= 0.035398785
2498 Epoch: 2462 cost= 0.034187432
2499 Epoch: 2463 cost= 0.034583822
2500 Epoch: 2464 cost= 0.035444032
2501 Epoch: 2465 cost= 0.035958804
2502 Epoch: 2466 cost= 0.037674267
2503 Epoch: 2467 cost= 0.035123970
2504 Epoch: 2468 cost= 0.034414396
2505 Epoch: 2469 cost= 0.035658054
2506 Epoch: 2470 cost= 0.034048099
2507 Epoch: 2471 cost= 0.034919225
2508 Epoch: 2472 cost= 0.035725947
2509 Epoch: 2473 cost= 0.035550196
2510 Epoch: 2474 cost= 0.034103427
2511 Epoch: 2475 cost= 0.033418588
2512 Epoch: 2476 cost= 0.032835022
2513 Epoch: 2477 cost= 0.034099098
2514 Epoch: 2478 cost= 0.035389341
```

```
2515 Epoch: 2479 cost= 0.033772886
2516 Epoch: 2480 cost= 0.035869159
2517 Epoch: 2481 cost= 0.034012407
2518 Epoch: 2482 cost= 0.034771539
2519 Epoch: 2483 cost= 0.033853512
2520 Epoch: 2484 cost= 0.033823289
2521 Epoch: 2485 cost= 0.034935415
2522 Epoch: 2486 cost= 0.035130449
2523 Epoch: 2487 cost= 0.035642475
2524 Epoch: 2488 cost= 0.035185974
2525 Epoch: 2489 cost= 0.034025412
2526 Epoch: 2490 cost= 0.034904227
2527 Epoch: 2491 cost= 0.035488471
2528 Epoch: 2492 cost= 0.035447698
2529 Epoch: 2493 cost= 0.034638140
2530 Epoch: 2494 cost= 0.036267184
2531 Epoch: 2495 cost= 0.036435418
2532 Epoch: 2496 cost= 0.033824094
2533 Epoch: 2497 cost= 0.034540690
2534 Epoch: 2498 cost= 0.035329513
2535 Epoch: 2499 cost= 0.033488289
2536 Epoch: 2500 cost= 0.032961830
2537 Epoch: 2501 cost= 0.034350887
2538 Epoch: 2502 cost= 0.034803636
```

```
2539 Epoch: 2503 cost= 0.035104945
2540 Epoch: 2504 cost= 0.033828720
2541 Epoch: 2505 cost= 0.033312656
2542 Epoch: 2506 cost= 0.036320984
2543 Epoch: 2507 cost= 0.035510395
2544 Epoch: 2508 cost= 0.035454318
2545 Epoch: 2509 cost= 0.036334440
2546 Epoch: 2510 cost= 0.037264090
2547 Epoch: 2511 cost= 0.035033293
2548 Epoch: 2512 cost= 0.035258558
2549 Epoch: 2513 cost= 0.033484973
2550 Epoch: 2514 cost= 0.037852827
2551 Epoch: 2515 cost= 0.033727810
2552 Epoch: 2516 cost= 0.034604337
2553 Epoch: 2517 cost= 0.035346478
2554 Epoch: 2518 cost= 0.034766633
2555 Epoch: 2519 cost= 0.034606550
2556 Epoch: 2520 cost= 0.033610418
2557 Epoch: 2521 cost= 0.035250422
2558 Epoch: 2522 cost= 0.032972325
2559 Epoch: 2523 cost= 0.035501659
2560 Epoch: 2524 cost= 0.036974695
2561 Epoch: 2525 cost= 0.034628779
2562 Epoch: 2526 cost= 0.035815492
```

```
2563 Epoch: 2527 cost= 0.033827960
2564 Epoch: 2528 cost= 0.036591690
2565 Epoch: 2529 cost= 0.035262939
2566 Epoch: 2530 cost= 0.034485742
2567 Epoch: 2531 cost= 0.033621341
2568 Epoch: 2532 cost= 0.034843132
2569 Epoch: 2533 cost= 0.035693895
2570 Epoch: 2534 cost= 0.035541397
2571 Epoch: 2535 cost= 0.033473253
2572 Epoch: 2536 cost= 0.036237743
2573 Epoch: 2537 cost= 0.034410100
2574 Epoch: 2538 cost= 0.033333044
2575 Epoch: 2539 cost= 0.034678437
2576 Epoch: 2540 cost= 0.033516984
2577 Epoch: 2541 cost= 0.036204729
2578 Epoch: 2542 cost= 0.036015522
2579 Epoch: 2543 cost= 0.035341077
2580 Epoch: 2544 cost= 0.033861857
2581 Epoch: 2545 cost= 0.035126787
2582 Epoch: 2546 cost= 0.034134898
2583 Epoch: 2547 cost= 0.034162056
2584 Epoch: 2548 cost= 0.034451347
2585 Epoch: 2549 cost= 0.036616188
2586 Epoch: 2550 cost= 0.034240235
```



```
2587 Epoch: 2551 cost= 0.032731488
2588 Epoch: 2552 cost= 0.034833428
2589 Epoch: 2553 cost= 0.034476444
2590 Epoch: 2554 cost= 0.034267120
2591 Epoch: 2555 cost= 0.036605649
2592 Epoch: 2556 cost= 0.034314156
2593 Epoch: 2557 cost= 0.034125246
2594 Epoch: 2558 cost= 0.037034888
2595 Epoch: 2559 cost= 0.034198485
2596 Epoch: 2560 cost= 0.035993397
2597 Epoch: 2561 cost= 0.034825005
2598 Epoch: 2562 cost= 0.033008516
2599 Epoch: 2563 cost= 0.033392202
2600 Epoch: 2564 cost= 0.036072999
2601 Epoch: 2565 cost= 0.034809399
2602 Epoch: 2566 cost= 0.033581100
2603 Epoch: 2567 cost= 0.035311259
2604 Epoch: 2568 cost= 0.034396876
2605 Epoch: 2569 cost= 0.037836276
2606 Epoch: 2570 cost= 0.034810856
2607 Epoch: 2571 cost= 0.033986606
2608 Epoch: 2572 cost= 0.036601085
2609 Epoch: 2573 cost= 0.034053780
2610 Epoch: 2574 cost= 0.034261700
```



```
2611 Epoch: 2575 cost= 0.035244185
2612 Epoch: 2576 cost= 0.036030829
2613 Epoch: 2577 cost= 0.033884346
2614 Epoch: 2578 cost= 0.034552224
2615 Epoch: 2579 cost= 0.033581395
2616 Epoch: 2580 cost= 0.034910567
2617 Epoch: 2581 cost= 0.034760118
2618 Epoch: 2582 cost= 0.033556506
2619 Epoch: 2583 cost= 0.036633343
2620 Epoch: 2584 cost= 0.035237525
2621 Epoch: 2585 cost= 0.034716781
2622 Epoch: 2586 cost= 0.033467546
2623 Epoch: 2587 cost= 0.033643585
2624 Epoch: 2588 cost= 0.034315258
2625 Epoch: 2589 cost= 0.034010943
2626 Epoch: 2590 cost= 0.034980778
2627 Epoch: 2591 cost= 0.034497723
2628 Epoch: 2592 cost= 0.034581881
2629 Epoch: 2593 cost= 0.033984333
2630 Epoch: 2594 cost= 0.032268472
2631 Epoch: 2595 cost= 0.035524532
2632 Epoch: 2596 cost= 0.033867151
2633 Epoch: 2597 cost= 0.032516185
2634 Epoch: 2598 cost= 0.035033621
```

```
2635 Epoch: 2599 cost= 0.035227031
2636 Epoch: 2600 cost= 0.033164378
2637 Epoch: 2601 cost= 0.033760834
2638 Epoch: 2602 cost= 0.035071041
2639 Epoch: 2603 cost= 0.036535017
2640 Epoch: 2604 cost= 0.035096213
2641 Epoch: 2605 cost= 0.035221972
2642 Epoch: 2606 cost= 0.034745138
2643 Epoch: 2607 cost= 0.034391988
2644 Epoch: 2608 cost= 0.035447754
2645 Epoch: 2609 cost= 0.034139678
2646 Epoch: 2610 cost= 0.034354497
2647 Epoch: 2611 cost= 0.035788283
2648 Epoch: 2612 cost= 0.034248516
2649 Epoch: 2613 cost= 0.035582397
2650 Epoch: 2614 cost= 0.035102762
2651 Epoch: 2615 cost= 0.033644438
2652 Epoch: 2616 cost= 0.033231691
2653 Epoch: 2617 cost= 0.032692280
2654 Epoch: 2618 cost= 0.033859432
2655 Epoch: 2619 cost= 0.035474423
2656 Epoch: 2620 cost= 0.034090508
2657 Epoch: 2621 cost= 0.034852471
2658 Epoch: 2622 cost= 0.034456417
```

```
2659 Epoch: 2623 cost= 0.036420189
2660 Epoch: 2624 cost= 0.033457782
2661 Epoch: 2625 cost= 0.033602502
2662 Epoch: 2626 cost= 0.034711391
2663 Epoch: 2627 cost= 0.034955185
2664 Epoch: 2628 cost= 0.034372795
2665 Epoch: 2629 cost= 0.034789111
2666 Epoch: 2630 cost= 0.034357209
2667 Epoch: 2631 cost= 0.034807049
2668 Epoch: 2632 cost= 0.036396947
2669 Epoch: 2633 cost= 0.035375964
2670 Epoch: 2634 cost= 0.034730479
2671 Epoch: 2635 cost= 0.032524142
2672 Epoch: 2636 cost= 0.034938179
2673 Epoch: 2637 cost= 0.034324538
2674 Epoch: 2638 cost= 0.034688540
2675 Epoch: 2639 cost= 0.034232229
2676 Epoch: 2640 cost= 0.034197230
2677 Epoch: 2641 cost= 0.035424042
2678 Epoch: 2642 cost= 0.034214407
2679 Epoch: 2643 cost= 0.035630237
2680 Epoch: 2644 cost= 0.034886502
2681 Epoch: 2645 cost= 0.034328166
2682 Epoch: 2646 cost= 0.035221815
```

```
2683 Epoch: 2647 cost= 0.038335018
2684 Epoch: 2648 cost= 0.033930425
2685 Epoch: 2649 cost= 0.036763944
2686 Epoch: 2650 cost= 0.032960624
2687 Epoch: 2651 cost= 0.035067558
2688 Epoch: 2652 cost= 0.036160611
2689 Epoch: 2653 cost= 0.034854509
2690 Epoch: 2654 cost= 0.035523202
2691 Epoch: 2655 cost= 0.036961392
2692 Epoch: 2656 cost= 0.033960171
2693 Epoch: 2657 cost= 0.035312161
2694 Epoch: 2658 cost= 0.036100566
2695 Epoch: 2659 cost= 0.034915365
2696 Epoch: 2660 cost= 0.035405423
2697 Epoch: 2661 cost= 0.034314953
2698 Epoch: 2662 cost= 0.034591138
2699 Epoch: 2663 cost= 0.036859170
2700 Epoch: 2664 cost= 0.036659207
2701 Epoch: 2665 cost= 0.035273191
2702 Epoch: 2666 cost= 0.033829741
2703 Epoch: 2667 cost= 0.034385055
2704 Epoch: 2668 cost= 0.034534458
2705 Epoch: 2669 cost= 0.036764212
2706 Epoch: 2670 cost= 0.033918720
```

```
2707 Epoch: 2671 cost= 0.033894606
2708 Epoch: 2672 cost= 0.034702815
2709 Epoch: 2673 cost= 0.034352776
2710 Epoch: 2674 cost= 0.034949481
2711 Epoch: 2675 cost= 0.034952246
2712 Epoch: 2676 cost= 0.035090785
2713 Epoch: 2677 cost= 0.036102623
2714 Epoch: 2678 cost= 0.036151499
2715 Epoch: 2679 cost= 0.034548629
2716 Epoch: 2680 cost= 0.034087718
2717 Epoch: 2681 cost= 0.036155466
2718 Epoch: 2682 cost= 0.036467806
2719 Epoch: 2683 cost= 0.036218170
2720 Epoch: 2684 cost= 0.037460975
2721 Epoch: 2685 cost= 0.033867057
2722 Epoch: 2686 cost= 0.035955310
2723 Epoch: 2687 cost= 0.034009386
2724 Epoch: 2688 cost= 0.034672335
2725 Epoch: 2689 cost= 0.036275391
2726 Epoch: 2690 cost= 0.034207571
2727 Epoch: 2691 cost= 0.034804530
2728 Epoch: 2692 cost= 0.034191132
2729 Epoch: 2693 cost= 0.033122174
2730 Epoch: 2694 cost= 0.035055723
```

```
2731 Epoch: 2695 cost= 0.033813518
2732 Epoch: 2696 cost= 0.035877187
2733 Epoch: 2697 cost= 0.035487786
2734 Epoch: 2698 cost= 0.036644801
2735 Epoch: 2699 cost= 0.035248410
2736 Epoch: 2700 cost= 0.036763817
2737 Epoch: 2701 cost= 0.034167331
2738 Epoch: 2702 cost= 0.035347760
2739 Epoch: 2703 cost= 0.033897322
2740 Epoch: 2704 cost= 0.034412015
2741 Epoch: 2705 cost= 0.033845861
2742 Epoch: 2706 cost= 0.033604134
2743 Epoch: 2707 cost= 0.034972019
2744 Epoch: 2708 cost= 0.033587344
2745 Epoch: 2709 cost= 0.035998978
2746 Epoch: 2710 cost= 0.035542056
2747 Epoch: 2711 cost= 0.035462935
2748 Epoch: 2712 cost= 0.034336656
2749 Epoch: 2713 cost= 0.037446998
2750 Epoch: 2714 cost= 0.033642050
2751 Epoch: 2715 cost= 0.034317274
2752 Epoch: 2716 cost= 0.034699701
2753 Epoch: 2717 cost= 0.035216533
2754 Epoch: 2718 cost= 0.031740289
```

```
2755 Epoch: 2719 cost= 0.036111265
2756 Epoch: 2720 cost= 0.035389669
2757 Epoch: 2721 cost= 0.032574344
2758 Epoch: 2722 cost= 0.036223490
2759 Epoch: 2723 cost= 0.037200198
2760 Epoch: 2724 cost= 0.034778416
2761 Epoch: 2725 cost= 0.035483140
2762 Epoch: 2726 cost= 0.033247754
2763 Epoch: 2727 cost= 0.033830553
2764 Epoch: 2728 cost= 0.034562457
2765 Epoch: 2729 cost= 0.034109455
2766 Epoch: 2730 cost= 0.035379361
2767 Epoch: 2731 cost= 0.036355764
2768 Epoch: 2732 cost= 0.035198916
2769 Epoch: 2733 cost= 0.036775950
2770 Epoch: 2734 cost= 0.036350872
2771 Epoch: 2735 cost= 0.036001187
2772 Epoch: 2736 cost= 0.036802176
2773 Epoch: 2737 cost= 0.033502240
2774 Epoch: 2738 cost= 0.034934483
2775 Epoch: 2739 cost= 0.035581373
2776 Epoch: 2740 cost= 0.035083655
2777 Epoch: 2741 cost= 0.035075031
2778 Epoch: 2742 cost= 0.035328001
```



```
2779 Epoch: 2743 cost= 0.034869358
2780 Epoch: 2744 cost= 0.035337765
2781 Epoch: 2745 cost= 0.035034228
2782 Epoch: 2746 cost= 0.033017956
2783 Epoch: 2747 cost= 0.035856202
2784 Epoch: 2748 cost= 0.034004144
2785 Epoch: 2749 cost= 0.034519382
2786 Epoch: 2750 cost= 0.034017734
2787 Epoch: 2751 cost= 0.033356622
2788 Epoch: 2752 cost= 0.035563391
2789 Epoch: 2753 cost= 0.034704760
2790 Epoch: 2754 cost= 0.033143509
2791 Epoch: 2755 cost= 0.034965869
2792 Epoch: 2756 cost= 0.033853337
2793 Epoch: 2757 cost= 0.034650426
2794 Epoch: 2758 cost= 0.035543840
2795 Epoch: 2759 cost= 0.036358286
2796 Epoch: 2760 cost= 0.034435000
2797 Epoch: 2761 cost= 0.035194926
2798 Epoch: 2762 cost= 0.036277547
2799 Epoch: 2763 cost= 0.036682416
2800 Epoch: 2764 cost= 0.033660106
2801 Epoch: 2765 cost= 0.035760406
2802 Epoch: 2766 cost= 0.039664995
```



```
2803 Epoch: 2767 cost= 0.034968369
2804 Epoch: 2768 cost= 0.035993580
2805 Epoch: 2769 cost= 0.034300990
2806 Epoch: 2770 cost= 0.036356594
2807 Epoch: 2771 cost= 0.035091847
2808 Epoch: 2772 cost= 0.033071555
2809 Epoch: 2773 cost= 0.034962073
2810 Epoch: 2774 cost= 0.036206700
2811 Epoch: 2775 cost= 0.035491340
2812 Epoch: 2776 cost= 0.035158131
2813 Epoch: 2777 cost= 0.034097392
2814 Epoch: 2778 cost= 0.035145488
2815 Epoch: 2779 cost= 0.035051197
2816 Epoch: 2780 cost= 0.033749990
2817 Epoch: 2781 cost= 0.034645386
2818 Epoch: 2782 cost= 0.035100996
2819 Epoch: 2783 cost= 0.032644562
2820 Epoch: 2784 cost= 0.036802053
2821 Epoch: 2785 cost= 0.034213427
2822 Epoch: 2786 cost= 0.035733894
2823 Epoch: 2787 cost= 0.034088068
2824 Epoch: 2788 cost= 0.034769189
2825 Epoch: 2789 cost= 0.035011102
2826 Epoch: 2790 cost= 0.035940748
```

```
2827 Epoch: 2791 cost= 0.035659563
2828 Epoch: 2792 cost= 0.033273473
2829 Epoch: 2793 cost= 0.036030654
2830 Epoch: 2794 cost= 0.036309019
2831 Epoch: 2795 cost= 0.034585591
2832 Epoch: 2796 cost= 0.035722461
2833 Epoch: 2797 cost= 0.033710875
2834 Epoch: 2798 cost= 0.036429167
2835 Epoch: 2799 cost= 0.033384901
2836 Epoch: 2800 cost= 0.035524610
2837 Epoch: 2801 cost= 0.033163160
2838 Epoch: 2802 cost= 0.035405625
2839 Epoch: 2803 cost= 0.034946788
2840 Epoch: 2804 cost= 0.034471635
2841 Epoch: 2805 cost= 0.036069661
2842 Epoch: 2806 cost= 0.032733329
2843 Epoch: 2807 cost= 0.034061611
2844 Epoch: 2808 cost= 0.035032872
2845 Epoch: 2809 cost= 0.035147745
2846 Epoch: 2810 cost= 0.034412585
2847 Epoch: 2811 cost= 0.034980208
2848 Epoch: 2812 cost= 0.033068720
2849 Epoch: 2813 cost= 0.033952948
2850 Epoch: 2814 cost= 0.034244645
```

```
2851 Epoch: 2815 cost= 0.034418471
2852 Epoch: 2816 cost= 0.033690151
2853 Epoch: 2817 cost= 0.036438707
2854 Epoch: 2818 cost= 0.034846228
2855 Epoch: 2819 cost= 0.034782857
2856 Epoch: 2820 cost= 0.034333393
2857 Epoch: 2821 cost= 0.034161378
2858 Epoch: 2822 cost= 0.032552965
2859 Epoch: 2823 cost= 0.033441227
2860 Epoch: 2824 cost= 0.036040355
2861 Epoch: 2825 cost= 0.032501008
2862 Epoch: 2826 cost= 0.035417527
2863 Epoch: 2827 cost= 0.034551218
2864 Epoch: 2828 cost= 0.033285782
2865 Epoch: 2829 cost= 0.034058701
2866 Epoch: 2830 cost= 0.034655776
2867 Epoch: 2831 cost= 0.033977170
2868 Epoch: 2832 cost= 0.035028614
2869 Epoch: 2833 cost= 0.035767797
2870 Epoch: 2834 cost= 0.033568453
2871 Epoch: 2835 cost= 0.035584271
2872 Epoch: 2836 cost= 0.035913430
2873 Epoch: 2837 cost= 0.035022181
2874 Epoch: 2838 cost= 0.035199814
```

```
2875 Epoch: 2839 cost= 0.034675039
2876 Epoch: 2840 cost= 0.034952454
2877 Epoch: 2841 cost= 0.034454711
2878 Epoch: 2842 cost= 0.034895986
2879 Epoch: 2843 cost= 0.035008706
2880 Epoch: 2844 cost= 0.033920307
2881 Epoch: 2845 cost= 0.034568749
2882 Epoch: 2846 cost= 0.034576897
2883 Epoch: 2847 cost= 0.035997070
2884 Epoch: 2848 cost= 0.036155749
2885 Epoch: 2849 cost= 0.034349404
2886 Epoch: 2850 cost= 0.035072163
2887 Epoch: 2851 cost= 0.034522809
2888 Epoch: 2852 cost= 0.035214134
2889 Epoch: 2853 cost= 0.035510547
2890 Epoch: 2854 cost= 0.032477420
2891 Epoch: 2855 cost= 0.034228783
2892 Epoch: 2856 cost= 0.034280628
2893 Epoch: 2857 cost= 0.037757725
2894 Epoch: 2858 cost= 0.034933101
2895 Epoch: 2859 cost= 0.034072116
2896 Epoch: 2860 cost= 0.035106052
2897 Epoch: 2861 cost= 0.034266476
2898 Epoch: 2862 cost= 0.035099838
```

```
2899 Epoch: 2863 cost= 0.035582244
2900 Epoch: 2864 cost= 0.032838210
2901 Epoch: 2865 cost= 0.034150988
2902 Epoch: 2866 cost= 0.035659090
2903 Epoch: 2867 cost= 0.033046894
2904 Epoch: 2868 cost= 0.033547778
2905 Epoch: 2869 cost= 0.034602024
2906 Epoch: 2870 cost= 0.034275215
2907 Epoch: 2871 cost= 0.033799589
2908 Epoch: 2872 cost= 0.034102671
2909 Epoch: 2873 cost= 0.034477994
2910 Epoch: 2874 cost= 0.036277261
2911 Epoch: 2875 cost= 0.036223337
2912 Epoch: 2876 cost= 0.035498030
2913 Epoch: 2877 cost= 0.034624334
2914 Epoch: 2878 cost= 0.034749810
2915 Epoch: 2879 cost= 0.033469059
2916 Epoch: 2880 cost= 0.034993920
2917 Epoch: 2881 cost= 0.038147528
2918 Epoch: 2882 cost= 0.035694413
2919 Epoch: 2883 cost= 0.035608344
2920 Epoch: 2884 cost= 0.033081267
2921 Epoch: 2885 cost= 0.035231929
2922 Epoch: 2886 cost= 0.035279263
```

```
2923 Epoch: 2887 cost= 0.034459587
2924 Epoch: 2888 cost= 0.034814849
2925 Epoch: 2889 cost= 0.032602347
2926 Epoch: 2890 cost= 0.032017816
2927 Epoch: 2891 cost= 0.037929103
2928 Epoch: 2892 cost= 0.033682860
2929 Epoch: 2893 cost= 0.034806848
2930 Epoch: 2894 cost= 0.033010043
2931 Epoch: 2895 cost= 0.034939803
2932 Epoch: 2896 cost= 0.034722839
2933 Epoch: 2897 cost= 0.034757875
2934 Epoch: 2898 cost= 0.036403820
2935 Epoch: 2899 cost= 0.032291431
2936 Epoch: 2900 cost= 0.035091046
2937 Epoch: 2901 cost= 0.034970772
2938 Epoch: 2902 cost= 0.034099817
2939 Epoch: 2903 cost= 0.036040809
2940 Epoch: 2904 cost= 0.032006204
2941 Epoch: 2905 cost= 0.034203153
2942 Epoch: 2906 cost= 0.035450839
2943 Epoch: 2907 cost= 0.034525845
2944 Epoch: 2908 cost= 0.035412937
2945 Epoch: 2909 cost= 0.035009295
2946 Epoch: 2910 cost= 0.034953795
```

```
2947 Epoch: 2911 cost= 0.034423534
2948 Epoch: 2912 cost= 0.032090887
2949 Epoch: 2913 cost= 0.036124274
2950 Epoch: 2914 cost= 0.034799654
2951 Epoch: 2915 cost= 0.035571612
2952 Epoch: 2916 cost= 0.035162527
2953 Epoch: 2917 cost= 0.036203731
2954 Epoch: 2918 cost= 0.036335915
2955 Epoch: 2919 cost= 0.033570886
2956 Epoch: 2920 cost= 0.034683827
2957 Epoch: 2921 cost= 0.032124091
2958 Epoch: 2922 cost= 0.034334924
2959 Epoch: 2923 cost= 0.034793228
2960 Epoch: 2924 cost= 0.033936180
2961 Epoch: 2925 cost= 0.034298450
2962 Epoch: 2926 cost= 0.033347301
2963 Epoch: 2927 cost= 0.035767775
2964 Epoch: 2928 cost= 0.036948148
2965 Epoch: 2929 cost= 0.035093613
2966 Epoch: 2930 cost= 0.034277279
2967 Epoch: 2931 cost= 0.036090497
2968 Epoch: 2932 cost= 0.032522358
2969 Epoch: 2933 cost= 0.033258710
2970 Epoch: 2934 cost= 0.031796224
```



```
2971 Epoch: 2935 cost= 0.035018791
2972 Epoch: 2936 cost= 0.034995984
2973 Epoch: 2937 cost= 0.035313353
2974 Epoch: 2938 cost= 0.034906693
2975 Epoch: 2939 cost= 0.033024944
2976 Epoch: 2940 cost= 0.035608105
2977 Epoch: 2941 cost= 0.036196776
2978 Epoch: 2942 cost= 0.038589396
2979 Epoch: 2943 cost= 0.035860512
2980 Epoch: 2944 cost= 0.035285261
2981 Epoch: 2945 cost= 0.034924265
2982 Epoch: 2946 cost= 0.033503223
2983 Epoch: 2947 cost= 0.034771677
2984 Epoch: 2948 cost= 0.035954677
2985 Epoch: 2949 cost= 0.034801066
2986 Epoch: 2950 cost= 0.035135970
2987 Epoch: 2951 cost= 0.034590445
2988 Epoch: 2952 cost= 0.035333235
2989 Epoch: 2953 cost= 0.036629353
2990 Epoch: 2954 cost= 0.034961510
2991 Epoch: 2955 cost= 0.036862299
2992 Epoch: 2956 cost= 0.035507198
2993 Epoch: 2957 cost= 0.035903614
2994 Epoch: 2958 cost= 0.035255708
```



```
2995 Epoch: 2959 cost= 0.037042275
2996 Epoch: 2960 cost= 0.034491390
2997 Epoch: 2961 cost= 0.038117360
2998 Epoch: 2962 cost= 0.035354339
2999 Epoch: 2963 cost= 0.035308272
3000 Epoch: 2964 cost= 0.035108548
3001 Epoch: 2965 cost= 0.036953449
3002 Epoch: 2966 cost= 0.033560924
3003 Epoch: 2967 cost= 0.033321001
3004 Epoch: 2968 cost= 0.033795480
3005 Epoch: 2969 cost= 0.036308892
3006 Epoch: 2970 cost= 0.035373650
3007 Epoch: 2971 cost= 0.034315102
3008 Epoch: 2972 cost= 0.034181949
3009 Epoch: 2973 cost= 0.034317445
3010 Epoch: 2974 cost= 0.033508204
3011 Epoch: 2975 cost= 0.034205884
3012 Epoch: 2976 cost= 0.034177229
3013 Epoch: 2977 cost= 0.034390561
3014 Epoch: 2978 cost= 0.036354635
3015 Epoch: 2979 cost= 0.032865986
3016 Epoch: 2980 cost= 0.035525672
3017 Epoch: 2981 cost= 0.033882696
3018 Epoch: 2982 cost= 0.035679866
```

```
3019 Epoch: 2983 cost= 0.035035003
3020 Epoch: 2984 cost= 0.035539154
3021 Epoch: 2985 cost= 0.034844380
3022 Epoch: 2986 cost= 0.033180203
3023 Epoch: 2987 cost= 0.035908062
3024 Epoch: 2988 cost= 0.034720518
3025 Epoch: 2989 cost= 0.034413308
3026 Epoch: 2990 cost= 0.033860721
3027 Epoch: 2991 cost= 0.032170266
3028 Epoch: 2992 cost= 0.033483103
3029 Epoch: 2993 cost= 0.035579018
3030 Epoch: 2994 cost= 0.034092255
3031 Epoch: 2995 cost= 0.032113001
3032 Epoch: 2996 cost= 0.034955777
3033 Epoch: 2997 cost= 0.034831733
3034 Epoch: 2998 cost= 0.033949140
3035 Epoch: 2999 cost= 0.033064645
3036 Epoch: 3000 cost= 0.035507537
3037 Epoch: 3001 cost= 0.032448392
3038 Epoch: 3002 cost= 0.034689549
3039 Epoch: 3003 cost= 0.035237219
3040 Epoch: 3004 cost= 0.034184810
3041 Epoch: 3005 cost= 0.035563082
3042 Epoch: 3006 cost= 0.035945691
```

```
3043 Epoch: 3007 cost= 0.035440743
3044 Epoch: 3008 cost= 0.034640092
3045 Epoch: 3009 cost= 0.034119137
3046 Epoch: 3010 cost= 0.033327829
3047 Epoch: 3011 cost= 0.033788525
3048 Epoch: 3012 cost= 0.035195913
3049 Epoch: 3013 cost= 0.033085551
3050 Epoch: 3014 cost= 0.034534283
3051 Epoch: 3015 cost= 0.035372246
3052 Epoch: 3016 cost= 0.034391325
3053 Epoch: 3017 cost= 0.035193797
3054 Epoch: 3018 cost= 0.033263385
3055 Epoch: 3019 cost= 0.035394341
3056 Epoch: 3020 cost= 0.034829918
3057 Epoch: 3021 cost= 0.035515781
3058 Epoch: 3022 cost= 0.036008295
3059 Epoch: 3023 cost= 0.033258792
3060 Epoch: 3024 cost= 0.033984888
3061 Epoch: 3025 cost= 0.034370989
3062 Epoch: 3026 cost= 0.036121100
3063 Epoch: 3027 cost= 0.033811074
3064 Epoch: 3028 cost= 0.035013448
3065 Epoch: 3029 cost= 0.033372037
3066 Epoch: 3030 cost= 0.034542374
```

```
3067 Epoch: 3031 cost= 0.034619059
3068 Epoch: 3032 cost= 0.033598438
3069 Epoch: 3033 cost= 0.034189224
3070 Epoch: 3034 cost= 0.033456448
3071 Epoch: 3035 cost= 0.034461901
3072 Epoch: 3036 cost= 0.035720292
3073 Epoch: 3037 cost= 0.033861160
3074 Epoch: 3038 cost= 0.033447530
3075 Epoch: 3039 cost= 0.035673391
3076 Epoch: 3040 cost= 0.033998962
3077 Epoch: 3041 cost= 0.036092840
3078 Epoch: 3042 cost= 0.034798540
3079 Epoch: 3043 cost= 0.034363750
3080 Epoch: 3044 cost= 0.034599785
3081 Epoch: 3045 cost= 0.035881851
3082 Epoch: 3046 cost= 0.032763116
3083 Epoch: 3047 cost= 0.034828436
3084 Epoch: 3048 cost= 0.036142703
3085 Epoch: 3049 cost= 0.035545029
3086 Epoch: 3050 cost= 0.034270354
3087 Epoch: 3051 cost= 0.035731949
3088 Epoch: 3052 cost= 0.035792243
3089 Epoch: 3053 cost= 0.035455331
3090 Epoch: 3054 cost= 0.031990401
```

```
3091 Epoch: 3055 cost= 0.034572013
3092 Epoch: 3056 cost= 0.035137367
3093 Epoch: 3057 cost= 0.032743406
3094 Epoch: 3058 cost= 0.034657639
3095 Epoch: 3059 cost= 0.035412632
3096 Epoch: 3060 cost= 0.036043335
3097 Epoch: 3061 cost= 0.033603441
3098 Epoch: 3062 cost= 0.034579072
3099 Epoch: 3063 cost= 0.036544766
3100 Epoch: 3064 cost= 0.035570849
3101 Epoch: 3065 cost= 0.033898693
3102 Epoch: 3066 cost= 0.036449470
3103 Epoch: 3067 cost= 0.034070831
3104 Epoch: 3068 cost= 0.034568869
3105 Epoch: 3069 cost= 0.034453321
3106 Epoch: 3070 cost= 0.032889970
3107 Epoch: 3071 cost= 0.035596095
3108 Epoch: 3072 cost= 0.034637455
3109 Epoch: 3073 cost= 0.034127016
3110 Epoch: 3074 cost= 0.034101516
3111 Epoch: 3075 cost= 0.035119433
3112 Epoch: 3076 cost= 0.035052449
3113 Epoch: 3077 cost= 0.036779497
3114 Epoch: 3078 cost= 0.035640284
```

```
3115 Epoch: 3079 cost= 0.034036968
3116 Epoch: 3080 cost= 0.035291787
3117 Epoch: 3081 cost= 0.033029422
3118 Epoch: 3082 cost= 0.034523107
3119 Epoch: 3083 cost= 0.034101874
3120 Epoch: 3084 cost= 0.035157513
3121 Epoch: 3085 cost= 0.035056666
3122 Epoch: 3086 cost= 0.036437757
3123 Epoch: 3087 cost= 0.034302309
3124 Epoch: 3088 cost= 0.034976128
3125 Epoch: 3089 cost= 0.033759035
3126 Epoch: 3090 cost= 0.033874221
3127 Epoch: 3091 cost= 0.033752326
3128 Epoch: 3092 cost= 0.033989832
3129 Epoch: 3093 cost= 0.034996528
3130 Epoch: 3094 cost= 0.033513289
3131 Epoch: 3095 cost= 0.034078624
3132 Epoch: 3096 cost= 0.033922032
3133 Epoch: 3097 cost= 0.033927239
3134 Epoch: 3098 cost= 0.036156062
3135 Epoch: 3099 cost= 0.035358440
3136 Epoch: 3100 cost= 0.034391530
3137 Epoch: 3101 cost= 0.034949858
3138 Epoch: 3102 cost= 0.036016647
```

```
3139 Epoch: 3103 cost= 0.037006523
3140 Epoch: 3104 cost= 0.036337554
3141 Epoch: 3105 cost= 0.033822834
3142 Epoch: 3106 cost= 0.035802241
3143 Epoch: 3107 cost= 0.035892576
3144 Epoch: 3108 cost= 0.034265798
3145 Epoch: 3109 cost= 0.035022158
3146 Epoch: 3110 cost= 0.033862639
3147 Epoch: 3111 cost= 0.034837805
3148 Epoch: 3112 cost= 0.034239121
3149 Epoch: 3113 cost= 0.035684939
3150 Epoch: 3114 cost= 0.036710873
3151 Epoch: 3115 cost= 0.035884425
3152 Epoch: 3116 cost= 0.032532498
3153 Epoch: 3117 cost= 0.034898281
3154 Epoch: 3118 cost= 0.034956437
3155 Epoch: 3119 cost= 0.033335987
3156 Epoch: 3120 cost= 0.033759337
3157 Epoch: 3121 cost= 0.035335992
3158 Epoch: 3122 cost= 0.035275336
3159 Epoch: 3123 cost= 0.033799510
3160 Epoch: 3124 cost= 0.034506653
3161 Epoch: 3125 cost= 0.036506839
3162 Epoch: 3126 cost= 0.034304678
```



```
3163 Epoch: 3127 cost= 0.035273615
3164 Epoch: 3128 cost= 0.035585448
3165 Epoch: 3129 cost= 0.035496488
3166 Epoch: 3130 cost= 0.035592455
3167 Epoch: 3131 cost= 0.035538532
3168 Epoch: 3132 cost= 0.035095613
3169 Epoch: 3133 cost= 0.035094846
3170 Epoch: 3134 cost= 0.035668410
3171 Epoch: 3135 cost= 0.034324374
3172 Epoch: 3136 cost= 0.032999042
3173 Epoch: 3137 cost= 0.033398364
3174 Epoch: 3138 cost= 0.034884647
3175 Epoch: 3139 cost= 0.033888184
3176 Epoch: 3140 cost= 0.036214150
3177 Epoch: 3141 cost= 0.035000335
3178 Epoch: 3142 cost= 0.037441902
3179 Epoch: 3143 cost= 0.036387097
3180 Epoch: 3144 cost= 0.036777388
3181 Epoch: 3145 cost= 0.036930755
3182 Epoch: 3146 cost= 0.035963736
3183 Epoch: 3147 cost= 0.034504578
3184 Epoch: 3148 cost= 0.037328482
3185 Epoch: 3149 cost= 0.034168776
3186 Epoch: 3150 cost= 0.035675578
```



```
3187 Epoch: 3151 cost= 0.034881242
3188 Epoch: 3152 cost= 0.034964923
3189 Epoch: 3153 cost= 0.036938377
3190 Epoch: 3154 cost= 0.034164019
3191 Epoch: 3155 cost= 0.033808894
3192 Epoch: 3156 cost= 0.035700571
3193 Epoch: 3157 cost= 0.036058232
3194 Epoch: 3158 cost= 0.035904802
3195 Epoch: 3159 cost= 0.035364211
3196 Epoch: 3160 cost= 0.035681535
3197 Epoch: 3161 cost= 0.035059728
3198 Epoch: 3162 cost= 0.033984706
3199 Epoch: 3163 cost= 0.035977669
3200 Epoch: 3164 cost= 0.036911506
3201 Epoch: 3165 cost= 0.035396103
3202 Epoch: 3166 cost= 0.035294864
3203 Epoch: 3167 cost= 0.035448786
3204 Epoch: 3168 cost= 0.035723474
3205 Epoch: 3169 cost= 0.035555411
3206 Epoch: 3170 cost= 0.034800120
3207 Epoch: 3171 cost= 0.034763299
3208 Epoch: 3172 cost= 0.033360321
3209 Epoch: 3173 cost= 0.032822698
3210 Epoch: 3174 cost= 0.034023002
```

```
3211 Epoch: 3175 cost= 0.036316711
3212 Epoch: 3176 cost= 0.034777526
3213 Epoch: 3177 cost= 0.033307500
3214 Epoch: 3178 cost= 0.033110544
3215 Epoch: 3179 cost= 0.034364589
3216 Epoch: 3180 cost= 0.034981050
3217 Epoch: 3181 cost= 0.035709966
3218 Epoch: 3182 cost= 0.036670431
3219 Epoch: 3183 cost= 0.034399688
3220 Epoch: 3184 cost= 0.036298607
3221 Epoch: 3185 cost= 0.035110697
3222 Epoch: 3186 cost= 0.035665739
3223 Epoch: 3187 cost= 0.034780357
3224 Epoch: 3188 cost= 0.034821890
3225 Epoch: 3189 cost= 0.035717048
3226 Epoch: 3190 cost= 0.035532907
3227 Epoch: 3191 cost= 0.036558293
3228 Epoch: 3192 cost= 0.034844793
3229 Epoch: 3193 cost= 0.034186948
3230 Epoch: 3194 cost= 0.035680320
3231 Epoch: 3195 cost= 0.033752654
3232 Epoch: 3196 cost= 0.034819622
3233 Epoch: 3197 cost= 0.036052812
3234 Epoch: 3198 cost= 0.036327988
```

```
3235 Epoch: 3199 cost= 0.033647630
3236 Epoch: 3200 cost= 0.034895942
3237 Epoch: 3201 cost= 0.035629556
3238 Epoch: 3202 cost= 0.035059366
3239 Epoch: 3203 cost= 0.035814703
3240 Epoch: 3204 cost= 0.034455232
3241 Epoch: 3205 cost= 0.036297321
3242 Epoch: 3206 cost= 0.035348572
3243 Epoch: 3207 cost= 0.033027004
3244 Epoch: 3208 cost= 0.035267361
3245 Epoch: 3209 cost= 0.036245234
3246 Epoch: 3210 cost= 0.035071343
3247 Epoch: 3211 cost= 0.035516996
3248 Epoch: 3212 cost= 0.034423817
3249 Epoch: 3213 cost= 0.034858260
3250 Epoch: 3214 cost= 0.033946615
3251 Epoch: 3215 cost= 0.036043193
3252 Epoch: 3216 cost= 0.035125166
3253 Epoch: 3217 cost= 0.033993669
3254 Epoch: 3218 cost= 0.032283306
3255 Epoch: 3219 cost= 0.032227531
3256 Epoch: 3220 cost= 0.034230232
3257 Epoch: 3221 cost= 0.034012962
3258 Epoch: 3222 cost= 0.036598708
```

```
3259 Epoch: 3223 cost= 0.033584081
3260 Epoch: 3224 cost= 0.033973355
3261 Epoch: 3225 cost= 0.033724226
3262 Epoch: 3226 cost= 0.035249382
3263 Epoch: 3227 cost= 0.033663876
3264 Epoch: 3228 cost= 0.036404602
3265 Epoch: 3229 cost= 0.033859573
3266 Epoch: 3230 cost= 0.035387918
3267 Epoch: 3231 cost= 0.035419200
3268 Epoch: 3232 cost= 0.033952579
3269 Epoch: 3233 cost= 0.035644546
3270 Epoch: 3234 cost= 0.034748733
3271 Epoch: 3235 cost= 0.033091333
3272 Epoch: 3236 cost= 0.035151158
3273 Epoch: 3237 cost= 0.034037210
3274 Epoch: 3238 cost= 0.033195611
3275 Epoch: 3239 cost= 0.032721356
3276 Epoch: 3240 cost= 0.033564556
3277 Epoch: 3241 cost= 0.034742959
3278 Epoch: 3242 cost= 0.034779552
3279 Epoch: 3243 cost= 0.035342027
3280 Epoch: 3244 cost= 0.034629546
3281 Epoch: 3245 cost= 0.035732634
3282 Epoch: 3246 cost= 0.035512604
```

```
3283 Epoch: 3247 cost= 0.035105709
3284 Epoch: 3248 cost= 0.033767615
3285 Epoch: 3249 cost= 0.035837062
3286 Epoch: 3250 cost= 0.034181532
3287 Epoch: 3251 cost= 0.033890177
3288 Epoch: 3252 cost= 0.034463141
3289 Epoch: 3253 cost= 0.035173602
3290 Epoch: 3254 cost= 0.034925766
3291 Epoch: 3255 cost= 0.035742685
3292 Epoch: 3256 cost= 0.034874879
3293 Epoch: 3257 cost= 0.034392036
3294 Epoch: 3258 cost= 0.033725359
3295 Epoch: 3259 cost= 0.037258755
3296 Epoch: 3260 cost= 0.034843955
3297 Epoch: 3261 cost= 0.036104128
3298 Epoch: 3262 cost= 0.034951605
3299 Epoch: 3263 cost= 0.035567883
3300 Epoch: 3264 cost= 0.037183587
3301 Epoch: 3265 cost= 0.034616962
3302 Epoch: 3266 cost= 0.035674322
3303 Epoch: 3267 cost= 0.033801202
3304 Epoch: 3268 cost= 0.034567215
3305 Epoch: 3269 cost= 0.032894719
3306 Epoch: 3270 cost= 0.034405068
```

```
3307 Epoch: 3271 cost= 0.033957940
3308 Epoch: 3272 cost= 0.034850534
3309 Epoch: 3273 cost= 0.035502482
3310 Epoch: 3274 cost= 0.033525229
3311 Epoch: 3275 cost= 0.035885628
3312 Epoch: 3276 cost= 0.034402102
3313 Epoch: 3277 cost= 0.033883344
3314 Epoch: 3278 cost= 0.034899414
3315 Epoch: 3279 cost= 0.034162626
3316 Epoch: 3280 cost= 0.034480780
3317 Epoch: 3281 cost= 0.033932433
3318 Epoch: 3282 cost= 0.035542361
3319 Epoch: 3283 cost= 0.033910304
3320 Epoch: 3284 cost= 0.035061296
3321 Epoch: 3285 cost= 0.037049919
3322 Epoch: 3286 cost= 0.035292774
3323 Epoch: 3287 cost= 0.033094171
3324 Epoch: 3288 cost= 0.033960011
3325 Epoch: 3289 cost= 0.033617340
3326 Epoch: 3290 cost= 0.035946410
3327 Epoch: 3291 cost= 0.034725375
3328 Epoch: 3292 cost= 0.036775753
3329 Epoch: 3293 cost= 0.033847388
3330 Epoch: 3294 cost= 0.036279507
```

```
3331 Epoch: 3295 cost= 0.034433290
3332 Epoch: 3296 cost= 0.035486870
3333 Epoch: 3297 cost= 0.034639943
3334 Epoch: 3298 cost= 0.034054626
3335 Epoch: 3299 cost= 0.034513097
3336 Epoch: 3300 cost= 0.036200412
3337 Epoch: 3301 cost= 0.035269130
3338 Epoch: 3302 cost= 0.034050282
3339 Epoch: 3303 cost= 0.033468343
3340 Epoch: 3304 cost= 0.031624384
3341 Epoch: 3305 cost= 0.033592697
3342 Epoch: 3306 cost= 0.033212312
3343 Epoch: 3307 cost= 0.035185874
3344 Epoch: 3308 cost= 0.033973079
3345 Epoch: 3309 cost= 0.035265952
3346 Epoch: 3310 cost= 0.033265427
3347 Epoch: 3311 cost= 0.033503629
3348 Epoch: 3312 cost= 0.034163136
3349 Epoch: 3313 cost= 0.034832545
3350 Epoch: 3314 cost= 0.033790037
3351 Epoch: 3315 cost= 0.033844821
3352 Epoch: 3316 cost= 0.035758384
3353 Epoch: 3317 cost= 0.035117488
3354 Epoch: 3318 cost= 0.032382723
```



```
3355 Epoch: 3319 cost= 0.033326801
3356 Epoch: 3320 cost= 0.036155902
3357 Epoch: 3321 cost= 0.034638584
3358 Epoch: 3322 cost= 0.033768341
3359 Epoch: 3323 cost= 0.036143094
3360 Epoch: 3324 cost= 0.034475975
3361 Epoch: 3325 cost= 0.033009160
3362 Epoch: 3326 cost= 0.033830997
3363 Epoch: 3327 cost= 0.031687435
3364 Epoch: 3328 cost= 0.032962054
3365 Epoch: 3329 cost= 0.034039382
3366 Epoch: 3330 cost= 0.033596795
3367 Epoch: 3331 cost= 0.033343952
3368 Epoch: 3332 cost= 0.035219323
3369 Epoch: 3333 cost= 0.038101401
3370 Epoch: 3334 cost= 0.035643715
3371 Epoch: 3335 cost= 0.036373261
3372 Epoch: 3336 cost= 0.036753237
3373 Epoch: 3337 cost= 0.035547897
3374 Epoch: 3338 cost= 0.035214875
3375 Epoch: 3339 cost= 0.033269417
3376 Epoch: 3340 cost= 0.036697496
3377 Epoch: 3341 cost= 0.034576103
3378 Epoch: 3342 cost= 0.033034638
```



```
3379 Epoch: 3343 cost= 0.032758098
3380 Epoch: 3344 cost= 0.031953536
3381 Epoch: 3345 cost= 0.035842501
3382 Epoch: 3346 cost= 0.034442190
3383 Epoch: 3347 cost= 0.033996206
3384 Epoch: 3348 cost= 0.033654533
3385 Epoch: 3349 cost= 0.034674261
3386 Epoch: 3350 cost= 0.035226658
3387 Epoch: 3351 cost= 0.033086650
3388 Epoch: 3352 cost= 0.034043457
3389 Epoch: 3353 cost= 0.035103057
3390 Epoch: 3354 cost= 0.035166904
3391 Epoch: 3355 cost= 0.034042031
3392 Epoch: 3356 cost= 0.034158003
3393 Epoch: 3357 cost= 0.034447260
3394 Epoch: 3358 cost= 0.034019321
3395 Epoch: 3359 cost= 0.034316119
3396 Epoch: 3360 cost= 0.033125013
3397 Epoch: 3361 cost= 0.033338655
3398 Epoch: 3362 cost= 0.035845537
3399 Epoch: 3363 cost= 0.035082769
3400 Epoch: 3364 cost= 0.033874389
3401 Epoch: 3365 cost= 0.034928359
3402 Epoch: 3366 cost= 0.034736473
```

```
3403 Epoch: 3367 cost= 0.033150185
3404 Epoch: 3368 cost= 0.033771522
3405 Epoch: 3369 cost= 0.033180192
3406 Epoch: 3370 cost= 0.034215722
3407 Epoch: 3371 cost= 0.033880223
3408 Epoch: 3372 cost= 0.032931261
3409 Epoch: 3373 cost= 0.037891716
3410 Epoch: 3374 cost= 0.036744256
3411 Epoch: 3375 cost= 0.033984799
3412 Epoch: 3376 cost= 0.033966541
3413 Epoch: 3377 cost= 0.034102269
3414 Epoch: 3378 cost= 0.034489650
3415 Epoch: 3379 cost= 0.035462189
3416 Epoch: 3380 cost= 0.033567127
3417 Epoch: 3381 cost= 0.034412701
3418 Epoch: 3382 cost= 0.036861531
3419 Epoch: 3383 cost= 0.033315923
3420 Epoch: 3384 cost= 0.035644084
3421 Epoch: 3385 cost= 0.033746790
3422 Epoch: 3386 cost= 0.032719444
3423 Epoch: 3387 cost= 0.034250557
3424 Epoch: 3388 cost= 0.034854956
3425 Epoch: 3389 cost= 0.032384939
3426 Epoch: 3390 cost= 0.033096075
```

```
3427 Epoch: 3391 cost= 0.032951489
3428 Epoch: 3392 cost= 0.036130600
3429 Epoch: 3393 cost= 0.034625981
3430 Epoch: 3394 cost= 0.036470871
3431 Epoch: 3395 cost= 0.034243640
3432 Epoch: 3396 cost= 0.034073588
3433 Epoch: 3397 cost= 0.036486279
3434 Epoch: 3398 cost= 0.033821009
3435 Epoch: 3399 cost= 0.035331633
3436 Epoch: 3400 cost= 0.035552051
3437 Epoch: 3401 cost= 0.035227668
3438 Epoch: 3402 cost= 0.032649361
3439 Epoch: 3403 cost= 0.033990443
3440 Epoch: 3404 cost= 0.035322301
3441 Epoch: 3405 cost= 0.035491202
3442 Epoch: 3406 cost= 0.033627458
3443 Epoch: 3407 cost= 0.033779971
3444 Epoch: 3408 cost= 0.032946508
3445 Epoch: 3409 cost= 0.034278091
3446 Epoch: 3410 cost= 0.032292478
3447 Epoch: 3411 cost= 0.034429848
3448 Epoch: 3412 cost= 0.035038214
3449 Epoch: 3413 cost= 0.037073147
3450 Epoch: 3414 cost= 0.033787653
```

```
3451 Epoch: 3415 cost= 0.033193842
3452 Epoch: 3416 cost= 0.034703191
3453 Epoch: 3417 cost= 0.033445131
3454 Epoch: 3418 cost= 0.037607927
3455 Epoch: 3419 cost= 0.034753073
3456 Epoch: 3420 cost= 0.034315079
3457 Epoch: 3421 cost= 0.032477859
3458 Epoch: 3422 cost= 0.034494903
3459 Epoch: 3423 cost= 0.035818327
3460 Epoch: 3424 cost= 0.034757420
3461 Epoch: 3425 cost= 0.035030704
3462 Epoch: 3426 cost= 0.036683351
3463 Epoch: 3427 cost= 0.036514845
3464 Epoch: 3428 cost= 0.034591869
3465 Epoch: 3429 cost= 0.035845075
3466 Epoch: 3430 cost= 0.036553591
3467 Epoch: 3431 cost= 0.035082854
3468 Epoch: 3432 cost= 0.036197387
3469 Epoch: 3433 cost= 0.034788590
3470 Epoch: 3434 cost= 0.034493655
3471 Epoch: 3435 cost= 0.034646228
3472 Epoch: 3436 cost= 0.033243481
3473 Epoch: 3437 cost= 0.033127502
3474 Epoch: 3438 cost= 0.033141900
```

```
3475 Epoch: 3439 cost= 0.036267918
3476 Epoch: 3440 cost= 0.033641800
3477 Epoch: 3441 cost= 0.034494601
3478 Epoch: 3442 cost= 0.036507905
3479 Epoch: 3443 cost= 0.033976298
3480 Epoch: 3444 cost= 0.033724800
3481 Epoch: 3445 cost= 0.034567542
3482 Epoch: 3446 cost= 0.033160299
3483 Epoch: 3447 cost= 0.033503495
3484 Epoch: 3448 cost= 0.035583545
3485 Epoch: 3449 cost= 0.035723787
3486 Epoch: 3450 cost= 0.033793520
3487 Epoch: 3451 cost= 0.036199145
3488 Epoch: 3452 cost= 0.034359757
3489 Epoch: 3453 cost= 0.037462074
3490 Epoch: 3454 cost= 0.036136504
3491 Epoch: 3455 cost= 0.036619574
3492 Epoch: 3456 cost= 0.033903487
3493 Epoch: 3457 cost= 0.033900410
3494 Epoch: 3458 cost= 0.034676768
3495 Epoch: 3459 cost= 0.035117485
3496 Epoch: 3460 cost= 0.035319671
3497 Epoch: 3461 cost= 0.035794493
3498 Epoch: 3462 cost= 0.035396554
```

```
3499 Epoch: 3463 cost= 0.034492061
3500 Epoch: 3464 cost= 0.034617875
3501 Epoch: 3465 cost= 0.036098696
3502 Epoch: 3466 cost= 0.036510292
3503 Epoch: 3467 cost= 0.033939790
3504 Epoch: 3468 cost= 0.033985619
3505 Epoch: 3469 cost= 0.035328351
3506 Epoch: 3470 cost= 0.035517529
3507 Epoch: 3471 cost= 0.034472022
3508 Epoch: 3472 cost= 0.034995999
3509 Epoch: 3473 cost= 0.037820928
3510 Epoch: 3474 cost= 0.035896737
3511 Epoch: 3475 cost= 0.034577809
3512 Epoch: 3476 cost= 0.036985718
3513 Epoch: 3477 cost= 0.035144273
3514 Epoch: 3478 cost= 0.035517633
3515 Epoch: 3479 cost= 0.036378421
3516 Epoch: 3480 cost= 0.037405647
3517 Epoch: 3481 cost= 0.037577841
3518 Epoch: 3482 cost= 0.037755810
3519 Epoch: 3483 cost= 0.037079252
3520 Epoch: 3484 cost= 0.034536745
3521 Epoch: 3485 cost= 0.034806456
3522 Epoch: 3486 cost= 0.036636628
```

```
3523 Epoch: 3487 cost= 0.036236141
3524 Epoch: 3488 cost= 0.036704428
3525 Epoch: 3489 cost= 0.035223853
3526 Epoch: 3490 cost= 0.035297997
3527 Epoch: 3491 cost= 0.033412777
3528 Epoch: 3492 cost= 0.034358867
3529 Epoch: 3493 cost= 0.034662176
3530 Epoch: 3494 cost= 0.034790814
3531 Epoch: 3495 cost= 0.036435854
3532 Epoch: 3496 cost= 0.035986826
3533 Epoch: 3497 cost= 0.035733424
3534 Epoch: 3498 cost= 0.034000080
3535 Epoch: 3499 cost= 0.036191970
3536 Epoch: 3500 cost= 0.034868881
3537 Epoch: 3501 cost= 0.036083862
3538 Epoch: 3502 cost= 0.036713414
3539 Epoch: 3503 cost= 0.036015097
3540 Epoch: 3504 cost= 0.038602818
3541 Epoch: 3505 cost= 0.035991162
3542 Epoch: 3506 cost= 0.037680879
3543 Epoch: 3507 cost= 0.036602326
3544 Epoch: 3508 cost= 0.036758959
3545 Epoch: 3509 cost= 0.034753762
3546 Epoch: 3510 cost= 0.034006536
```



```
3547 Epoch: 3511 cost= 0.034478717
3548 Epoch: 3512 cost= 0.034564577
3549 Epoch: 3513 cost= 0.032899924
3550 Epoch: 3514 cost= 0.033980977
3551 Epoch: 3515 cost= 0.032444019
3552 Epoch: 3516 cost= 0.034798071
3553 Epoch: 3517 cost= 0.033879980
3554 Epoch: 3518 cost= 0.035515115
3555 Epoch: 3519 cost= 0.035634708
3556 Epoch: 3520 cost= 0.034138810
3557 Epoch: 3521 cost= 0.036153954
3558 Epoch: 3522 cost= 0.035233185
3559 Epoch: 3523 cost= 0.035745468
3560 Epoch: 3524 cost= 0.034309622
3561 Epoch: 3525 cost= 0.035902902
3562 Epoch: 3526 cost= 0.032443747
3563 Epoch: 3527 cost= 0.034974255
3564 Epoch: 3528 cost= 0.033038605
3565 Epoch: 3529 cost= 0.035747189
3566 Epoch: 3530 cost= 0.034919426
3567 Epoch: 3531 cost= 0.033629566
3568 Epoch: 3532 cost= 0.035058405
3569 Epoch: 3533 cost= 0.033287186
3570 Epoch: 3534 cost= 0.033868339
```



```
3571 Epoch: 3535 cost= 0.035934966
3572 Epoch: 3536 cost= 0.035351943
3573 Epoch: 3537 cost= 0.034957699
3574 Epoch: 3538 cost= 0.034107082
3575 Epoch: 3539 cost= 0.035364274
3576 Epoch: 3540 cost= 0.035804145
3577 Epoch: 3541 cost= 0.033584565
3578 Epoch: 3542 cost= 0.034247112
3579 Epoch: 3543 cost= 0.035019871
3580 Epoch: 3544 cost= 0.036020711
3581 Epoch: 3545 cost= 0.036410660
3582 Epoch: 3546 cost= 0.035650384
3583 Epoch: 3547 cost= 0.035802923
3584 Epoch: 3548 cost= 0.033619620
3585 Epoch: 3549 cost= 0.032896418
3586 Epoch: 3550 cost= 0.033439450
3587 Epoch: 3551 cost= 0.034602448
3588 Epoch: 3552 cost= 0.035681359
3589 Epoch: 3553 cost= 0.036534712
3590 Epoch: 3554 cost= 0.033290651
3591 Epoch: 3555 cost= 0.034211691
3592 Epoch: 3556 cost= 0.032727912
3593 Epoch: 3557 cost= 0.037244059
3594 Epoch: 3558 cost= 0.036384091
```

```
3595 Epoch: 3559 cost= 0.037006423
3596 Epoch: 3560 cost= 0.035627935
3597 Epoch: 3561 cost= 0.035208542
3598 Epoch: 3562 cost= 0.035033509
3599 Epoch: 3563 cost= 0.035351422
3600 Epoch: 3564 cost= 0.034350216
3601 Epoch: 3565 cost= 0.035764601
3602 Epoch: 3566 cost= 0.034887299
3603 Epoch: 3567 cost= 0.036229677
3604 Epoch: 3568 cost= 0.037039232
3605 Epoch: 3569 cost= 0.034075812
3606 Epoch: 3570 cost= 0.036139041
3607 Epoch: 3571 cost= 0.035030350
3608 Epoch: 3572 cost= 0.035105892
3609 Epoch: 3573 cost= 0.035562944
3610 Epoch: 3574 cost= 0.035389774
3611 Epoch: 3575 cost= 0.034132022
3612 Epoch: 3576 cost= 0.036390595
3613 Epoch: 3577 cost= 0.035248302
3614 Epoch: 3578 cost= 0.034608509
3615 Epoch: 3579 cost= 0.035761833
3616 Epoch: 3580 cost= 0.034933053
3617 Epoch: 3581 cost= 0.035828203
3618 Epoch: 3582 cost= 0.034813091
```

```
3619 Epoch: 3583 cost= 0.035862904
3620 Epoch: 3584 cost= 0.035427902
3621 Epoch: 3585 cost= 0.037088294
3622 Epoch: 3586 cost= 0.036475353
3623 Epoch: 3587 cost= 0.037222113
3624 Epoch: 3588 cost= 0.036910277
3625 Epoch: 3589 cost= 0.036629271
3626 Epoch: 3590 cost= 0.035369281
3627 Epoch: 3591 cost= 0.035194136
3628 Epoch: 3592 cost= 0.035185222
3629 Epoch: 3593 cost= 0.037534483
3630 Epoch: 3594 cost= 0.034332909
3631 Epoch: 3595 cost= 0.035981938
3632 Epoch: 3596 cost= 0.035759754
3633 Epoch: 3597 cost= 0.035881117
3634 Epoch: 3598 cost= 0.036493339
3635 Epoch: 3599 cost= 0.035938349
3636 Epoch: 3600 cost= 0.036221396
3637 Epoch: 3601 cost= 0.034908030
3638 Epoch: 3602 cost= 0.035315253
3639 Epoch: 3603 cost= 0.036519498
3640 Epoch: 3604 cost= 0.034965880
3641 Epoch: 3605 cost= 0.034693953
3642 Epoch: 3606 cost= 0.037196700
```

```
3643 Epoch: 3607 cost= 0.035690751
3644 Epoch: 3608 cost= 0.034415629
3645 Epoch: 3609 cost= 0.037687942
3646 Epoch: 3610 cost= 0.037550613
3647 Epoch: 3611 cost= 0.036535602
3648 Epoch: 3612 cost= 0.035959456
3649 Epoch: 3613 cost= 0.035710044
3650 Epoch: 3614 cost= 0.034290064
3651 Epoch: 3615 cost= 0.035873543
3652 Epoch: 3616 cost= 0.036419719
3653 Epoch: 3617 cost= 0.035732057
3654 Epoch: 3618 cost= 0.035113018
3655 Epoch: 3619 cost= 0.037402678
3656 Epoch: 3620 cost= 0.036851972
3657 Epoch: 3621 cost= 0.037701797
3658 Epoch: 3622 cost= 0.037987858
3659 Epoch: 3623 cost= 0.034548614
3660 Epoch: 3624 cost= 0.034417085
3661 Epoch: 3625 cost= 0.035848007
3662 Epoch: 3626 cost= 0.037589323
3663 Epoch: 3627 cost= 0.034284186
3664 Epoch: 3628 cost= 0.037374660
3665 Epoch: 3629 cost= 0.035991415
3666 Epoch: 3630 cost= 0.035769563
```

```
3667 Epoch: 3631 cost= 0.036988638
3668 Epoch: 3632 cost= 0.034088466
3669 Epoch: 3633 cost= 0.035422083
3670 Epoch: 3634 cost= 0.036001481
3671 Epoch: 3635 cost= 0.037604712
3672 Epoch: 3636 cost= 0.034251306
3673 Epoch: 3637 cost= 0.036139853
3674 Epoch: 3638 cost= 0.034947950
3675 Epoch: 3639 cost= 0.034199808
3676 Epoch: 3640 cost= 0.034087200
3677 Epoch: 3641 cost= 0.035748336
3678 Epoch: 3642 cost= 0.037222095
3679 Epoch: 3643 cost= 0.034390185
3680 Epoch: 3644 cost= 0.035868470
3681 Epoch: 3645 cost= 0.035655361
3682 Epoch: 3646 cost= 0.035592116
3683 Epoch: 3647 cost= 0.035183489
3684 Epoch: 3648 cost= 0.035105184
3685 Epoch: 3649 cost= 0.033772919
3686 Epoch: 3650 cost= 0.036078744
3687 Epoch: 3651 cost= 0.034598663
3688 Epoch: 3652 cost= 0.034843210
3689 Epoch: 3653 cost= 0.032915611
3690 Epoch: 3654 cost= 0.035541344
```

```
3691 Epoch: 3655 cost= 0.036124911
3692 Epoch: 3656 cost= 0.034095399
3693 Epoch: 3657 cost= 0.035374340
3694 Epoch: 3658 cost= 0.034920361
3695 Epoch: 3659 cost= 0.034503330
3696 Epoch: 3660 cost= 0.034360409
3697 Epoch: 3661 cost= 0.035458777
3698 Epoch: 3662 cost= 0.035738401
3699 Epoch: 3663 cost= 0.034493528
3700 Epoch: 3664 cost= 0.036410950
3701 Epoch: 3665 cost= 0.034285408
3702 Epoch: 3666 cost= 0.035907250
3703 Epoch: 3667 cost= 0.033762120
3704 Epoch: 3668 cost= 0.034238923
3705 Epoch: 3669 cost= 0.035370838
3706 Epoch: 3670 cost= 0.035584707
3707 Epoch: 3671 cost= 0.034504242
3708 Epoch: 3672 cost= 0.034874532
3709 Epoch: 3673 cost= 0.035445470
3710 Epoch: 3674 cost= 0.034501091
3711 Epoch: 3675 cost= 0.034966376
3712 Epoch: 3676 cost= 0.035346847
3713 Epoch: 3677 cost= 0.034438640
3714 Epoch: 3678 cost= 0.035033043
```

```
3715 Epoch: 3679 cost= 0.036105201
3716 Epoch: 3680 cost= 0.034138002
3717 Epoch: 3681 cost= 0.036197867
3718 Epoch: 3682 cost= 0.035741296
3719 Epoch: 3683 cost= 0.034714367
3720 Epoch: 3684 cost= 0.034209613
3721 Epoch: 3685 cost= 0.034061227
3722 Epoch: 3686 cost= 0.036902416
3723 Epoch: 3687 cost= 0.035936043
3724 Epoch: 3688 cost= 0.033150792
3725 Epoch: 3689 cost= 0.037311409
3726 Epoch: 3690 cost= 0.035509247
3727 Epoch: 3691 cost= 0.035684988
3728 Epoch: 3692 cost= 0.037291203
3729 Epoch: 3693 cost= 0.032974094
3730 Epoch: 3694 cost= 0.035259914
3731 Epoch: 3695 cost= 0.037085243
3732 Epoch: 3696 cost= 0.033995461
3733 Epoch: 3697 cost= 0.036096685
3734 Epoch: 3698 cost= 0.036137730
3735 Epoch: 3699 cost= 0.036514521
3736 Epoch: 3700 cost= 0.035538215
3737 Epoch: 3701 cost= 0.036123987
3738 Epoch: 3702 cost= 0.035213690
```



```
3739 Epoch: 3703 cost= 0.036428105
3740 Epoch: 3704 cost= 0.038312223
3741 Epoch: 3705 cost= 0.037208475
3742 Epoch: 3706 cost= 0.036163904
3743 Epoch: 3707 cost= 0.034520261
3744 Epoch: 3708 cost= 0.036455568
3745 Epoch: 3709 cost= 0.034722555
3746 Epoch: 3710 cost= 0.035238929
3747 Epoch: 3711 cost= 0.033759993
3748 Epoch: 3712 cost= 0.038141783
3749 Epoch: 3713 cost= 0.035901297
3750 Epoch: 3714 cost= 0.034252159
3751 Epoch: 3715 cost= 0.034365650
3752 Epoch: 3716 cost= 0.037502412
3753 Epoch: 3717 cost= 0.036892354
3754 Epoch: 3718 cost= 0.033946782
3755 Epoch: 3719 cost= 0.034485377
3756 Epoch: 3720 cost= 0.036504537
3757 Epoch: 3721 cost= 0.035121538
3758 Epoch: 3722 cost= 0.035010152
3759 Epoch: 3723 cost= 0.035209786
3760 Epoch: 3724 cost= 0.034201220
3761 Epoch: 3725 cost= 0.034368951
3762 Epoch: 3726 cost= 0.035204343
```



```
3763 Epoch: 3727 cost= 0.036520749
3764 Epoch: 3728 cost= 0.036488675
3765 Epoch: 3729 cost= 0.035815436
3766 Epoch: 3730 cost= 0.038108934
3767 Epoch: 3731 cost= 0.036877383
3768 Epoch: 3732 cost= 0.034384422
3769 Epoch: 3733 cost= 0.034451626
3770 Epoch: 3734 cost= 0.032952655
3771 Epoch: 3735 cost= 0.037398327
3772 Epoch: 3736 cost= 0.035647567
3773 Epoch: 3737 cost= 0.035815179
3774 Epoch: 3738 cost= 0.036730692
3775 Epoch: 3739 cost= 0.036193233
3776 Epoch: 3740 cost= 0.033757050
3777 Epoch: 3741 cost= 0.035410017
3778 Epoch: 3742 cost= 0.034037322
3779 Epoch: 3743 cost= 0.034286775
3780 Epoch: 3744 cost= 0.036168229
3781 Epoch: 3745 cost= 0.035603747
3782 Epoch: 3746 cost= 0.036069956
3783 Epoch: 3747 cost= 0.034382775
3784 Epoch: 3748 cost= 0.034687206
3785 Epoch: 3749 cost= 0.035643201
3786 Epoch: 3750 cost= 0.037103087
```

```
3787 Epoch: 3751 cost= 0.035348605
3788 Epoch: 3752 cost= 0.033525243
3789 Epoch: 3753 cost= 0.035445925
3790 Epoch: 3754 cost= 0.035752300
3791 Epoch: 3755 cost= 0.034067541
3792 Epoch: 3756 cost= 0.032711364
3793 Epoch: 3757 cost= 0.034735356
3794 Epoch: 3758 cost= 0.032305889
3795 Epoch: 3759 cost= 0.035242274
3796 Epoch: 3760 cost= 0.035205767
3797 Epoch: 3761 cost= 0.034771282
3798 Epoch: 3762 cost= 0.035613127
3799 Epoch: 3763 cost= 0.032362886
3800 Epoch: 3764 cost= 0.033643693
3801 Epoch: 3765 cost= 0.035457246
3802 Epoch: 3766 cost= 0.036353242
3803 Epoch: 3767 cost= 0.034408763
3804 Epoch: 3768 cost= 0.034931190
3805 Epoch: 3769 cost= 0.035457265
3806 Epoch: 3770 cost= 0.035090759
3807 Epoch: 3771 cost= 0.036712680
3808 Epoch: 3772 cost= 0.037527241
3809 Epoch: 3773 cost= 0.035394952
3810 Epoch: 3774 cost= 0.036314778
```

```
3811 Epoch: 3775 cost= 0.036729001
3812 Epoch: 3776 cost= 0.034923226
3813 Epoch: 3777 cost= 0.034760263
3814 Epoch: 3778 cost= 0.034602612
3815 Epoch: 3779 cost= 0.035537414
3816 Epoch: 3780 cost= 0.034275353
3817 Epoch: 3781 cost= 0.034774952
3818 Epoch: 3782 cost= 0.035024550
3819 Epoch: 3783 cost= 0.035336968
3820 Epoch: 3784 cost= 0.036275674
3821 Epoch: 3785 cost= 0.034667265
3822 Epoch: 3786 cost= 0.034582030
3823 Epoch: 3787 cost= 0.034857959
3824 Epoch: 3788 cost= 0.034915350
3825 Epoch: 3789 cost= 0.036146462
3826 Epoch: 3790 cost= 0.035088059
3827 Epoch: 3791 cost= 0.036007807
3828 Epoch: 3792 cost= 0.033032764
3829 Epoch: 3793 cost= 0.034009118
3830 Epoch: 3794 cost= 0.036492079
3831 Epoch: 3795 cost= 0.036637545
3832 Epoch: 3796 cost= 0.036674783
3833 Epoch: 3797 cost= 0.034779035
3834 Epoch: 3798 cost= 0.034572948
```

```
3835 Epoch: 3799 cost= 0.036609974
3836 Epoch: 3800 cost= 0.035403892
3837 Epoch: 3801 cost= 0.036643151
3838 Epoch: 3802 cost= 0.033565495
3839 Epoch: 3803 cost= 0.034698427
3840 Epoch: 3804 cost= 0.034943208
3841 Epoch: 3805 cost= 0.034320645
3842 Epoch: 3806 cost= 0.034354985
3843 Epoch: 3807 cost= 0.034842238
3844 Epoch: 3808 cost= 0.034658466
3845 Epoch: 3809 cost= 0.033887636
3846 Epoch: 3810 cost= 0.037824817
3847 Epoch: 3811 cost= 0.034164365
3848 Epoch: 3812 cost= 0.033347171
3849 Epoch: 3813 cost= 0.036606506
3850 Epoch: 3814 cost= 0.034394976
3851 Epoch: 3815 cost= 0.033958543
3852 Epoch: 3816 cost= 0.033896822
3853 Epoch: 3817 cost= 0.034631178
3854 Epoch: 3818 cost= 0.035230838
3855 Epoch: 3819 cost= 0.032737456
3856 Epoch: 3820 cost= 0.036039893
3857 Epoch: 3821 cost= 0.033382896
3858 Epoch: 3822 cost= 0.033495151
```

```
3859 Epoch: 3823 cost= 0.033857748
3860 Epoch: 3824 cost= 0.036110073
3861 Epoch: 3825 cost= 0.036590289
3862 Epoch: 3826 cost= 0.033179045
3863 Epoch: 3827 cost= 0.034277063
3864 Epoch: 3828 cost= 0.034279574
3865 Epoch: 3829 cost= 0.036144443
3866 Epoch: 3830 cost= 0.033165626
3867 Epoch: 3831 cost= 0.036240619
3868 Epoch: 3832 cost= 0.036171976
3869 Epoch: 3833 cost= 0.034905571
3870 Epoch: 3834 cost= 0.034978624
3871 Epoch: 3835 cost= 0.035071276
3872 Epoch: 3836 cost= 0.034075774
3873 Epoch: 3837 cost= 0.035432357
3874 Epoch: 3838 cost= 0.034604996
3875 Epoch: 3839 cost= 0.033405129
3876 Epoch: 3840 cost= 0.035907622
3877 Epoch: 3841 cost= 0.036897231
3878 Epoch: 3842 cost= 0.037000176
3879 Epoch: 3843 cost= 0.036238104
3880 Epoch: 3844 cost= 0.032857232
3881 Epoch: 3845 cost= 0.036463324
3882 Epoch: 3846 cost= 0.035989478
```

```
3883 Epoch: 3847 cost= 0.035076097
3884 Epoch: 3848 cost= 0.035985135
3885 Epoch: 3849 cost= 0.034902584
3886 Epoch: 3850 cost= 0.034199070
3887 Epoch: 3851 cost= 0.036676023
3888 Epoch: 3852 cost= 0.035867609
3889 Epoch: 3853 cost= 0.036447879
3890 Epoch: 3854 cost= 0.034582406
3891 Epoch: 3855 cost= 0.034609050
3892 Epoch: 3856 cost= 0.033387873
3893 Epoch: 3857 cost= 0.033427924
3894 Epoch: 3858 cost= 0.036538519
3895 Epoch: 3859 cost= 0.034331441
3896 Epoch: 3860 cost= 0.036743440
3897 Epoch: 3861 cost= 0.036102422
3898 Epoch: 3862 cost= 0.035515312
3899 Epoch: 3863 cost= 0.035453059
3900 Epoch: 3864 cost= 0.036425736
3901 Epoch: 3865 cost= 0.034772702
3902 Epoch: 3866 cost= 0.034840733
3903 Epoch: 3867 cost= 0.037159041
3904 Epoch: 3868 cost= 0.037091546
3905 Epoch: 3869 cost= 0.035899907
3906 Epoch: 3870 cost= 0.035661314
```

```
3907 Epoch: 3871 cost= 0.036938034
3908 Epoch: 3872 cost= 0.035618603
3909 Epoch: 3873 cost= 0.035339557
3910 Epoch: 3874 cost= 0.035189502
3911 Epoch: 3875 cost= 0.038539652
3912 Epoch: 3876 cost= 0.037943557
3913 Epoch: 3877 cost= 0.036597773
3914 Epoch: 3878 cost= 0.036781617
3915 Epoch: 3879 cost= 0.036085922
3916 Epoch: 3880 cost= 0.036978271
3917 Epoch: 3881 cost= 0.035566151
3918 Epoch: 3882 cost= 0.036687236
3919 Epoch: 3883 cost= 0.036053594
3920 Epoch: 3884 cost= 0.036155805
3921 Epoch: 3885 cost= 0.036351115
3922 Epoch: 3886 cost= 0.037960652
3923 Epoch: 3887 cost= 0.035808798
3924 Epoch: 3888 cost= 0.035282247
3925 Epoch: 3889 cost= 0.035532206
3926 Epoch: 3890 cost= 0.034271244
3927 Epoch: 3891 cost= 0.036882069
3928 Epoch: 3892 cost= 0.036017228
3929 Epoch: 3893 cost= 0.035056498
3930 Epoch: 3894 cost= 0.037589397
```



```
3931 Epoch: 3895 cost= 0.037809867
3932 Epoch: 3896 cost= 0.037161622
3933 Epoch: 3897 cost= 0.036296844
3934 Epoch: 3898 cost= 0.037600737
3935 Epoch: 3899 cost= 0.037481468
3936 Epoch: 3900 cost= 0.035373684
3937 Epoch: 3901 cost= 0.035545267
3938 Epoch: 3902 cost= 0.036737975
3939 Epoch: 3903 cost= 0.037386719
3940 Epoch: 3904 cost= 0.036768317
3941 Epoch: 3905 cost= 0.036583897
3942 Epoch: 3906 cost= 0.037286848
3943 Epoch: 3907 cost= 0.035767894
3944 Epoch: 3908 cost= 0.034267638
3945 Epoch: 3909 cost= 0.037978601
3946 Epoch: 3910 cost= 0.034384154
3947 Epoch: 3911 cost= 0.036861122
3948 Epoch: 3912 cost= 0.035471443
3949 Epoch: 3913 cost= 0.036179181
3950 Epoch: 3914 cost= 0.036734499
3951 Epoch: 3915 cost= 0.035876587
3952 Epoch: 3916 cost= 0.036725171
3953 Epoch: 3917 cost= 0.035020754
3954 Epoch: 3918 cost= 0.036967561
```



```
3955 Epoch: 3919 cost= 0.037435547
3956 Epoch: 3920 cost= 0.037274871
3957 Epoch: 3921 cost= 0.035650074
3958 Epoch: 3922 cost= 0.036219094
3959 Epoch: 3923 cost= 0.035265859
3960 Epoch: 3924 cost= 0.036407731
3961 Epoch: 3925 cost= 0.035845187
3962 Epoch: 3926 cost= 0.034455191
3963 Epoch: 3927 cost= 0.036730964
3964 Epoch: 3928 cost= 0.034407128
3965 Epoch: 3929 cost= 0.036494564
3966 Epoch: 3930 cost= 0.035363678
3967 Epoch: 3931 cost= 0.035393380
3968 Epoch: 3932 cost= 0.036052145
3969 Epoch: 3933 cost= 0.036167227
3970 Epoch: 3934 cost= 0.035938550
3971 Epoch: 3935 cost= 0.034448259
3972 Epoch: 3936 cost= 0.038159672
3973 Epoch: 3937 cost= 0.036042262
3974 Epoch: 3938 cost= 0.033135366
3975 Epoch: 3939 cost= 0.033019982
3976 Epoch: 3940 cost= 0.034573145
3977 Epoch: 3941 cost= 0.033991724
3978 Epoch: 3942 cost= 0.034145564
```

```
3979 Epoch: 3943 cost= 0.035397701
3980 Epoch: 3944 cost= 0.035726406
3981 Epoch: 3945 cost= 0.034870215
3982 Epoch: 3946 cost= 0.032803331
3983 Epoch: 3947 cost= 0.034772698
3984 Epoch: 3948 cost= 0.034424800
3985 Epoch: 3949 cost= 0.037023976
3986 Epoch: 3950 cost= 0.035322163
3987 Epoch: 3951 cost= 0.036662247
3988 Epoch: 3952 cost= 0.035356972
3989 Epoch: 3953 cost= 0.035475202
3990 Epoch: 3954 cost= 0.034624368
3991 Epoch: 3955 cost= 0.036825504
3992 Epoch: 3956 cost= 0.035232343
3993 Epoch: 3957 cost= 0.035026725
3994 Epoch: 3958 cost= 0.034848593
3995 Epoch: 3959 cost= 0.032961223
3996 Epoch: 3960 cost= 0.035271544
3997 Epoch: 3961 cost= 0.036628995
3998 Epoch: 3962 cost= 0.035446744
3999 Epoch: 3963 cost= 0.034485489
4000 Epoch: 3964 cost= 0.037019610
4001 Epoch: 3965 cost= 0.036727902
4002 Epoch: 3966 cost= 0.034400225
```

```
4003 Epoch: 3967 cost= 0.035403442
4004 Epoch: 3968 cost= 0.035619169
4005 Epoch: 3969 cost= 0.035386287
4006 Epoch: 3970 cost= 0.037212066
4007 Epoch: 3971 cost= 0.035319000
4008 Epoch: 3972 cost= 0.036488395
4009 Epoch: 3973 cost= 0.036455348
4010 Epoch: 3974 cost= 0.037513729
4011 Epoch: 3975 cost= 0.035518296
4012 Epoch: 3976 cost= 0.034334645
4013 Epoch: 3977 cost= 0.036402896
4014 Epoch: 3978 cost= 0.035863988
4015 Epoch: 3979 cost= 0.037158046
4016 Epoch: 3980 cost= 0.036272123
4017 Epoch: 3981 cost= 0.034639053
4018 Epoch: 3982 cost= 0.038032997
4019 Epoch: 3983 cost= 0.034032904
4020 Epoch: 3984 cost= 0.034637373
4021 Epoch: 3985 cost= 0.036689658
4022 Epoch: 3986 cost= 0.035252366
4023 Epoch: 3987 cost= 0.034738567
4024 Epoch: 3988 cost= 0.034973696
4025 Epoch: 3989 cost= 0.036839895
4026 Epoch: 3990 cost= 0.037729874
```

```
4027 Epoch: 3991 cost= 0.033017319
4028 Epoch: 3992 cost= 0.035852600
4029 Epoch: 3993 cost= 0.034840714
4030 Epoch: 3994 cost= 0.035447352
4031 Epoch: 3995 cost= 0.035061572
4032 Epoch: 3996 cost= 0.034936011
4033 Epoch: 3997 cost= 0.034856878
4034 Epoch: 3998 cost= 0.034748953
4035 Epoch: 3999 cost= 0.034590870
4036 Epoch: 4000 cost= 0.034610093
4037 Epoch: 4001 cost= 0.033160519
4038 Epoch: 4002 cost= 0.036657926
4039 Epoch: 4003 cost= 0.035762481
4040 Epoch: 4004 cost= 0.034388132
4041 Epoch: 4005 cost= 0.034683548
4042 Epoch: 4006 cost= 0.036604837
4043 Epoch: 4007 cost= 0.034729976
4044 Epoch: 4008 cost= 0.035881676
4045 Epoch: 4009 cost= 0.034649398
4046 Epoch: 4010 cost= 0.035151895
4047 Epoch: 4011 cost= 0.037012376
4048 Epoch: 4012 cost= 0.034015533
4049 Epoch: 4013 cost= 0.036233827
4050 Epoch: 4014 cost= 0.037714705
```

```
4051 Epoch: 4015 cost= 0.034852043
4052 Epoch: 4016 cost= 0.034609657
4053 Epoch: 4017 cost= 0.034476623
4054 Epoch: 4018 cost= 0.034928866
4055 Epoch: 4019 cost= 0.036307283
4056 Epoch: 4020 cost= 0.035401445
4057 Epoch: 4021 cost= 0.035935652
4058 Epoch: 4022 cost= 0.035277590
4059 Epoch: 4023 cost= 0.036505178
4060 Epoch: 4024 cost= 0.033672363
4061 Epoch: 4025 cost= 0.034406092
4062 Epoch: 4026 cost= 0.036596153
4063 Epoch: 4027 cost= 0.034997042
4064 Epoch: 4028 cost= 0.034873575
4065 Epoch: 4029 cost= 0.034400959
4066 Epoch: 4030 cost= 0.035510778
4067 Epoch: 4031 cost= 0.034253661
4068 Epoch: 4032 cost= 0.036234561
4069 Epoch: 4033 cost= 0.035217021
4070 Epoch: 4034 cost= 0.034376163
4071 Epoch: 4035 cost= 0.036993168
4072 Epoch: 4036 cost= 0.037016913
4073 Epoch: 4037 cost= 0.036807537
4074 Epoch: 4038 cost= 0.035463806
```

```
4075 Epoch: 4039 cost= 0.034416564
4076 Epoch: 4040 cost= 0.035639063
4077 Epoch: 4041 cost= 0.035402142
4078 Epoch: 4042 cost= 0.035900403
4079 Epoch: 4043 cost= 0.032658227
4080 Epoch: 4044 cost= 0.033402108
4081 Epoch: 4045 cost= 0.034492925
4082 Epoch: 4046 cost= 0.033601336
4083 Epoch: 4047 cost= 0.034288865
4084 Epoch: 4048 cost= 0.033685975
4085 Epoch: 4049 cost= 0.035078101
4086 Epoch: 4050 cost= 0.034731053
4087 Epoch: 4051 cost= 0.036544919
4088 Epoch: 4052 cost= 0.034931835
4089 Epoch: 4053 cost= 0.035053790
4090 Epoch: 4054 cost= 0.037884526
4091 Epoch: 4055 cost= 0.034983605
4092 Epoch: 4056 cost= 0.034226496
4093 Epoch: 4057 cost= 0.035775937
4094 Epoch: 4058 cost= 0.034883946
4095 Epoch: 4059 cost= 0.035036281
4096 Epoch: 4060 cost= 0.036556151
4097 Epoch: 4061 cost= 0.035995703
4098 Epoch: 4062 cost= 0.036636911
```

```
4099 Epoch: 4063 cost= 0.035679024
4100 Epoch: 4064 cost= 0.036958236
4101 Epoch: 4065 cost= 0.035801649
4102 Epoch: 4066 cost= 0.035965718
4103 Epoch: 4067 cost= 0.035185769
4104 Epoch: 4068 cost= 0.036911905
4105 Epoch: 4069 cost= 0.036210455
4106 Epoch: 4070 cost= 0.036195692
4107 Epoch: 4071 cost= 0.034588542
4108 Epoch: 4072 cost= 0.036555130
4109 Epoch: 4073 cost= 0.037116803
4110 Epoch: 4074 cost= 0.035347831
4111 Epoch: 4075 cost= 0.036225729
4112 Epoch: 4076 cost= 0.037066538
4113 Epoch: 4077 cost= 0.036742821
4114 Epoch: 4078 cost= 0.036173508
4115 Epoch: 4079 cost= 0.036354348
4116 Epoch: 4080 cost= 0.037132889
4117 Epoch: 4081 cost= 0.037670508
4118 Epoch: 4082 cost= 0.035109188
4119 Epoch: 4083 cost= 0.034272335
4120 Epoch: 4084 cost= 0.036575705
4121 Epoch: 4085 cost= 0.036617666
4122 Epoch: 4086 cost= 0.036184691
```



```
4123 Epoch: 4087 cost= 0.036229193
4124 Epoch: 4088 cost= 0.037072908
4125 Epoch: 4089 cost= 0.035929885
4126 Epoch: 4090 cost= 0.036478229
4127 Epoch: 4091 cost= 0.035198387
4128 Epoch: 4092 cost= 0.035023279
4129 Epoch: 4093 cost= 0.034056041
4130 Epoch: 4094 cost= 0.033874910
4131 Epoch: 4095 cost= 0.036003698
4132 Epoch: 4096 cost= 0.036167182
4133 Epoch: 4097 cost= 0.035546642
4134 Epoch: 4098 cost= 0.035136323
4135 Epoch: 4099 cost= 0.035736803
4136 Epoch: 4100 cost= 0.034879621
4137 Epoch: 4101 cost= 0.036112696
4138 Epoch: 4102 cost= 0.035578493
4139 Epoch: 4103 cost= 0.035687674
4140 Epoch: 4104 cost= 0.037233602
4141 Epoch: 4105 cost= 0.034138780
4142 Epoch: 4106 cost= 0.035572100
4143 Epoch: 4107 cost= 0.034332559
4144 Epoch: 4108 cost= 0.035259329
4145 Epoch: 4109 cost= 0.035871405
4146 Epoch: 4110 cost= 0.036021203
```



```
4147 Epoch: 4111 cost= 0.035821412
4148 Epoch: 4112 cost= 0.034631621
4149 Epoch: 4113 cost= 0.034355436
4150 Epoch: 4114 cost= 0.034991734
4151 Epoch: 4115 cost= 0.033297673
4152 Epoch: 4116 cost= 0.034227774
4153 Epoch: 4117 cost= 0.033832520
4154 Epoch: 4118 cost= 0.035351373
4155 Epoch: 4119 cost= 0.034753881
4156 Epoch: 4120 cost= 0.034616727
4157 Epoch: 4121 cost= 0.033936705
4158 Epoch: 4122 cost= 0.036046505
4159 Epoch: 4123 cost= 0.034246497
4160 Epoch: 4124 cost= 0.035334751
4161 Epoch: 4125 cost= 0.033821631
4162 Epoch: 4126 cost= 0.034988265
4163 Epoch: 4127 cost= 0.034080468
4164 Epoch: 4128 cost= 0.034775238
4165 Epoch: 4129 cost= 0.034352664
4166 Epoch: 4130 cost= 0.034482017
4167 Epoch: 4131 cost= 0.035533994
4168 Epoch: 4132 cost= 0.034717590
4169 Epoch: 4133 cost= 0.035036568
4170 Epoch: 4134 cost= 0.036769513
```

```
4171 Epoch: 4135 cost= 0.033429205
4172 Epoch: 4136 cost= 0.033489980
4173 Epoch: 4137 cost= 0.034509536
4174 Epoch: 4138 cost= 0.035169553
4175 Epoch: 4139 cost= 0.036138028
4176 Epoch: 4140 cost= 0.035688356
4177 Epoch: 4141 cost= 0.035005119
4178 Epoch: 4142 cost= 0.034646682
4179 Epoch: 4143 cost= 0.034553636
4180 Epoch: 4144 cost= 0.033726692
4181 Epoch: 4145 cost= 0.033775080
4182 Epoch: 4146 cost= 0.033424646
4183 Epoch: 4147 cost= 0.033785608
4184 Epoch: 4148 cost= 0.035312634
4185 Epoch: 4149 cost= 0.035833243
4186 Epoch: 4150 cost= 0.034511250
4187 Epoch: 4151 cost= 0.033979129
4188 Epoch: 4152 cost= 0.035382703
4189 Epoch: 4153 cost= 0.034724485
4190 Epoch: 4154 cost= 0.035141759
4191 Epoch: 4155 cost= 0.035207838
4192 Epoch: 4156 cost= 0.034723848
4193 Epoch: 4157 cost= 0.034783453
4194 Epoch: 4158 cost= 0.035073552
```

```
4195 Epoch: 4159 cost= 0.036484331
4196 Epoch: 4160 cost= 0.035690483
4197 Epoch: 4161 cost= 0.034686062
4198 Epoch: 4162 cost= 0.035193492
4199 Epoch: 4163 cost= 0.033601105
4200 Epoch: 4164 cost= 0.037287947
4201 Epoch: 4165 cost= 0.036094137
4202 Epoch: 4166 cost= 0.033751775
4203 Epoch: 4167 cost= 0.035069387
4204 Epoch: 4168 cost= 0.033905316
4205 Epoch: 4169 cost= 0.035863321
4206 Epoch: 4170 cost= 0.035991870
4207 Epoch: 4171 cost= 0.035980970
4208 Epoch: 4172 cost= 0.035854358
4209 Epoch: 4173 cost= 0.034248464
4210 Epoch: 4174 cost= 0.036383394
4211 Epoch: 4175 cost= 0.033780124
4212 Epoch: 4176 cost= 0.034476869
4213 Epoch: 4177 cost= 0.035952978
4214 Epoch: 4178 cost= 0.034150176
4215 Epoch: 4179 cost= 0.034205463
4216 Epoch: 4180 cost= 0.033192307
4217 Epoch: 4181 cost= 0.034447569
4218 Epoch: 4182 cost= 0.035592131
```

```
4219 Epoch: 4183 cost= 0.035694405
4220 Epoch: 4184 cost= 0.033819169
4221 Epoch: 4185 cost= 0.035727680
4222 Epoch: 4186 cost= 0.036970567
4223 Epoch: 4187 cost= 0.036746610
4224 Epoch: 4188 cost= 0.032532293
4225 Epoch: 4189 cost= 0.034435779
4226 Epoch: 4190 cost= 0.035071384
4227 Epoch: 4191 cost= 0.033902366
4228 Epoch: 4192 cost= 0.035734002
4229 Epoch: 4193 cost= 0.033995919
4230 Epoch: 4194 cost= 0.036707796
4231 Epoch: 4195 cost= 0.035167363
4232 Epoch: 4196 cost= 0.034785543
4233 Epoch: 4197 cost= 0.036833879
4234 Epoch: 4198 cost= 0.034643423
4235 Epoch: 4199 cost= 0.035033833
4236 Epoch: 4200 cost= 0.033791758
4237 Epoch: 4201 cost= 0.034061406
4238 Epoch: 4202 cost= 0.036959108
4239 Epoch: 4203 cost= 0.037546393
4240 Epoch: 4204 cost= 0.034160741
4241 Epoch: 4205 cost= 0.035274599
4242 Epoch: 4206 cost= 0.034809109
```

```
4243 Epoch: 4207 cost= 0.036105834
4244 Epoch: 4208 cost= 0.035924666
4245 Epoch: 4209 cost= 0.036001354
4246 Epoch: 4210 cost= 0.036221690
4247 Epoch: 4211 cost= 0.035538118
4248 Epoch: 4212 cost= 0.036860004
4249 Epoch: 4213 cost= 0.034650929
4250 Epoch: 4214 cost= 0.035360403
4251 Epoch: 4215 cost= 0.034161225
4252 Epoch: 4216 cost= 0.034239821
4253 Epoch: 4217 cost= 0.036722284
4254 Epoch: 4218 cost= 0.034039829
4255 Epoch: 4219 cost= 0.033996671
4256 Epoch: 4220 cost= 0.036436427
4257 Epoch: 4221 cost= 0.033968605
4258 Epoch: 4222 cost= 0.035548422
4259 Epoch: 4223 cost= 0.036403492
4260 Epoch: 4224 cost= 0.035091095
4261 Epoch: 4225 cost= 0.035265416
4262 Epoch: 4226 cost= 0.034322228
4263 Epoch: 4227 cost= 0.036531117
4264 Epoch: 4228 cost= 0.034514423
4265 Epoch: 4229 cost= 0.033487651
4266 Epoch: 4230 cost= 0.035384063
```

```
4267 Epoch: 4231 cost= 0.035250325
4268 Epoch: 4232 cost= 0.035004154
4269 Epoch: 4233 cost= 0.034006093
4270 Epoch: 4234 cost= 0.034519494
4271 Epoch: 4235 cost= 0.033905480
4272 Epoch: 4236 cost= 0.039391696
4273 Epoch: 4237 cost= 0.034951910
4274 Epoch: 4238 cost= 0.034928139
4275 Epoch: 4239 cost= 0.035424281
4276 Epoch: 4240 cost= 0.035301585
4277 Epoch: 4241 cost= 0.036092903
4278 Epoch: 4242 cost= 0.036378637
4279 Epoch: 4243 cost= 0.035036847
4280 Epoch: 4244 cost= 0.035951488
4281 Epoch: 4245 cost= 0.037576586
4282 Epoch: 4246 cost= 0.034418087
4283 Epoch: 4247 cost= 0.036478814
4284 Epoch: 4248 cost= 0.035436284
4285 Epoch: 4249 cost= 0.037275359
4286 Epoch: 4250 cost= 0.033127703
4287 Epoch: 4251 cost= 0.037547383
4288 Epoch: 4252 cost= 0.035650395
4289 Epoch: 4253 cost= 0.035382211
4290 Epoch: 4254 cost= 0.034374855
```

```
4291 Epoch: 4255 cost= 0.037239172
4292 Epoch: 4256 cost= 0.036060598
4293 Epoch: 4257 cost= 0.035601500
4294 Epoch: 4258 cost= 0.035891049
4295 Epoch: 4259 cost= 0.035553519
4296 Epoch: 4260 cost= 0.035623148
4297 Epoch: 4261 cost= 0.036670972
4298 Epoch: 4262 cost= 0.037624460
4299 Epoch: 4263 cost= 0.036686711
4300 Epoch: 4264 cost= 0.037222151
4301 Epoch: 4265 cost= 0.035264172
4302 Epoch: 4266 cost= 0.037974082
4303 Epoch: 4267 cost= 0.035252076
4304 Epoch: 4268 cost= 0.035210863
4305 Epoch: 4269 cost= 0.035619494
4306 Epoch: 4270 cost= 0.036967382
4307 Epoch: 4271 cost= 0.035340771
4308 Epoch: 4272 cost= 0.035593726
4309 Epoch: 4273 cost= 0.036962278
4310 Epoch: 4274 cost= 0.035940330
4311 Epoch: 4275 cost= 0.035023145
4312 Epoch: 4276 cost= 0.036250006
4313 Epoch: 4277 cost= 0.034796402
4314 Epoch: 4278 cost= 0.035920281
```

```
4315 Epoch: 4279 cost= 0.036534943
4316 Epoch: 4280 cost= 0.035136253
4317 Epoch: 4281 cost= 0.035054769
4318 Epoch: 4282 cost= 0.035468671
4319 Epoch: 4283 cost= 0.036256552
4320 Epoch: 4284 cost= 0.037919953
4321 Epoch: 4285 cost= 0.035442397
4322 Epoch: 4286 cost= 0.035621855
4323 Epoch: 4287 cost= 0.034538351
4324 Epoch: 4288 cost= 0.036271036
4325 Epoch: 4289 cost= 0.035709180
4326 Epoch: 4290 cost= 0.036038291
4327 Epoch: 4291 cost= 0.037711952
4328 Epoch: 4292 cost= 0.036633458
4329 Epoch: 4293 cost= 0.038373090
4330 Epoch: 4294 cost= 0.032315917
4331 Epoch: 4295 cost= 0.035348620
4332 Epoch: 4296 cost= 0.035263419
4333 Epoch: 4297 cost= 0.038063973
4334 Epoch: 4298 cost= 0.033452448
4335 Epoch: 4299 cost= 0.034619443
4336 Epoch: 4300 cost= 0.037001815
4337 Epoch: 4301 cost= 0.034754734
4338 Epoch: 4302 cost= 0.036714233
```



```
4339 Epoch: 4303 cost= 0.033511944
4340 Epoch: 4304 cost= 0.034595978
4341 Epoch: 4305 cost= 0.034799706
4342 Epoch: 4306 cost= 0.035998482
4343 Epoch: 4307 cost= 0.035967205
4344 Epoch: 4308 cost= 0.036834534
4345 Epoch: 4309 cost= 0.033292949
4346 Epoch: 4310 cost= 0.036816854
4347 Epoch: 4311 cost= 0.036182776
4348 Epoch: 4312 cost= 0.033247918
4349 Epoch: 4313 cost= 0.035651732
4350 Epoch: 4314 cost= 0.038549203
4351 Epoch: 4315 cost= 0.034510639
4352 Epoch: 4316 cost= 0.034197506
4353 Epoch: 4317 cost= 0.034868166
4354 Epoch: 4318 cost= 0.035846237
4355 Epoch: 4319 cost= 0.035790171
4356 Epoch: 4320 cost= 0.036363032
4357 Epoch: 4321 cost= 0.036484148
4358 Epoch: 4322 cost= 0.036455758
4359 Epoch: 4323 cost= 0.036226634
4360 Epoch: 4324 cost= 0.035736185
4361 Epoch: 4325 cost= 0.035509612
4362 Epoch: 4326 cost= 0.035777971
```

```
4363 Epoch: 4327 cost= 0.035594013
4364 Epoch: 4328 cost= 0.033680044
4365 Epoch: 4329 cost= 0.034923445
4366 Epoch: 4330 cost= 0.035659406
4367 Epoch: 4331 cost= 0.033172417
4368 Epoch: 4332 cost= 0.036249448
4369 Epoch: 4333 cost= 0.036226463
4370 Epoch: 4334 cost= 0.034802709
4371 Epoch: 4335 cost= 0.036676213
4372 Epoch: 4336 cost= 0.036138434
4373 Epoch: 4337 cost= 0.036125135
4374 Epoch: 4338 cost= 0.037091877
4375 Epoch: 4339 cost= 0.034823224
4376 Epoch: 4340 cost= 0.037713286
4377 Epoch: 4341 cost= 0.035554431
4378 Epoch: 4342 cost= 0.036906011
4379 Epoch: 4343 cost= 0.036637876
4380 Epoch: 4344 cost= 0.035075527
4381 Epoch: 4345 cost= 0.035783261
4382 Epoch: 4346 cost= 0.035141118
4383 Epoch: 4347 cost= 0.037251089
4384 Epoch: 4348 cost= 0.036984425
4385 Epoch: 4349 cost= 0.036395624
4386 Epoch: 4350 cost= 0.035404950
```

```
4387 Epoch: 4351 cost= 0.036716361
4388 Epoch: 4352 cost= 0.034057934
4389 Epoch: 4353 cost= 0.036123369
4390 Epoch: 4354 cost= 0.037571650
4391 Epoch: 4355 cost= 0.036335535
4392 Epoch: 4356 cost= 0.036207236
4393 Epoch: 4357 cost= 0.037394620
4394 Epoch: 4358 cost= 0.039243255
4395 Epoch: 4359 cost= 0.035790555
4396 Epoch: 4360 cost= 0.037690625
4397 Epoch: 4361 cost= 0.037600134
4398 Epoch: 4362 cost= 0.038027465
4399 Epoch: 4363 cost= 0.036519580
4400 Epoch: 4364 cost= 0.037321318
4401 Epoch: 4365 cost= 0.037752751
4402 Epoch: 4366 cost= 0.036592737
4403 Epoch: 4367 cost= 0.035870094
4404 Epoch: 4368 cost= 0.036715910
4405 Epoch: 4369 cost= 0.037417840
4406 Epoch: 4370 cost= 0.035424493
4407 Epoch: 4371 cost= 0.037867390
4408 Epoch: 4372 cost= 0.035151001
4409 Epoch: 4373 cost= 0.036048781
4410 Epoch: 4374 cost= 0.036652729
```

```
4411 Epoch: 4375 cost= 0.036834162
4412 Epoch: 4376 cost= 0.036125116
4413 Epoch: 4377 cost= 0.036003441
4414 Epoch: 4378 cost= 0.039073884
4415 Epoch: 4379 cost= 0.036357455
4416 Epoch: 4380 cost= 0.036320850
4417 Epoch: 4381 cost= 0.037576765
4418 Epoch: 4382 cost= 0.035416808
4419 Epoch: 4383 cost= 0.035582203
4420 Epoch: 4384 cost= 0.037806649
4421 Epoch: 4385 cost= 0.035826124
4422 Epoch: 4386 cost= 0.036064990
4423 Epoch: 4387 cost= 0.036232509
4424 Epoch: 4388 cost= 0.035581794
4425 Epoch: 4389 cost= 0.034878649
4426 Epoch: 4390 cost= 0.035744637
4427 Epoch: 4391 cost= 0.035731226
4428 Epoch: 4392 cost= 0.035630390
4429 Epoch: 4393 cost= 0.034945507
4430 Epoch: 4394 cost= 0.036285199
4431 Epoch: 4395 cost= 0.037892766
4432 Epoch: 4396 cost= 0.035181161
4433 Epoch: 4397 cost= 0.036287934
4434 Epoch: 4398 cost= 0.036243800
```

```
4435 Epoch: 4399 cost= 0.035554700
4436 Epoch: 4400 cost= 0.035287537
4437 Epoch: 4401 cost= 0.035923831
4438 Epoch: 4402 cost= 0.036505625
4439 Epoch: 4403 cost= 0.036211114
4440 Epoch: 4404 cost= 0.037149590
4441 Epoch: 4405 cost= 0.037569709
4442 Epoch: 4406 cost= 0.034876540
4443 Epoch: 4407 cost= 0.036106396
4444 Epoch: 4408 cost= 0.036931112
4445 Epoch: 4409 cost= 0.037651621
4446 Epoch: 4410 cost= 0.035825964
4447 Epoch: 4411 cost= 0.035280798
4448 Epoch: 4412 cost= 0.036910418
4449 Epoch: 4413 cost= 0.035984155
4450 Epoch: 4414 cost= 0.036671318
4451 Epoch: 4415 cost= 0.036826387
4452 Epoch: 4416 cost= 0.036200639
4453 Epoch: 4417 cost= 0.037521735
4454 Epoch: 4418 cost= 0.040123552
4455 Epoch: 4419 cost= 0.036659595
4456 Epoch: 4420 cost= 0.038192395
4457 Epoch: 4421 cost= 0.035424609
4458 Epoch: 4422 cost= 0.036568608
```

```
4459 Epoch: 4423 cost= 0.036098562
4460 Epoch: 4424 cost= 0.035960689
4461 Epoch: 4425 cost= 0.036455773
4462 Epoch: 4426 cost= 0.034546170
4463 Epoch: 4427 cost= 0.035615984
4464 Epoch: 4428 cost= 0.034604959
4465 Epoch: 4429 cost= 0.036387004
4466 Epoch: 4430 cost= 0.036592696
4467 Epoch: 4431 cost= 0.036588177
4468 Epoch: 4432 cost= 0.036891930
4469 Epoch: 4433 cost= 0.038542952
4470 Epoch: 4434 cost= 0.035207465
4471 Epoch: 4435 cost= 0.035534877
4472 Epoch: 4436 cost= 0.035823151
4473 Epoch: 4437 cost= 0.036261715
4474 Epoch: 4438 cost= 0.034977842
4475 Epoch: 4439 cost= 0.036184102
4476 Epoch: 4440 cost= 0.035314396
4477 Epoch: 4441 cost= 0.036574189
4478 Epoch: 4442 cost= 0.035995003
4479 Epoch: 4443 cost= 0.036437690
4480 Epoch: 4444 cost= 0.037121106
4481 Epoch: 4445 cost= 0.033765461
4482 Epoch: 4446 cost= 0.036770146
```

```
4483 Epoch: 4447 cost= 0.035108641
4484 Epoch: 4448 cost= 0.036860537
4485 Epoch: 4449 cost= 0.037576098
4486 Epoch: 4450 cost= 0.034357447
4487 Epoch: 4451 cost= 0.034782134
4488 Epoch: 4452 cost= 0.034868319
4489 Epoch: 4453 cost= 0.038858786
4490 Epoch: 4454 cost= 0.034650836
4491 Epoch: 4455 cost= 0.035733219
4492 Epoch: 4456 cost= 0.036279622
4493 Epoch: 4457 cost= 0.035320774
4494 Epoch: 4458 cost= 0.036744639
4495 Epoch: 4459 cost= 0.036571749
4496 Epoch: 4460 cost= 0.035295755
4497 Epoch: 4461 cost= 0.034063548
4498 Epoch: 4462 cost= 0.035083324
4499 Epoch: 4463 cost= 0.034351759
4500 Epoch: 4464 cost= 0.034830827
4501 Epoch: 4465 cost= 0.034877747
4502 Epoch: 4466 cost= 0.035342880
4503 Epoch: 4467 cost= 0.037545554
4504 Epoch: 4468 cost= 0.036186628
4505 Epoch: 4469 cost= 0.032602627
4506 Epoch: 4470 cost= 0.037210021
```

```
4507 Epoch: 4471 cost= 0.035316743
4508 Epoch: 4472 cost= 0.034605332
4509 Epoch: 4473 cost= 0.033984348
4510 Epoch: 4474 cost= 0.036000948
4511 Epoch: 4475 cost= 0.035088021
4512 Epoch: 4476 cost= 0.034645546
4513 Epoch: 4477 cost= 0.033502370
4514 Epoch: 4478 cost= 0.033655901
4515 Epoch: 4479 cost= 0.035054609
4516 Epoch: 4480 cost= 0.034671050
4517 Epoch: 4481 cost= 0.036304742
4518 Epoch: 4482 cost= 0.035888180
4519 Epoch: 4483 cost= 0.034969334
4520 Epoch: 4484 cost= 0.034671325
4521 Epoch: 4485 cost= 0.036245428
4522 Epoch: 4486 cost= 0.035465699
4523 Epoch: 4487 cost= 0.034928795
4524 Epoch: 4488 cost= 0.037134517
4525 Epoch: 4489 cost= 0.033570062
4526 Epoch: 4490 cost= 0.034375824
4527 Epoch: 4491 cost= 0.035664547
4528 Epoch: 4492 cost= 0.035255764
4529 Epoch: 4493 cost= 0.035575554
4530 Epoch: 4494 cost= 0.035612274
```



```
4531 Epoch: 4495 cost= 0.038132161
4532 Epoch: 4496 cost= 0.037214205
4533 Epoch: 4497 cost= 0.037877489
4534 Epoch: 4498 cost= 0.036106784
4535 Epoch: 4499 cost= 0.035987001
4536 Epoch: 4500 cost= 0.036354654
4537 Epoch: 4501 cost= 0.035153136
4538 Epoch: 4502 cost= 0.035817988
4539 Epoch: 4503 cost= 0.036353402
4540 Epoch: 4504 cost= 0.035600133
4541 Epoch: 4505 cost= 0.035344522
4542 Epoch: 4506 cost= 0.035509080
4543 Epoch: 4507 cost= 0.034661740
4544 Epoch: 4508 cost= 0.037003454
4545 Epoch: 4509 cost= 0.036056921
4546 Epoch: 4510 cost= 0.033993702
4547 Epoch: 4511 cost= 0.034627527
4548 Epoch: 4512 cost= 0.035736848
4549 Epoch: 4513 cost= 0.035729803
4550 Epoch: 4514 cost= 0.034459658
4551 Epoch: 4515 cost= 0.034589440
4552 Epoch: 4516 cost= 0.035766058
4553 Epoch: 4517 cost= 0.036932465
4554 Epoch: 4518 cost= 0.036703303
```

```
4555 Epoch: 4519 cost= 0.035882216
4556 Epoch: 4520 cost= 0.036541142
4557 Epoch: 4521 cost= 0.037345164
4558 Epoch: 4522 cost= 0.036359515
4559 Epoch: 4523 cost= 0.034267962
4560 Epoch: 4524 cost= 0.035950471
4561 Epoch: 4525 cost= 0.035480563
4562 Epoch: 4526 cost= 0.036378030
4563 Epoch: 4527 cost= 0.036267333
4564 Epoch: 4528 cost= 0.033983834
4565 Epoch: 4529 cost= 0.035201237
4566 Epoch: 4530 cost= 0.035494316
4567 Epoch: 4531 cost= 0.038337305
4568 Epoch: 4532 cost= 0.034204163
4569 Epoch: 4533 cost= 0.035476960
4570 Epoch: 4534 cost= 0.036286701
4571 Epoch: 4535 cost= 0.035518497
4572 Epoch: 4536 cost= 0.034890004
4573 Epoch: 4537 cost= 0.035925530
4574 Epoch: 4538 cost= 0.034538478
4575 Epoch: 4539 cost= 0.035708692
4576 Epoch: 4540 cost= 0.034030218
4577 Epoch: 4541 cost= 0.034396619
4578 Epoch: 4542 cost= 0.035152610
```

```
4579 Epoch: 4543 cost= 0.034467462
4580 Epoch: 4544 cost= 0.034797128
4581 Epoch: 4545 cost= 0.034922771
4582 Epoch: 4546 cost= 0.033865053
4583 Epoch: 4547 cost= 0.035180949
4584 Epoch: 4548 cost= 0.034157723
4585 Epoch: 4549 cost= 0.035391673
4586 Epoch: 4550 cost= 0.035248134
4587 Epoch: 4551 cost= 0.037526038
4588 Epoch: 4552 cost= 0.034364782
4589 Epoch: 4553 cost= 0.036273841
4590 Epoch: 4554 cost= 0.034791529
4591 Epoch: 4555 cost= 0.036684982
4592 Epoch: 4556 cost= 0.035256065
4593 Epoch: 4557 cost= 0.035157945
4594 Epoch: 4558 cost= 0.036786657
4595 Epoch: 4559 cost= 0.036712397
4596 Epoch: 4560 cost= 0.035449512
4597 Epoch: 4561 cost= 0.038442664
4598 Epoch: 4562 cost= 0.036029112
4599 Epoch: 4563 cost= 0.035524622
4600 Epoch: 4564 cost= 0.035063133
4601 Epoch: 4565 cost= 0.034637116
4602 Epoch: 4566 cost= 0.034433078
```

```
4603 Epoch: 4567 cost= 0.035175126
4604 Epoch: 4568 cost= 0.037003167
4605 Epoch: 4569 cost= 0.033968937
4606 Epoch: 4570 cost= 0.035827354
4607 Epoch: 4571 cost= 0.034581739
4608 Epoch: 4572 cost= 0.036084298
4609 Epoch: 4573 cost= 0.033699207
4610 Epoch: 4574 cost= 0.036426242
4611 Epoch: 4575 cost= 0.033199005
4612 Epoch: 4576 cost= 0.037674524
4613 Epoch: 4577 cost= 0.034500442
4614 Epoch: 4578 cost= 0.036606103
4615 Epoch: 4579 cost= 0.033234138
4616 Epoch: 4580 cost= 0.034714300
4617 Epoch: 4581 cost= 0.038124375
4618 Epoch: 4582 cost= 0.036675759
4619 Epoch: 4583 cost= 0.035739403
4620 Epoch: 4584 cost= 0.035145912
4621 Epoch: 4585 cost= 0.036352113
4622 Epoch: 4586 cost= 0.035774220
4623 Epoch: 4587 cost= 0.035730243
4624 Epoch: 4588 cost= 0.034335613
4625 Epoch: 4589 cost= 0.034666274
4626 Epoch: 4590 cost= 0.036271535
```

```
4627 Epoch: 4591 cost= 0.035838798
4628 Epoch: 4592 cost= 0.034068272
4629 Epoch: 4593 cost= 0.033750173
4630 Epoch: 4594 cost= 0.035933238
4631 Epoch: 4595 cost= 0.032740194
4632 Epoch: 4596 cost= 0.036612976
4633 Epoch: 4597 cost= 0.035337765
4634 Epoch: 4598 cost= 0.036170274
4635 Epoch: 4599 cost= 0.034489471
4636 Epoch: 4600 cost= 0.034864701
4637 Epoch: 4601 cost= 0.036040463
4638 Epoch: 4602 cost= 0.036761034
4639 Epoch: 4603 cost= 0.037284441
4640 Epoch: 4604 cost= 0.033821069
4641 Epoch: 4605 cost= 0.035331570
4642 Epoch: 4606 cost= 0.035794351
4643 Epoch: 4607 cost= 0.035566978
4644 Epoch: 4608 cost= 0.035603762
4645 Epoch: 4609 cost= 0.036641661
4646 Epoch: 4610 cost= 0.035004731
4647 Epoch: 4611 cost= 0.034166846
4648 Epoch: 4612 cost= 0.038247146
4649 Epoch: 4613 cost= 0.033363339
4650 Epoch: 4614 cost= 0.035814568
```

```
4651 Epoch: 4615 cost= 0.037553210
4652 Epoch: 4616 cost= 0.034371283
4653 Epoch: 4617 cost= 0.035696089
4654 Epoch: 4618 cost= 0.036878459
4655 Epoch: 4619 cost= 0.034578122
4656 Epoch: 4620 cost= 0.034905165
4657 Epoch: 4621 cost= 0.035592876
4658 Epoch: 4622 cost= 0.035511792
4659 Epoch: 4623 cost= 0.036346067
4660 Epoch: 4624 cost= 0.035737161
4661 Epoch: 4625 cost= 0.036772579
4662 Epoch: 4626 cost= 0.036679920
4663 Epoch: 4627 cost= 0.034741160
4664 Epoch: 4628 cost= 0.036569495
4665 Epoch: 4629 cost= 0.036627010
4666 Epoch: 4630 cost= 0.034345377
4667 Epoch: 4631 cost= 0.036509272
4668 Epoch: 4632 cost= 0.034894377
4669 Epoch: 4633 cost= 0.034154292
4670 Epoch: 4634 cost= 0.036233280
4671 Epoch: 4635 cost= 0.034151107
4672 Epoch: 4636 cost= 0.036144707
4673 Epoch: 4637 cost= 0.035922974
4674 Epoch: 4638 cost= 0.034315079
```

```
4675 Epoch: 4639 cost= 0.036801267
4676 Epoch: 4640 cost= 0.035783760
4677 Epoch: 4641 cost= 0.036307156
4678 Epoch: 4642 cost= 0.037121937
4679 Epoch: 4643 cost= 0.034843843
4680 Epoch: 4644 cost= 0.035799686
4681 Epoch: 4645 cost= 0.035478029
4682 Epoch: 4646 cost= 0.035260919
4683 Epoch: 4647 cost= 0.035761550
4684 Epoch: 4648 cost= 0.035910927
4685 Epoch: 4649 cost= 0.035042685
4686 Epoch: 4650 cost= 0.035413817
4687 Epoch: 4651 cost= 0.034826692
4688 Epoch: 4652 cost= 0.034599487
4689 Epoch: 4653 cost= 0.034242641
4690 Epoch: 4654 cost= 0.035164319
4691 Epoch: 4655 cost= 0.033430882
4692 Epoch: 4656 cost= 0.035334583
4693 Epoch: 4657 cost= 0.035292845
4694 Epoch: 4658 cost= 0.035500221
4695 Epoch: 4659 cost= 0.034635242
4696 Epoch: 4660 cost= 0.035899021
4697 Epoch: 4661 cost= 0.034217197
4698 Epoch: 4662 cost= 0.034241714
```

```
4699 Epoch: 4663 cost= 0.035102468
4700 Epoch: 4664 cost= 0.036773808
4701 Epoch: 4665 cost= 0.036924649
4702 Epoch: 4666 cost= 0.036211941
4703 Epoch: 4667 cost= 0.036352750
4704 Epoch: 4668 cost= 0.037112344
4705 Epoch: 4669 cost= 0.036757730
4706 Epoch: 4670 cost= 0.035792682
4707 Epoch: 4671 cost= 0.034992170
4708 Epoch: 4672 cost= 0.033781420
4709 Epoch: 4673 cost= 0.036135949
4710 Epoch: 4674 cost= 0.035566408
4711 Epoch: 4675 cost= 0.035851143
4712 Epoch: 4676 cost= 0.035984900
4713 Epoch: 4677 cost= 0.034455705
4714 Epoch: 4678 cost= 0.034840710
4715 Epoch: 4679 cost= 0.033281337
4716 Epoch: 4680 cost= 0.034270827
4717 Epoch: 4681 cost= 0.035304070
4718 Epoch: 4682 cost= 0.034052234
4719 Epoch: 4683 cost= 0.036106545
4720 Epoch: 4684 cost= 0.035427343
4721 Epoch: 4685 cost= 0.035416510
4722 Epoch: 4686 cost= 0.034967449
```



```
4723 Epoch: 4687 cost= 0.035417043
4724 Epoch: 4688 cost= 0.035752386
4725 Epoch: 4689 cost= 0.036430869
4726 Epoch: 4690 cost= 0.035348490
4727 Epoch: 4691 cost= 0.035131425
4728 Epoch: 4692 cost= 0.034157593
4729 Epoch: 4693 cost= 0.034396376
4730 Epoch: 4694 cost= 0.035258736
4731 Epoch: 4695 cost= 0.034487776
4732 Epoch: 4696 cost= 0.035148524
4733 Epoch: 4697 cost= 0.035735313
4734 Epoch: 4698 cost= 0.035570044
4735 Epoch: 4699 cost= 0.032339577
4736 Epoch: 4700 cost= 0.035603132
4737 Epoch: 4701 cost= 0.036363650
4738 Epoch: 4702 cost= 0.033281852
4739 Epoch: 4703 cost= 0.034038723
4740 Epoch: 4704 cost= 0.035582405
4741 Epoch: 4705 cost= 0.034833990
4742 Epoch: 4706 cost= 0.036386982
4743 Epoch: 4707 cost= 0.035959709
4744 Epoch: 4708 cost= 0.037068445
4745 Epoch: 4709 cost= 0.034184977
4746 Epoch: 4710 cost= 0.035307631
```

```
4747 Epoch: 4711 cost= 0.035465576
4748 Epoch: 4712 cost= 0.035915501
4749 Epoch: 4713 cost= 0.035245433
4750 Epoch: 4714 cost= 0.036485907
4751 Epoch: 4715 cost= 0.035267346
4752 Epoch: 4716 cost= 0.035528027
4753 Epoch: 4717 cost= 0.035574812
4754 Epoch: 4718 cost= 0.035466690
4755 Epoch: 4719 cost= 0.036427718
4756 Epoch: 4720 cost= 0.037056800
4757 Epoch: 4721 cost= 0.035983581
4758 Epoch: 4722 cost= 0.035366349
4759 Epoch: 4723 cost= 0.035650734
4760 Epoch: 4724 cost= 0.035711460
4761 Epoch: 4725 cost= 0.035970006
4762 Epoch: 4726 cost= 0.036330640
4763 Epoch: 4727 cost= 0.035161197
4764 Epoch: 4728 cost= 0.035762317
4765 Epoch: 4729 cost= 0.035845228
4766 Epoch: 4730 cost= 0.037397739
4767 Epoch: 4731 cost= 0.035808776
4768 Epoch: 4732 cost= 0.035494622
4769 Epoch: 4733 cost= 0.037398543
4770 Epoch: 4734 cost= 0.038598329
```

```
4771 Epoch: 4735 cost= 0.035006750
4772 Epoch: 4736 cost= 0.037471309
4773 Epoch: 4737 cost= 0.033711102
4774 Epoch: 4738 cost= 0.036842868
4775 Epoch: 4739 cost= 0.036084425
4776 Epoch: 4740 cost= 0.032940164
4777 Epoch: 4741 cost= 0.035273612
4778 Epoch: 4742 cost= 0.035740029
4779 Epoch: 4743 cost= 0.036899865
4780 Epoch: 4744 cost= 0.034987476
4781 Epoch: 4745 cost= 0.036537599
4782 Epoch: 4746 cost= 0.035171922
4783 Epoch: 4747 cost= 0.035672333
4784 Epoch: 4748 cost= 0.035559446
4785 Epoch: 4749 cost= 0.033194568
4786 Epoch: 4750 cost= 0.036293209
4787 Epoch: 4751 cost= 0.034258943
4788 Epoch: 4752 cost= 0.035204057
4789 Epoch: 4753 cost= 0.036661215
4790 Epoch: 4754 cost= 0.037011176
4791 Epoch: 4755 cost= 0.034861661
4792 Epoch: 4756 cost= 0.035662014
4793 Epoch: 4757 cost= 0.034627065
4794 Epoch: 4758 cost= 0.034733087
```

```
4795 Epoch: 4759 cost= 0.036485020
4796 Epoch: 4760 cost= 0.037103862
4797 Epoch: 4761 cost= 0.034588482
4798 Epoch: 4762 cost= 0.036206309
4799 Epoch: 4763 cost= 0.036332436
4800 Epoch: 4764 cost= 0.036018781
4801 Epoch: 4765 cost= 0.035382412
4802 Epoch: 4766 cost= 0.034606017
4803 Epoch: 4767 cost= 0.036995444
4804 Epoch: 4768 cost= 0.035934176
4805 Epoch: 4769 cost= 0.036332358
4806 Epoch: 4770 cost= 0.035610117
4807 Epoch: 4771 cost= 0.036986139
4808 Epoch: 4772 cost= 0.035515253
4809 Epoch: 4773 cost= 0.037222404
4810 Epoch: 4774 cost= 0.037203863
4811 Epoch: 4775 cost= 0.034576088
4812 Epoch: 4776 cost= 0.034201145
4813 Epoch: 4777 cost= 0.036240321
4814 Epoch: 4778 cost= 0.035701659
4815 Epoch: 4779 cost= 0.036375310
4816 Epoch: 4780 cost= 0.036482271
4817 Epoch: 4781 cost= 0.036379397
4818 Epoch: 4782 cost= 0.034550466
```

```
4819 Epoch: 4783 cost= 0.037346404
4820 Epoch: 4784 cost= 0.036770418
4821 Epoch: 4785 cost= 0.035885330
4822 Epoch: 4786 cost= 0.037359886
4823 Epoch: 4787 cost= 0.037466228
4824 Epoch: 4788 cost= 0.035292517
4825 Epoch: 4789 cost= 0.033379570
4826 Epoch: 4790 cost= 0.036069684
4827 Epoch: 4791 cost= 0.037811123
4828 Epoch: 4792 cost= 0.036348864
4829 Epoch: 4793 cost= 0.037971403
4830 Epoch: 4794 cost= 0.036775518
4831 Epoch: 4795 cost= 0.036874115
4832 Epoch: 4796 cost= 0.036017612
4833 Epoch: 4797 cost= 0.035368603
4834 Epoch: 4798 cost= 0.036571760
4835 Epoch: 4799 cost= 0.037346750
4836 Epoch: 4800 cost= 0.037094034
4837 Epoch: 4801 cost= 0.036752921
4838 Epoch: 4802 cost= 0.036084075
4839 Epoch: 4803 cost= 0.035160672
4840 Epoch: 4804 cost= 0.034670144
4841 Epoch: 4805 cost= 0.033723280
4842 Epoch: 4806 cost= 0.035064906
```

```
4843 Epoch: 4807 cost= 0.034279622
4844 Epoch: 4808 cost= 0.034699216
4845 Epoch: 4809 cost= 0.035399057
4846 Epoch: 4810 cost= 0.035063136
4847 Epoch: 4811 cost= 0.038059801
4848 Epoch: 4812 cost= 0.036165934
4849 Epoch: 4813 cost= 0.037036933
4850 Epoch: 4814 cost= 0.036116738
4851 Epoch: 4815 cost= 0.033662520
4852 Epoch: 4816 cost= 0.033220898
4853 Epoch: 4817 cost= 0.036841214
4854 Epoch: 4818 cost= 0.037235290
4855 Epoch: 4819 cost= 0.035405863
4856 Epoch: 4820 cost= 0.035353150
4857 Epoch: 4821 cost= 0.035139479
4858 Epoch: 4822 cost= 0.035860579
4859 Epoch: 4823 cost= 0.036613669
4860 Epoch: 4824 cost= 0.035162143
4861 Epoch: 4825 cost= 0.037467718
4862 Epoch: 4826 cost= 0.035278682
4863 Epoch: 4827 cost= 0.033982560
4864 Epoch: 4828 cost= 0.032937489
4865 Epoch: 4829 cost= 0.036164477
4866 Epoch: 4830 cost= 0.034432795
```

```
4867 Epoch: 4831 cost= 0.034296539
4868 Epoch: 4832 cost= 0.035826426
4869 Epoch: 4833 cost= 0.038837112
4870 Epoch: 4834 cost= 0.035458710
4871 Epoch: 4835 cost= 0.034535453
4872 Epoch: 4836 cost= 0.035360698
4873 Epoch: 4837 cost= 0.037518278
4874 Epoch: 4838 cost= 0.035319503
4875 Epoch: 4839 cost= 0.036231693
4876 Epoch: 4840 cost= 0.037734512
4877 Epoch: 4841 cost= 0.036368720
4878 Epoch: 4842 cost= 0.035141598
4879 Epoch: 4843 cost= 0.037000097
4880 Epoch: 4844 cost= 0.037325397
4881 Epoch: 4845 cost= 0.037125461
4882 Epoch: 4846 cost= 0.035658594
4883 Epoch: 4847 cost= 0.035864674
4884 Epoch: 4848 cost= 0.036131345
4885 Epoch: 4849 cost= 0.036358710
4886 Epoch: 4850 cost= 0.035769362
4887 Epoch: 4851 cost= 0.037568681
4888 Epoch: 4852 cost= 0.036871437
4889 Epoch: 4853 cost= 0.034979839
4890 Epoch: 4854 cost= 0.037919398
```

```
4891 Epoch: 4855 cost= 0.035720967
4892 Epoch: 4856 cost= 0.036213379
4893 Epoch: 4857 cost= 0.038698319
4894 Epoch: 4858 cost= 0.035303023
4895 Epoch: 4859 cost= 0.037688952
4896 Epoch: 4860 cost= 0.037877318
4897 Epoch: 4861 cost= 0.036412768
4898 Epoch: 4862 cost= 0.034400702
4899 Epoch: 4863 cost= 0.036383539
4900 Epoch: 4864 cost= 0.034697980
4901 Epoch: 4865 cost= 0.036433242
4902 Epoch: 4866 cost= 0.035188057
4903 Epoch: 4867 cost= 0.034789525
4904 Epoch: 4868 cost= 0.036012672
4905 Epoch: 4869 cost= 0.035318363
4906 Epoch: 4870 cost= 0.036254257
4907 Epoch: 4871 cost= 0.035111949
4908 Epoch: 4872 cost= 0.034738000
4909 Epoch: 4873 cost= 0.036513105
4910 Epoch: 4874 cost= 0.036503531
4911 Epoch: 4875 cost= 0.036625646
4912 Epoch: 4876 cost= 0.035302881
4913 Epoch: 4877 cost= 0.037497938
4914 Epoch: 4878 cost= 0.035005916
```



```
4915 Epoch: 4879 cost= 0.036630932
4916 Epoch: 4880 cost= 0.035240397
4917 Epoch: 4881 cost= 0.035586450
4918 Epoch: 4882 cost= 0.037117120
4919 Epoch: 4883 cost= 0.035177372
4920 Epoch: 4884 cost= 0.033603277
4921 Epoch: 4885 cost= 0.036394220
4922 Epoch: 4886 cost= 0.034690179
4923 Epoch: 4887 cost= 0.037037153
4924 Epoch: 4888 cost= 0.036745228
4925 Epoch: 4889 cost= 0.036490545
4926 Epoch: 4890 cost= 0.034946214
4927 Epoch: 4891 cost= 0.036355227
4928 Epoch: 4892 cost= 0.033904728
4929 Epoch: 4893 cost= 0.036460698
4930 Epoch: 4894 cost= 0.036211479
4931 Epoch: 4895 cost= 0.035094045
4932 Epoch: 4896 cost= 0.035984561
4933 Epoch: 4897 cost= 0.035310321
4934 Epoch: 4898 cost= 0.034736805
4935 Epoch: 4899 cost= 0.034412049
4936 Epoch: 4900 cost= 0.035586409
4937 Epoch: 4901 cost= 0.035051748
4938 Epoch: 4902 cost= 0.035321813
```

```
4939 Epoch: 4903 cost= 0.035525523
4940 Epoch: 4904 cost= 0.033592474
4941 Epoch: 4905 cost= 0.035777185
4942 Epoch: 4906 cost= 0.032750301
4943 Epoch: 4907 cost= 0.035394061
4944 Epoch: 4908 cost= 0.034998782
4945 Epoch: 4909 cost= 0.036940657
4946 Epoch: 4910 cost= 0.036492806
4947 Epoch: 4911 cost= 0.037246305
4948 Epoch: 4912 cost= 0.035056908
4949 Epoch: 4913 cost= 0.037359245
4950 Epoch: 4914 cost= 0.036205493
4951 Epoch: 4915 cost= 0.035594404
4952 Epoch: 4916 cost= 0.036683954
4953 Epoch: 4917 cost= 0.035294171
4954 Epoch: 4918 cost= 0.037117150
4955 Epoch: 4919 cost= 0.034777392
4956 Epoch: 4920 cost= 0.035762593
4957 Epoch: 4921 cost= 0.035940133
4958 Epoch: 4922 cost= 0.035865065
4959 Epoch: 4923 cost= 0.035319317
4960 Epoch: 4924 cost= 0.037379000
4961 Epoch: 4925 cost= 0.034715660
4962 Epoch: 4926 cost= 0.036819249
```

```
4963 Epoch: 4927 cost= 0.035216335
4964 Epoch: 4928 cost= 0.035208926
4965 Epoch: 4929 cost= 0.035067637
4966 Epoch: 4930 cost= 0.035769682
4967 Epoch: 4931 cost= 0.036146056
4968 Epoch: 4932 cost= 0.036487121
4969 Epoch: 4933 cost= 0.036666993
4970 Epoch: 4934 cost= 0.033736866
4971 Epoch: 4935 cost= 0.036222722
4972 Epoch: 4936 cost= 0.035381757
4973 Epoch: 4937 cost= 0.037068315
4974 Epoch: 4938 cost= 0.036859438
4975 Epoch: 4939 cost= 0.034057271
4976 Epoch: 4940 cost= 0.034728196
4977 Epoch: 4941 cost= 0.034958281
4978 Epoch: 4942 cost= 0.036066473
4979 Epoch: 4943 cost= 0.036869865
4980 Epoch: 4944 cost= 0.036706012
4981 Epoch: 4945 cost= 0.033594668
4982 Epoch: 4946 cost= 0.033151250
4983 Epoch: 4947 cost= 0.036323719
4984 Epoch: 4948 cost= 0.036292583
4985 Epoch: 4949 cost= 0.037057512
4986 Epoch: 4950 cost= 0.038406596
```

```
4987 Epoch: 4951 cost= 0.034243096
4988 Epoch: 4952 cost= 0.036654875
4989 Epoch: 4953 cost= 0.035579916
4990 Epoch: 4954 cost= 0.036879845
4991 Epoch: 4955 cost= 0.036039099
4992 Epoch: 4956 cost= 0.037406266
4993 Epoch: 4957 cost= 0.036556646
4994 Epoch: 4958 cost= 0.035424072
4995 Epoch: 4959 cost= 0.034196682
4996 Epoch: 4960 cost= 0.035729650
4997 Epoch: 4961 cost= 0.034986105
4998 Epoch: 4962 cost= 0.035588212
4999 Epoch: 4963 cost= 0.033650886
5000 Epoch: 4964 cost= 0.034613196
5001 Epoch: 4965 cost= 0.035458278
5002 Epoch: 4966 cost= 0.036234234
5003 Epoch: 4967 cost= 0.037447214
5004 Epoch: 4968 cost= 0.035997149
5005 Epoch: 4969 cost= 0.037331443
5006 Epoch: 4970 cost= 0.035325866
5007 Epoch: 4971 cost= 0.034678861
5008 Epoch: 4972 cost= 0.035861187
5009 Epoch: 4973 cost= 0.035609148
5010 Epoch: 4974 cost= 0.034214094
```

```
5011 Epoch: 4975 cost= 0.037029173
5012 Epoch: 4976 cost= 0.034385934
5013 Epoch: 4977 cost= 0.035594303
5014 Epoch: 4978 cost= 0.032627292
5015 Epoch: 4979 cost= 0.036497433
5016 Epoch: 4980 cost= 0.034131315
5017 Epoch: 4981 cost= 0.035488643
5018 Epoch: 4982 cost= 0.034848250
5019 Epoch: 4983 cost= 0.035862546
5020 Epoch: 4984 cost= 0.034822054
5021 Epoch: 4985 cost= 0.035220988
5022 Epoch: 4986 cost= 0.033737969
5023 Epoch: 4987 cost= 0.034651447
5024 Epoch: 4988 cost= 0.036984891
5025 Epoch: 4989 cost= 0.035069980
5026 Epoch: 4990 cost= 0.035521522
5027 Epoch: 4991 cost= 0.035936017
5028 Epoch: 4992 cost= 0.035724510
5029 Epoch: 4993 cost= 0.037124425
5030 Epoch: 4994 cost= 0.036414932
5031 Epoch: 4995 cost= 0.038013458
5032 Epoch: 4996 cost= 0.033721939
5033 Epoch: 4997 cost= 0.035845682
5034 Epoch: 4998 cost= 0.036138628
```

```
5035 Epoch: 4999 cost= 0.034484439
5036 Epoch: 5000 cost= 0.034881014
5037 Epoch: 5001 cost= 0.036238268
5038 Epoch: 5002 cost= 0.036227711
5039 Epoch: 5003 cost= 0.036371689
5040 Epoch: 5004 cost= 0.035940126
5041 Epoch: 5005 cost= 0.035100989
5042 Epoch: 5006 cost= 0.034308050
5043 Epoch: 5007 cost= 0.035738274
5044 Epoch: 5008 cost= 0.033102941
5045 Epoch: 5009 cost= 0.034785546
5046 Epoch: 5010 cost= 0.034746516
5047 Epoch: 5011 cost= 0.035232127
5048 Epoch: 5012 cost= 0.034031235
5049 Epoch: 5013 cost= 0.035716429
5050 Epoch: 5014 cost= 0.032242738
5051 Epoch: 5015 cost= 0.036506642
5052 Epoch: 5016 cost= 0.035146885
5053 Epoch: 5017 cost= 0.036077213
5054 Epoch: 5018 cost= 0.034187060
5055 Epoch: 5019 cost= 0.035621002
5056 Epoch: 5020 cost= 0.035076749
5057 Epoch: 5021 cost= 0.033487357
5058 Epoch: 5022 cost= 0.036397539
```

```
5059 Epoch: 5023 cost= 0.037229087
5060 Epoch: 5024 cost= 0.035086796
5061 Epoch: 5025 cost= 0.034921128
5062 Epoch: 5026 cost= 0.034883868
5063 Epoch: 5027 cost= 0.035291675
5064 Epoch: 5028 cost= 0.035486829
5065 Epoch: 5029 cost= 0.035298582
5066 Epoch: 5030 cost= 0.033007450
5067 Epoch: 5031 cost= 0.034044802
5068 Epoch: 5032 cost= 0.034494195
5069 Epoch: 5033 cost= 0.035963498
5070 Epoch: 5034 cost= 0.033400070
5071 Epoch: 5035 cost= 0.036022920
5072 Epoch: 5036 cost= 0.034508187
5073 Epoch: 5037 cost= 0.036513660
5074 Epoch: 5038 cost= 0.035464905
5075 Epoch: 5039 cost= 0.035891913
5076 Epoch: 5040 cost= 0.035268381
5077 Epoch: 5041 cost= 0.036276828
5078 Epoch: 5042 cost= 0.034608401
5079 Epoch: 5043 cost= 0.034595501
5080 Epoch: 5044 cost= 0.035336673
5081 Epoch: 5045 cost= 0.035601038
5082 Epoch: 5046 cost= 0.034621824
```



```
5083 Epoch: 5047 cost= 0.035589922
5084 Epoch: 5048 cost= 0.037149638
5085 Epoch: 5049 cost= 0.033738915
5086 Epoch: 5050 cost= 0.033634834
5087 Epoch: 5051 cost= 0.035747524
5088 Epoch: 5052 cost= 0.035875261
5089 Epoch: 5053 cost= 0.034914095
5090 Epoch: 5054 cost= 0.036390450
5091 Epoch: 5055 cost= 0.035960257
5092 Epoch: 5056 cost= 0.033517599
5093 Epoch: 5057 cost= 0.034431167
5094 Epoch: 5058 cost= 0.034076203
5095 Epoch: 5059 cost= 0.033951506
5096 Epoch: 5060 cost= 0.034411415
5097 Epoch: 5061 cost= 0.035476100
5098 Epoch: 5062 cost= 0.035034016
5099 Epoch: 5063 cost= 0.036114063
5100 Epoch: 5064 cost= 0.035330914
5101 Epoch: 5065 cost= 0.035501763
5102 Epoch: 5066 cost= 0.034924239
5103 Epoch: 5067 cost= 0.034768511
5104 Epoch: 5068 cost= 0.036581948
5105 Epoch: 5069 cost= 0.034905769
5106 Epoch: 5070 cost= 0.035330594
```



```
5107 Epoch: 5071 cost= 0.034543868
5108 Epoch: 5072 cost= 0.037231110
5109 Epoch: 5073 cost= 0.035073742
5110 Epoch: 5074 cost= 0.038520318
5111 Epoch: 5075 cost= 0.035053480
5112 Epoch: 5076 cost= 0.036288347
5113 Epoch: 5077 cost= 0.033692781
5114 Epoch: 5078 cost= 0.036353126
5115 Epoch: 5079 cost= 0.033922795
5116 Epoch: 5080 cost= 0.033604570
5117 Epoch: 5081 cost= 0.036015417
5118 Epoch: 5082 cost= 0.035272818
5119 Epoch: 5083 cost= 0.033987734
5120 Epoch: 5084 cost= 0.032829478
5121 Epoch: 5085 cost= 0.035075646
5122 Epoch: 5086 cost= 0.035985194
5123 Epoch: 5087 cost= 0.035348069
5124 Epoch: 5088 cost= 0.037917968
5125 Epoch: 5089 cost= 0.035705563
5126 Epoch: 5090 cost= 0.035117477
5127 Epoch: 5091 cost= 0.034134302
5128 Epoch: 5092 cost= 0.034894455
5129 Epoch: 5093 cost= 0.035919156
5130 Epoch: 5094 cost= 0.034911782
```

```
5131 Epoch: 5095 cost= 0.033736050
5132 Epoch: 5096 cost= 0.035229191
5133 Epoch: 5097 cost= 0.034409698
5134 Epoch: 5098 cost= 0.034216963
5135 Epoch: 5099 cost= 0.034575060
5136 Epoch: 5100 cost= 0.035813458
5137 Epoch: 5101 cost= 0.035661440
5138 Epoch: 5102 cost= 0.035315689
5139 Epoch: 5103 cost= 0.034354705
5140 Epoch: 5104 cost= 0.032353640
5141 Epoch: 5105 cost= 0.034198232
5142 Epoch: 5106 cost= 0.035442565
5143 Epoch: 5107 cost= 0.034701638
5144 Epoch: 5108 cost= 0.034042336
5145 Epoch: 5109 cost= 0.035357915
5146 Epoch: 5110 cost= 0.033670437
5147 Epoch: 5111 cost= 0.034805406
5148 Epoch: 5112 cost= 0.035569254
5149 Epoch: 5113 cost= 0.035258457
5150 Epoch: 5114 cost= 0.035515755
5151 Epoch: 5115 cost= 0.036897615
5152 Epoch: 5116 cost= 0.035159748
5153 Epoch: 5117 cost= 0.034492731
5154 Epoch: 5118 cost= 0.035171885
```

```
5155 Epoch: 5119 cost= 0.033794556
5156 Epoch: 5120 cost= 0.035769440
5157 Epoch: 5121 cost= 0.036748968
5158 Epoch: 5122 cost= 0.035155140
5159 Epoch: 5123 cost= 0.034248151
5160 Epoch: 5124 cost= 0.036393598
5161 Epoch: 5125 cost= 0.034999546
5162 Epoch: 5126 cost= 0.033669747
5163 Epoch: 5127 cost= 0.035087742
5164 Epoch: 5128 cost= 0.033210475
5165 Epoch: 5129 cost= 0.034586176
5166 Epoch: 5130 cost= 0.034894910
5167 Epoch: 5131 cost= 0.035936262
5168 Epoch: 5132 cost= 0.034893900
5169 Epoch: 5133 cost= 0.033531740
5170 Epoch: 5134 cost= 0.036078792
5171 Epoch: 5135 cost= 0.034458674
5172 Epoch: 5136 cost= 0.034433935
5173 Epoch: 5137 cost= 0.033288062
5174 Epoch: 5138 cost= 0.035250485
5175 Epoch: 5139 cost= 0.035231069
5176 Epoch: 5140 cost= 0.035987809
5177 Epoch: 5141 cost= 0.033873104
5178 Epoch: 5142 cost= 0.033362400
```

```
5179 Epoch: 5143 cost= 0.036402877
5180 Epoch: 5144 cost= 0.034312740
5181 Epoch: 5145 cost= 0.034800354
5182 Epoch: 5146 cost= 0.033589017
5183 Epoch: 5147 cost= 0.036220238
5184 Epoch: 5148 cost= 0.034785125
5185 Epoch: 5149 cost= 0.034745388
5186 Epoch: 5150 cost= 0.035086438
5187 Epoch: 5151 cost= 0.033744484
5188 Epoch: 5152 cost= 0.033861917
5189 Epoch: 5153 cost= 0.035347644
5190 Epoch: 5154 cost= 0.035217851
5191 Epoch: 5155 cost= 0.033552948
5192 Epoch: 5156 cost= 0.033659346
5193 Epoch: 5157 cost= 0.031917661
5194 Epoch: 5158 cost= 0.036145754
5195 Epoch: 5159 cost= 0.034082819
5196 Epoch: 5160 cost= 0.037464552
5197 Epoch: 5161 cost= 0.034107745
5198 Epoch: 5162 cost= 0.035441380
5199 Epoch: 5163 cost= 0.037536468
5200 Epoch: 5164 cost= 0.034911320
5201 Epoch: 5165 cost= 0.034909777
5202 Epoch: 5166 cost= 0.033924051
```

```
5203 Epoch: 5167 cost= 0.035633378
5204 Epoch: 5168 cost= 0.035590556
5205 Epoch: 5169 cost= 0.034950271
5206 Epoch: 5170 cost= 0.032097772
5207 Epoch: 5171 cost= 0.034614600
5208 Epoch: 5172 cost= 0.033572722
5209 Epoch: 5173 cost= 0.034976836
5210 Epoch: 5174 cost= 0.035081286
5211 Epoch: 5175 cost= 0.035793968
5212 Epoch: 5176 cost= 0.035225581
5213 Epoch: 5177 cost= 0.034888901
5214 Epoch: 5178 cost= 0.034890451
5215 Epoch: 5179 cost= 0.033714451
5216 Epoch: 5180 cost= 0.034813773
5217 Epoch: 5181 cost= 0.034186378
5218 Epoch: 5182 cost= 0.035856806
5219 Epoch: 5183 cost= 0.034910768
5220 Epoch: 5184 cost= 0.032780062
5221 Epoch: 5185 cost= 0.035363410
5222 Epoch: 5186 cost= 0.035197429
5223 Epoch: 5187 cost= 0.034562994
5224 Epoch: 5188 cost= 0.035120420
5225 Epoch: 5189 cost= 0.035106055
5226 Epoch: 5190 cost= 0.035695184
```

```
5227 Epoch: 5191 cost= 0.036571983
5228 Epoch: 5192 cost= 0.035424117
5229 Epoch: 5193 cost= 0.036752101
5230 Epoch: 5194 cost= 0.034273986
5231 Epoch: 5195 cost= 0.033854473
5232 Epoch: 5196 cost= 0.033673640
5233 Epoch: 5197 cost= 0.036283541
5234 Epoch: 5198 cost= 0.033333927
5235 Epoch: 5199 cost= 0.034336362
5236 Epoch: 5200 cost= 0.033046886
5237 Epoch: 5201 cost= 0.036095798
5238 Epoch: 5202 cost= 0.036712077
5239 Epoch: 5203 cost= 0.034777712
5240 Epoch: 5204 cost= 0.035495531
5241 Epoch: 5205 cost= 0.035113048
5242 Epoch: 5206 cost= 0.035566542
5243 Epoch: 5207 cost= 0.035515796
5244 Epoch: 5208 cost= 0.033327676
5245 Epoch: 5209 cost= 0.035030708
5246 Epoch: 5210 cost= 0.032853868
5247 Epoch: 5211 cost= 0.034695975
5248 Epoch: 5212 cost= 0.035074659
5249 Epoch: 5213 cost= 0.034853846
5250 Epoch: 5214 cost= 0.034947850
```

```
5251 Epoch: 5215 cost= 0.036147177
5252 Epoch: 5216 cost= 0.035512514
5253 Epoch: 5217 cost= 0.034237076
5254 Epoch: 5218 cost= 0.034717347
5255 Epoch: 5219 cost= 0.033297673
5256 Epoch: 5220 cost= 0.036469791
5257 Epoch: 5221 cost= 0.033554103
5258 Epoch: 5222 cost= 0.033237319
5259 Epoch: 5223 cost= 0.035078589
5260 Epoch: 5224 cost= 0.036384951
5261 Epoch: 5225 cost= 0.035161227
5262 Epoch: 5226 cost= 0.034832604
5263 Epoch: 5227 cost= 0.035684835
5264 Epoch: 5228 cost= 0.035205312
5265 Epoch: 5229 cost= 0.034456637
5266 Epoch: 5230 cost= 0.032769807
5267 Epoch: 5231 cost= 0.035015125
5268 Epoch: 5232 cost= 0.034327701
5269 Epoch: 5233 cost= 0.036603972
5270 Epoch: 5234 cost= 0.034018341
5271 Epoch: 5235 cost= 0.033700131
5272 Epoch: 5236 cost= 0.035733599
5273 Epoch: 5237 cost= 0.035659049
5274 Epoch: 5238 cost= 0.033858161
```

```
5275 Epoch: 5239 cost= 0.036741968
5276 Epoch: 5240 cost= 0.037402768
5277 Epoch: 5241 cost= 0.035320230
5278 Epoch: 5242 cost= 0.035191067
5279 Epoch: 5243 cost= 0.035044257
5280 Epoch: 5244 cost= 0.035763670
5281 Epoch: 5245 cost= 0.034665614
5282 Epoch: 5246 cost= 0.035600729
5283 Epoch: 5247 cost= 0.033267230
5284 Epoch: 5248 cost= 0.033879362
5285 Epoch: 5249 cost= 0.033821817
5286 Epoch: 5250 cost= 0.034945443
5287 Epoch: 5251 cost= 0.035301361
5288 Epoch: 5252 cost= 0.033810485
5289 Epoch: 5253 cost= 0.034925092
5290 Epoch: 5254 cost= 0.036386270
5291 Epoch: 5255 cost= 0.033607043
5292 Epoch: 5256 cost= 0.034213543
5293 Epoch: 5257 cost= 0.035568353
5294 Epoch: 5258 cost= 0.034263398
5295 Epoch: 5259 cost= 0.035638295
5296 Epoch: 5260 cost= 0.035269007
5297 Epoch: 5261 cost= 0.034748606
5298 Epoch: 5262 cost= 0.036103856
```



```
5299 Epoch: 5263 cost= 0.035914652
5300 Epoch: 5264 cost= 0.034237467
5301 Epoch: 5265 cost= 0.033286583
5302 Epoch: 5266 cost= 0.035847880
5303 Epoch: 5267 cost= 0.034315974
5304 Epoch: 5268 cost= 0.035465203
5305 Epoch: 5269 cost= 0.033707976
5306 Epoch: 5270 cost= 0.033663873
5307 Epoch: 5271 cost= 0.035532296
5308 Epoch: 5272 cost= 0.033844918
5309 Epoch: 5273 cost= 0.033237465
5310 Epoch: 5274 cost= 0.033309106
5311 Epoch: 5275 cost= 0.033968411
5312 Epoch: 5276 cost= 0.036295898
5313 Epoch: 5277 cost= 0.034205593
5314 Epoch: 5278 cost= 0.034471501
5315 Epoch: 5279 cost= 0.033269893
5316 Epoch: 5280 cost= 0.036145095
5317 Epoch: 5281 cost= 0.034154810
5318 Epoch: 5282 cost= 0.035891257
5319 Epoch: 5283 cost= 0.031789899
5320 Epoch: 5284 cost= 0.035659119
5321 Epoch: 5285 cost= 0.035783906
5322 Epoch: 5286 cost= 0.035339329
```

```
5323 Epoch: 5287 cost= 0.033629302
5324 Epoch: 5288 cost= 0.035723634
5325 Epoch: 5289 cost= 0.035708714
5326 Epoch: 5290 cost= 0.034895614
5327 Epoch: 5291 cost= 0.034138460
5328 Epoch: 5292 cost= 0.035014804
5329 Epoch: 5293 cost= 0.034545455
5330 Epoch: 5294 cost= 0.033272985
5331 Epoch: 5295 cost= 0.035455894
5332 Epoch: 5296 cost= 0.035905138
5333 Epoch: 5297 cost= 0.033800658
5334 Epoch: 5298 cost= 0.033458944
5335 Epoch: 5299 cost= 0.034722850
5336 Epoch: 5300 cost= 0.033353928
5337 Epoch: 5301 cost= 0.035350718
5338 Epoch: 5302 cost= 0.034995764
5339 Epoch: 5303 cost= 0.034246966
5340 Epoch: 5304 cost= 0.035199575
5341 Epoch: 5305 cost= 0.035448421
5342 Epoch: 5306 cost= 0.034399003
5343 Epoch: 5307 cost= 0.033625297
5344 Epoch: 5308 cost= 0.035461601
5345 Epoch: 5309 cost= 0.033973865
5346 Epoch: 5310 cost= 0.032849934
```

```
5347 Epoch: 5311 cost= 0.035481241
5348 Epoch: 5312 cost= 0.036219556
5349 Epoch: 5313 cost= 0.037663728
5350 Epoch: 5314 cost= 0.033258401
5351 Epoch: 5315 cost= 0.035751283
5352 Epoch: 5316 cost= 0.034677524
5353 Epoch: 5317 cost= 0.034448668
5354 Epoch: 5318 cost= 0.036093190
5355 Epoch: 5319 cost= 0.033852983
5356 Epoch: 5320 cost= 0.035309941
5357 Epoch: 5321 cost= 0.033965915
5358 Epoch: 5322 cost= 0.034353342
5359 Epoch: 5323 cost= 0.034607280
5360 Epoch: 5324 cost= 0.034622651
5361 Epoch: 5325 cost= 0.035435364
5362 Epoch: 5326 cost= 0.034648765
5363 Epoch: 5327 cost= 0.033239201
5364 Epoch: 5328 cost= 0.033949401
5365 Epoch: 5329 cost= 0.035152316
5366 Epoch: 5330 cost= 0.035714276
5367 Epoch: 5331 cost= 0.035914999
5368 Epoch: 5332 cost= 0.035505444
5369 Epoch: 5333 cost= 0.034813102
5370 Epoch: 5334 cost= 0.034356192
```

```
5371 Epoch: 5335 cost= 0.035179097
5372 Epoch: 5336 cost= 0.034242827
5373 Epoch: 5337 cost= 0.034715176
5374 Epoch: 5338 cost= 0.033126540
5375 Epoch: 5339 cost= 0.033807568
5376 Epoch: 5340 cost= 0.035713762
5377 Epoch: 5341 cost= 0.035303969
5378 Epoch: 5342 cost= 0.036234558
5379 Epoch: 5343 cost= 0.034108587
5380 Epoch: 5344 cost= 0.034947108
5381 Epoch: 5345 cost= 0.034844510
5382 Epoch: 5346 cost= 0.034370560
5383 Epoch: 5347 cost= 0.035281479
5384 Epoch: 5348 cost= 0.036513168
5385 Epoch: 5349 cost= 0.035928823
5386 Epoch: 5350 cost= 0.036219340
5387 Epoch: 5351 cost= 0.035962030
5388 Epoch: 5352 cost= 0.032772861
5389 Epoch: 5353 cost= 0.034966473
5390 Epoch: 5354 cost= 0.033853646
5391 Epoch: 5355 cost= 0.033508800
5392 Epoch: 5356 cost= 0.034633838
5393 Epoch: 5357 cost= 0.033525139
5394 Epoch: 5358 cost= 0.033774540
```

```
5395 Epoch: 5359 cost= 0.033617370
5396 Epoch: 5360 cost= 0.034274273
5397 Epoch: 5361 cost= 0.036330584
5398 Epoch: 5362 cost= 0.034503158
5399 Epoch: 5363 cost= 0.036316264
5400 Epoch: 5364 cost= 0.034894239
5401 Epoch: 5365 cost= 0.035710245
5402 Epoch: 5366 cost= 0.034214117
5403 Epoch: 5367 cost= 0.032913107
5404 Epoch: 5368 cost= 0.035391901
5405 Epoch: 5369 cost= 0.034577638
5406 Epoch: 5370 cost= 0.032924965
5407 Epoch: 5371 cost= 0.035847519
5408 Epoch: 5372 cost= 0.035621516
5409 Epoch: 5373 cost= 0.034762237
5410 Epoch: 5374 cost= 0.033507917
5411 Epoch: 5375 cost= 0.034918755
5412 Epoch: 5376 cost= 0.035840649
5413 Epoch: 5377 cost= 0.034988392
5414 Epoch: 5378 cost= 0.034236532
5415 Epoch: 5379 cost= 0.033965167
5416 Epoch: 5380 cost= 0.035087898
5417 Epoch: 5381 cost= 0.033940990
5418 Epoch: 5382 cost= 0.034650877
```

```
5419 Epoch: 5383 cost= 0.033340294
5420 Epoch: 5384 cost= 0.035308901
5421 Epoch: 5385 cost= 0.034154564
5422 Epoch: 5386 cost= 0.035077482
5423 Epoch: 5387 cost= 0.033431452
5424 Epoch: 5388 cost= 0.035050396
5425 Epoch: 5389 cost= 0.036717508
5426 Epoch: 5390 cost= 0.035273101
5427 Epoch: 5391 cost= 0.033558253
5428 Epoch: 5392 cost= 0.034825902
5429 Epoch: 5393 cost= 0.031738725
5430 Epoch: 5394 cost= 0.035556648
5431 Epoch: 5395 cost= 0.035786901
5432 Epoch: 5396 cost= 0.032826684
5433 Epoch: 5397 cost= 0.037526514
5434 Epoch: 5398 cost= 0.037230719
5435 Epoch: 5399 cost= 0.035004281
5436 Epoch: 5400 cost= 0.033845630
5437 Epoch: 5401 cost= 0.033189140
5438 Epoch: 5402 cost= 0.033890773
5439 Epoch: 5403 cost= 0.034687124
5440 Epoch: 5404 cost= 0.031737484
5441 Epoch: 5405 cost= 0.034102887
5442 Epoch: 5406 cost= 0.033542223
```

```
5443 Epoch: 5407 cost= 0.033845276
5444 Epoch: 5408 cost= 0.034514505
5445 Epoch: 5409 cost= 0.037433356
5446 Epoch: 5410 cost= 0.034532372
5447 Epoch: 5411 cost= 0.034348603
5448 Epoch: 5412 cost= 0.034395028
5449 Epoch: 5413 cost= 0.034623541
5450 Epoch: 5414 cost= 0.035384364
5451 Epoch: 5415 cost= 0.036500163
5452 Epoch: 5416 cost= 0.036243085
5453 Epoch: 5417 cost= 0.035038564
5454 Epoch: 5418 cost= 0.037783802
5455 Epoch: 5419 cost= 0.035243768
5456 Epoch: 5420 cost= 0.034431744
5457 Epoch: 5421 cost= 0.035378657
5458 Epoch: 5422 cost= 0.034207545
5459 Epoch: 5423 cost= 0.035540108
5460 Epoch: 5424 cost= 0.033828925
5461 Epoch: 5425 cost= 0.034572486
5462 Epoch: 5426 cost= 0.034996524
5463 Epoch: 5427 cost= 0.034988612
5464 Epoch: 5428 cost= 0.035405912
5465 Epoch: 5429 cost= 0.036199972
5466 Epoch: 5430 cost= 0.033226307
```



```
5467 Epoch: 5431 cost= 0.035398360
5468 Epoch: 5432 cost= 0.035014741
5469 Epoch: 5433 cost= 0.034474164
5470 Epoch: 5434 cost= 0.033931162
5471 Epoch: 5435 cost= 0.033845738
5472 Epoch: 5436 cost= 0.034361154
5473 Epoch: 5437 cost= 0.034035839
5474 Epoch: 5438 cost= 0.034802798
5475 Epoch: 5439 cost= 0.034028653
5476 Epoch: 5440 cost= 0.035440657
5477 Epoch: 5441 cost= 0.032676876
5478 Epoch: 5442 cost= 0.033102311
5479 Epoch: 5443 cost= 0.033783160
5480 Epoch: 5444 cost= 0.035072386
5481 Epoch: 5445 cost= 0.034252420
5482 Epoch: 5446 cost= 0.035515822
5483 Epoch: 5447 cost= 0.034531027
5484 Epoch: 5448 cost= 0.034327198
5485 Epoch: 5449 cost= 0.035474606
5486 Epoch: 5450 cost= 0.033597779
5487 Epoch: 5451 cost= 0.035320681
5488 Epoch: 5452 cost= 0.036374912
5489 Epoch: 5453 cost= 0.033613041
5490 Epoch: 5454 cost= 0.035560206
```



```
5491 Epoch: 5455 cost= 0.035476893
5492 Epoch: 5456 cost= 0.034079012
5493 Epoch: 5457 cost= 0.035812568
5494 Epoch: 5458 cost= 0.033011653
5495 Epoch: 5459 cost= 0.034729499
5496 Epoch: 5460 cost= 0.036244780
5497 Epoch: 5461 cost= 0.035361018
5498 Epoch: 5462 cost= 0.034015615
5499 Epoch: 5463 cost= 0.036019113
5500 Epoch: 5464 cost= 0.034821603
5501 Epoch: 5465 cost= 0.034011651
5502 Epoch: 5466 cost= 0.036083099
5503 Epoch: 5467 cost= 0.033270538
5504 Epoch: 5468 cost= 0.033480614
5505 Epoch: 5469 cost= 0.036143795
5506 Epoch: 5470 cost= 0.034506734
5507 Epoch: 5471 cost= 0.033468060
5508 Epoch: 5472 cost= 0.033180900
5509 Epoch: 5473 cost= 0.034911271
5510 Epoch: 5474 cost= 0.033798903
5511 Epoch: 5475 cost= 0.036693860
5512 Epoch: 5476 cost= 0.034904651
5513 Epoch: 5477 cost= 0.035529356
5514 Epoch: 5478 cost= 0.033558432
```

```
5515 Epoch: 5479 cost= 0.035822053
5516 Epoch: 5480 cost= 0.036335755
5517 Epoch: 5481 cost= 0.036425117
5518 Epoch: 5482 cost= 0.033891398
5519 Epoch: 5483 cost= 0.034945682
5520 Epoch: 5484 cost= 0.034588244
5521 Epoch: 5485 cost= 0.032516692
5522 Epoch: 5486 cost= 0.034384571
5523 Epoch: 5487 cost= 0.035161372
5524 Epoch: 5488 cost= 0.035091955
5525 Epoch: 5489 cost= 0.035707232
5526 Epoch: 5490 cost= 0.032278780
5527 Epoch: 5491 cost= 0.035423722
5528 Epoch: 5492 cost= 0.035840515
5529 Epoch: 5493 cost= 0.033225335
5530 Epoch: 5494 cost= 0.034422655
5531 Epoch: 5495 cost= 0.035004281
5532 Epoch: 5496 cost= 0.034267571
5533 Epoch: 5497 cost= 0.032060806
5534 Epoch: 5498 cost= 0.034036651
5535 Epoch: 5499 cost= 0.034182560
5536 Epoch: 5500 cost= 0.035031218
5537 Epoch: 5501 cost= 0.037056975
5538 Epoch: 5502 cost= 0.035736907
```

```
5539 Epoch: 5503 cost= 0.032883946
5540 Epoch: 5504 cost= 0.034848515
5541 Epoch: 5505 cost= 0.033602446
5542 Epoch: 5506 cost= 0.034103531
5543 Epoch: 5507 cost= 0.035624661
5544 Epoch: 5508 cost= 0.032742798
5545 Epoch: 5509 cost= 0.035754796
5546 Epoch: 5510 cost= 0.034504820
5547 Epoch: 5511 cost= 0.035837509
5548 Epoch: 5512 cost= 0.036146581
5549 Epoch: 5513 cost= 0.034518212
5550 Epoch: 5514 cost= 0.033962373
5551 Epoch: 5515 cost= 0.034995046
5552 Epoch: 5516 cost= 0.035793893
5553 Epoch: 5517 cost= 0.035463892
5554 Epoch: 5518 cost= 0.032965355
5555 Epoch: 5519 cost= 0.034368392
5556 Epoch: 5520 cost= 0.035306949
5557 Epoch: 5521 cost= 0.034446348
5558 Epoch: 5522 cost= 0.034433141
5559 Epoch: 5523 cost= 0.034940016
5560 Epoch: 5524 cost= 0.034710549
5561 Epoch: 5525 cost= 0.033649180
5562 Epoch: 5526 cost= 0.035671588
```

```
5563 Epoch: 5527 cost= 0.033629477
5564 Epoch: 5528 cost= 0.033644136
5565 Epoch: 5529 cost= 0.033216223
5566 Epoch: 5530 cost= 0.033791285
5567 Epoch: 5531 cost= 0.034086335
5568 Epoch: 5532 cost= 0.035189502
5569 Epoch: 5533 cost= 0.035418797
5570 Epoch: 5534 cost= 0.034879934
5571 Epoch: 5535 cost= 0.033913456
5572 Epoch: 5536 cost= 0.034705766
5573 Epoch: 5537 cost= 0.035813905
5574 Epoch: 5538 cost= 0.032120492
5575 Epoch: 5539 cost= 0.034787804
5576 Epoch: 5540 cost= 0.035066165
5577 Epoch: 5541 cost= 0.036764983
5578 Epoch: 5542 cost= 0.034441736
5579 Epoch: 5543 cost= 0.034333266
5580 Epoch: 5544 cost= 0.034843545
5581 Epoch: 5545 cost= 0.034578271
5582 Epoch: 5546 cost= 0.034342941
5583 Epoch: 5547 cost= 0.034920711
5584 Epoch: 5548 cost= 0.034454554
5585 Epoch: 5549 cost= 0.035910178
5586 Epoch: 5550 cost= 0.032981202
```

```
5587 Epoch: 5551 cost= 0.037457794
5588 Epoch: 5552 cost= 0.033952605
5589 Epoch: 5553 cost= 0.035130408
5590 Epoch: 5554 cost= 0.035957146
5591 Epoch: 5555 cost= 0.035153538
5592 Epoch: 5556 cost= 0.033804972
5593 Epoch: 5557 cost= 0.035105824
5594 Epoch: 5558 cost= 0.033785466
5595 Epoch: 5559 cost= 0.036340997
5596 Epoch: 5560 cost= 0.033151850
5597 Epoch: 5561 cost= 0.034285057
5598 Epoch: 5562 cost= 0.033600036
5599 Epoch: 5563 cost= 0.035504155
5600 Epoch: 5564 cost= 0.037037678
5601 Epoch: 5565 cost= 0.036269378
5602 Epoch: 5566 cost= 0.033987846
5603 Epoch: 5567 cost= 0.033868968
5604 Epoch: 5568 cost= 0.036400016
5605 Epoch: 5569 cost= 0.035216030
5606 Epoch: 5570 cost= 0.036471490
5607 Epoch: 5571 cost= 0.034445081
5608 Epoch: 5572 cost= 0.035843279
5609 Epoch: 5573 cost= 0.034198008
5610 Epoch: 5574 cost= 0.035260178
```

```
5611 Epoch: 5575 cost= 0.034521803
5612 Epoch: 5576 cost= 0.035488982
5613 Epoch: 5577 cost= 0.033940803
5614 Epoch: 5578 cost= 0.034157801
5615 Epoch: 5579 cost= 0.035860844
5616 Epoch: 5580 cost= 0.033144701
5617 Epoch: 5581 cost= 0.034786850
5618 Epoch: 5582 cost= 0.034952223
5619 Epoch: 5583 cost= 0.035470329
5620 Epoch: 5584 cost= 0.035687730
5621 Epoch: 5585 cost= 0.033815295
5622 Epoch: 5586 cost= 0.036695350
5623 Epoch: 5587 cost= 0.034603965
5624 Epoch: 5588 cost= 0.036558487
5625 Epoch: 5589 cost= 0.035653118
5626 Epoch: 5590 cost= 0.035367671
5627 Epoch: 5591 cost= 0.035178617
5628 Epoch: 5592 cost= 0.037001975
5629 Epoch: 5593 cost= 0.033508327
5630 Epoch: 5594 cost= 0.035233233
5631 Epoch: 5595 cost= 0.035335854
5632 Epoch: 5596 cost= 0.034267936
5633 Epoch: 5597 cost= 0.034873214
5634 Epoch: 5598 cost= 0.037115283
```

```
5635 Epoch: 5599 cost= 0.035826020
5636 Epoch: 5600 cost= 0.035111703
5637 Epoch: 5601 cost= 0.037642237
5638 Epoch: 5602 cost= 0.036796328
5639 Epoch: 5603 cost= 0.035418242
5640 Epoch: 5604 cost= 0.032753512
5641 Epoch: 5605 cost= 0.036778286
5642 Epoch: 5606 cost= 0.035898261
5643 Epoch: 5607 cost= 0.034742858
5644 Epoch: 5608 cost= 0.037474137
5645 Epoch: 5609 cost= 0.035039883
5646 Epoch: 5610 cost= 0.034598123
5647 Epoch: 5611 cost= 0.035307441
5648 Epoch: 5612 cost= 0.033026952
5649 Epoch: 5613 cost= 0.034221936
5650 Epoch: 5614 cost= 0.033224292
5651 Epoch: 5615 cost= 0.035891853
5652 Epoch: 5616 cost= 0.036437351
5653 Epoch: 5617 cost= 0.035860091
5654 Epoch: 5618 cost= 0.035691723
5655 Epoch: 5619 cost= 0.036142569
5656 Epoch: 5620 cost= 0.036930706
5657 Epoch: 5621 cost= 0.033313338
5658 Epoch: 5622 cost= 0.034139451
```



```
5659 Epoch: 5623 cost= 0.035264444
5660 Epoch: 5624 cost= 0.035222832
5661 Epoch: 5625 cost= 0.035319202
5662 Epoch: 5626 cost= 0.033419590
5663 Epoch: 5627 cost= 0.035719316
5664 Epoch: 5628 cost= 0.036552925
5665 Epoch: 5629 cost= 0.035669953
5666 Epoch: 5630 cost= 0.034349155
5667 Epoch: 5631 cost= 0.034942932
5668 Epoch: 5632 cost= 0.033709038
5669 Epoch: 5633 cost= 0.033216666
5670 Epoch: 5634 cost= 0.035864938
5671 Epoch: 5635 cost= 0.035155404
5672 Epoch: 5636 cost= 0.036328074
5673 Epoch: 5637 cost= 0.033915389
5674 Epoch: 5638 cost= 0.035743743
5675 Epoch: 5639 cost= 0.036657613
5676 Epoch: 5640 cost= 0.032798916
5677 Epoch: 5641 cost= 0.033692479
5678 Epoch: 5642 cost= 0.034837037
5679 Epoch: 5643 cost= 0.036082357
5680 Epoch: 5644 cost= 0.034493133
5681 Epoch: 5645 cost= 0.034070332
5682 Epoch: 5646 cost= 0.034839045
```



```
5683 Epoch: 5647 cost= 0.036114421
5684 Epoch: 5648 cost= 0.035024013
5685 Epoch: 5649 cost= 0.035990115
5686 Epoch: 5650 cost= 0.033852719
5687 Epoch: 5651 cost= 0.035133619
5688 Epoch: 5652 cost= 0.034446016
5689 Epoch: 5653 cost= 0.033646423
5690 Epoch: 5654 cost= 0.035038628
5691 Epoch: 5655 cost= 0.034073476
5692 Epoch: 5656 cost= 0.033780050
5693 Epoch: 5657 cost= 0.035565019
5694 Epoch: 5658 cost= 0.036161363
5695 Epoch: 5659 cost= 0.035997655
5696 Epoch: 5660 cost= 0.036395419
5697 Epoch: 5661 cost= 0.036137048
5698 Epoch: 5662 cost= 0.035979848
5699 Epoch: 5663 cost= 0.034121953
5700 Epoch: 5664 cost= 0.036296327
5701 Epoch: 5665 cost= 0.036732897
5702 Epoch: 5666 cost= 0.036296919
5703 Epoch: 5667 cost= 0.036042154
5704 Epoch: 5668 cost= 0.035685860
5705 Epoch: 5669 cost= 0.034300979
5706 Epoch: 5670 cost= 0.033706401
```

```
5707 Epoch: 5671 cost= 0.032960117
5708 Epoch: 5672 cost= 0.035364915
5709 Epoch: 5673 cost= 0.033377536
5710 Epoch: 5674 cost= 0.035478469
5711 Epoch: 5675 cost= 0.033046726
5712 Epoch: 5676 cost= 0.033956323
5713 Epoch: 5677 cost= 0.034907605
5714 Epoch: 5678 cost= 0.035832614
5715 Epoch: 5679 cost= 0.035274792
5716 Epoch: 5680 cost= 0.034458499
5717 Epoch: 5681 cost= 0.035099778
5718 Epoch: 5682 cost= 0.034991499
5719 Epoch: 5683 cost= 0.032998864
5720 Epoch: 5684 cost= 0.035537675
5721 Epoch: 5685 cost= 0.036393862
5722 Epoch: 5686 cost= 0.036594737
5723 Epoch: 5687 cost= 0.034384102
5724 Epoch: 5688 cost= 0.036048893
5725 Epoch: 5689 cost= 0.035912637
5726 Epoch: 5690 cost= 0.035852067
5727 Epoch: 5691 cost= 0.034647338
5728 Epoch: 5692 cost= 0.033683654
5729 Epoch: 5693 cost= 0.035189547
5730 Epoch: 5694 cost= 0.035587009
```

```
5731 Epoch: 5695 cost= 0.035393592
5732 Epoch: 5696 cost= 0.034158919
5733 Epoch: 5697 cost= 0.034980576
5734 Epoch: 5698 cost= 0.034909189
5735 Epoch: 5699 cost= 0.034269709
5736 Epoch: 5700 cost= 0.035965256
5737 Epoch: 5701 cost= 0.034703769
5738 Epoch: 5702 cost= 0.035512850
5739 Epoch: 5703 cost= 0.034006786
5740 Epoch: 5704 cost= 0.033388283
5741 Epoch: 5705 cost= 0.035766575
5742 Epoch: 5706 cost= 0.036050860
5743 Epoch: 5707 cost= 0.034979187
5744 Epoch: 5708 cost= 0.035523109
5745 Epoch: 5709 cost= 0.034470525
5746 Epoch: 5710 cost= 0.033564661
5747 Epoch: 5711 cost= 0.034702744
5748 Epoch: 5712 cost= 0.031877905
5749 Epoch: 5713 cost= 0.034722894
5750 Epoch: 5714 cost= 0.035674203
5751 Epoch: 5715 cost= 0.034500528
5752 Epoch: 5716 cost= 0.033901695
5753 Epoch: 5717 cost= 0.033651114
5754 Epoch: 5718 cost= 0.034552772
```

```
5755 Epoch: 5719 cost= 0.034803793
5756 Epoch: 5720 cost= 0.034472805
5757 Epoch: 5721 cost= 0.034349434
5758 Epoch: 5722 cost= 0.036381718
5759 Epoch: 5723 cost= 0.035238996
5760 Epoch: 5724 cost= 0.036805950
5761 Epoch: 5725 cost= 0.033402771
5762 Epoch: 5726 cost= 0.034764476
5763 Epoch: 5727 cost= 0.034223255
5764 Epoch: 5728 cost= 0.035595052
5765 Epoch: 5729 cost= 0.032883368
5766 Epoch: 5730 cost= 0.035039172
5767 Epoch: 5731 cost= 0.036727130
5768 Epoch: 5732 cost= 0.033219200
5769 Epoch: 5733 cost= 0.033554874
5770 Epoch: 5734 cost= 0.033957385
5771 Epoch: 5735 cost= 0.035709314
5772 Epoch: 5736 cost= 0.034600627
5773 Epoch: 5737 cost= 0.035140719
5774 Epoch: 5738 cost= 0.035763547
5775 Epoch: 5739 cost= 0.035787173
5776 Epoch: 5740 cost= 0.036781304
5777 Epoch: 5741 cost= 0.035867933
5778 Epoch: 5742 cost= 0.036558524
```

```
5779 Epoch: 5743 cost= 0.036975980
5780 Epoch: 5744 cost= 0.035223033
5781 Epoch: 5745 cost= 0.032627005
5782 Epoch: 5746 cost= 0.034600168
5783 Epoch: 5747 cost= 0.034274116
5784 Epoch: 5748 cost= 0.033334922
5785 Epoch: 5749 cost= 0.034134407
5786 Epoch: 5750 cost= 0.035764795
5787 Epoch: 5751 cost= 0.034102060
5788 Epoch: 5752 cost= 0.034888357
5789 Epoch: 5753 cost= 0.034742225
5790 Epoch: 5754 cost= 0.037055179
5791 Epoch: 5755 cost= 0.033598900
5792 Epoch: 5756 cost= 0.034644481
5793 Epoch: 5757 cost= 0.036458306
5794 Epoch: 5758 cost= 0.034727033
5795 Epoch: 5759 cost= 0.034927633
5796 Epoch: 5760 cost= 0.033935685
5797 Epoch: 5761 cost= 0.034550354
5798 Epoch: 5762 cost= 0.035041273
5799 Epoch: 5763 cost= 0.035492405
5800 Epoch: 5764 cost= 0.035517786
5801 Epoch: 5765 cost= 0.038080253
5802 Epoch: 5766 cost= 0.036246274
```

```
5803 Epoch: 5767 cost= 0.034775373
5804 Epoch: 5768 cost= 0.036524441
5805 Epoch: 5769 cost= 0.034119055
5806 Epoch: 5770 cost= 0.036141697
5807 Epoch: 5771 cost= 0.036955852
5808 Epoch: 5772 cost= 0.033618875
5809 Epoch: 5773 cost= 0.033914920
5810 Epoch: 5774 cost= 0.035557225
5811 Epoch: 5775 cost= 0.033766732
5812 Epoch: 5776 cost= 0.035572156
5813 Epoch: 5777 cost= 0.034211330
5814 Epoch: 5778 cost= 0.034549598
5815 Epoch: 5779 cost= 0.034664564
5816 Epoch: 5780 cost= 0.032492351
5817 Epoch: 5781 cost= 0.035826810
5818 Epoch: 5782 cost= 0.033832010
5819 Epoch: 5783 cost= 0.034895934
5820 Epoch: 5784 cost= 0.032444708
5821 Epoch: 5785 cost= 0.035713289
5822 Epoch: 5786 cost= 0.035101872
5823 Epoch: 5787 cost= 0.034401629
5824 Epoch: 5788 cost= 0.035793498
5825 Epoch: 5789 cost= 0.033410981
5826 Epoch: 5790 cost= 0.035717778
```

```
5827 Epoch: 5791 cost= 0.034195200
5828 Epoch: 5792 cost= 0.035647854
5829 Epoch: 5793 cost= 0.034083314
5830 Epoch: 5794 cost= 0.033900291
5831 Epoch: 5795 cost= 0.035201233
5832 Epoch: 5796 cost= 0.034398105
5833 Epoch: 5797 cost= 0.035576571
5834 Epoch: 5798 cost= 0.034723174
5835 Epoch: 5799 cost= 0.035807561
5836 Epoch: 5800 cost= 0.034247104
5837 Epoch: 5801 cost= 0.035212673
5838 Epoch: 5802 cost= 0.032731201
5839 Epoch: 5803 cost= 0.035140630
5840 Epoch: 5804 cost= 0.034078211
5841 Epoch: 5805 cost= 0.036651179
5842 Epoch: 5806 cost= 0.035551079
5843 Epoch: 5807 cost= 0.033681754
5844 Epoch: 5808 cost= 0.034447875
5845 Epoch: 5809 cost= 0.034707010
5846 Epoch: 5810 cost= 0.037091855
5847 Epoch: 5811 cost= 0.033778299
5848 Epoch: 5812 cost= 0.032083370
5849 Epoch: 5813 cost= 0.035394527
5850 Epoch: 5814 cost= 0.034558009
```

```
5851 Epoch: 5815 cost= 0.035106886
5852 Epoch: 5816 cost= 0.036208704
5853 Epoch: 5817 cost= 0.035339419
5854 Epoch: 5818 cost= 0.033645697
5855 Epoch: 5819 cost= 0.036249220
5856 Epoch: 5820 cost= 0.034367215
5857 Epoch: 5821 cost= 0.033655416
5858 Epoch: 5822 cost= 0.035327654
5859 Epoch: 5823 cost= 0.035481710
5860 Epoch: 5824 cost= 0.034616515
5861 Epoch: 5825 cost= 0.034813043
5862 Epoch: 5826 cost= 0.032661952
5863 Epoch: 5827 cost= 0.034771953
5864 Epoch: 5828 cost= 0.033555731
5865 Epoch: 5829 cost= 0.035956305
5866 Epoch: 5830 cost= 0.034175683
5867 Epoch: 5831 cost= 0.033769079
5868 Epoch: 5832 cost= 0.033039406
5869 Epoch: 5833 cost= 0.034547921
5870 Epoch: 5834 cost= 0.036162224
5871 Epoch: 5835 cost= 0.034391023
5872 Epoch: 5836 cost= 0.035430081
5873 Epoch: 5837 cost= 0.034708712
5874 Epoch: 5838 cost= 0.034474734
```



```
5875 Epoch: 5839 cost= 0.035764053
5876 Epoch: 5840 cost= 0.034962680
5877 Epoch: 5841 cost= 0.033354234
5878 Epoch: 5842 cost= 0.033772472
5879 Epoch: 5843 cost= 0.035160065
5880 Epoch: 5844 cost= 0.033460073
5881 Epoch: 5845 cost= 0.034763936
5882 Epoch: 5846 cost= 0.032758519
5883 Epoch: 5847 cost= 0.032708220
5884 Epoch: 5848 cost= 0.033476070
5885 Epoch: 5849 cost= 0.037102494
5886 Epoch: 5850 cost= 0.034447365
5887 Epoch: 5851 cost= 0.035392471
5888 Epoch: 5852 cost= 0.036219031
5889 Epoch: 5853 cost= 0.035970192
5890 Epoch: 5854 cost= 0.035808757
5891 Epoch: 5855 cost= 0.035124782
5892 Epoch: 5856 cost= 0.034516469
5893 Epoch: 5857 cost= 0.033612460
5894 Epoch: 5858 cost= 0.035772566
5895 Epoch: 5859 cost= 0.033914570
5896 Epoch: 5860 cost= 0.035861019
5897 Epoch: 5861 cost= 0.036162604
5898 Epoch: 5862 cost= 0.034718208
```

```
5899 Epoch: 5863 cost= 0.034313716
5900 Epoch: 5864 cost= 0.034319468
5901 Epoch: 5865 cost= 0.034577969
5902 Epoch: 5866 cost= 0.033236492
5903 Epoch: 5867 cost= 0.037062198
5904 Epoch: 5868 cost= 0.033269506
5905 Epoch: 5869 cost= 0.035672553
5906 Epoch: 5870 cost= 0.034923971
5907 Epoch: 5871 cost= 0.034054846
5908 Epoch: 5872 cost= 0.034790851
5909 Epoch: 5873 cost= 0.033476636
5910 Epoch: 5874 cost= 0.032004960
5911 Epoch: 5875 cost= 0.033616163
5912 Epoch: 5876 cost= 0.034121677
5913 Epoch: 5877 cost= 0.036557764
5914 Epoch: 5878 cost= 0.033600286
5915 Epoch: 5879 cost= 0.035791442
5916 Epoch: 5880 cost= 0.034849610
5917 Epoch: 5881 cost= 0.031191355
5918 Epoch: 5882 cost= 0.033961557
5919 Epoch: 5883 cost= 0.033097573
5920 Epoch: 5884 cost= 0.032931548
5921 Epoch: 5885 cost= 0.034863587
5922 Epoch: 5886 cost= 0.034000333
```

```
5923 Epoch: 5887 cost= 0.032809786
5924 Epoch: 5888 cost= 0.036619581
5925 Epoch: 5889 cost= 0.035767768
5926 Epoch: 5890 cost= 0.034497194
5927 Epoch: 5891 cost= 0.036493301
5928 Epoch: 5892 cost= 0.034579933
5929 Epoch: 5893 cost= 0.034897931
5930 Epoch: 5894 cost= 0.033288803
5931 Epoch: 5895 cost= 0.034438547
5932 Epoch: 5896 cost= 0.034124143
5933 Epoch: 5897 cost= 0.035991933
5934 Epoch: 5898 cost= 0.033119425
5935 Epoch: 5899 cost= 0.032962143
5936 Epoch: 5900 cost= 0.033858199
5937 Epoch: 5901 cost= 0.035463411
5938 Epoch: 5902 cost= 0.035808641
5939 Epoch: 5903 cost= 0.033898555
5940 Epoch: 5904 cost= 0.034310326
5941 Epoch: 5905 cost= 0.032452166
5942 Epoch: 5906 cost= 0.034884423
5943 Epoch: 5907 cost= 0.032282587
5944 Epoch: 5908 cost= 0.033884052
5945 Epoch: 5909 cost= 0.032661427
5946 Epoch: 5910 cost= 0.033811681
```

```
5947 Epoch: 5911 cost= 0.035263725
5948 Epoch: 5912 cost= 0.035253711
5949 Epoch: 5913 cost= 0.034153663
5950 Epoch: 5914 cost= 0.033796344
5951 Epoch: 5915 cost= 0.036173824
5952 Epoch: 5916 cost= 0.034381438
5953 Epoch: 5917 cost= 0.034682997
5954 Epoch: 5918 cost= 0.033972062
5955 Epoch: 5919 cost= 0.033318289
5956 Epoch: 5920 cost= 0.034855302
5957 Epoch: 5921 cost= 0.033476237
5958 Epoch: 5922 cost= 0.033790831
5959 Epoch: 5923 cost= 0.035799358
5960 Epoch: 5924 cost= 0.032576773
5961 Epoch: 5925 cost= 0.033841956
5962 Epoch: 5926 cost= 0.032841973
5963 Epoch: 5927 cost= 0.032887883
5964 Epoch: 5928 cost= 0.035250869
5965 Epoch: 5929 cost= 0.034036003
5966 Epoch: 5930 cost= 0.033077862
5967 Epoch: 5931 cost= 0.036111668
5968 Epoch: 5932 cost= 0.035092976
5969 Epoch: 5933 cost= 0.033127367
5970 Epoch: 5934 cost= 0.033076145
```

```
5971 Epoch: 5935 cost= 0.031875465
5972 Epoch: 5936 cost= 0.035691626
5973 Epoch: 5937 cost= 0.034030925
5974 Epoch: 5938 cost= 0.035570368
5975 Epoch: 5939 cost= 0.034693811
5976 Epoch: 5940 cost= 0.033410762
5977 Epoch: 5941 cost= 0.035680793
5978 Epoch: 5942 cost= 0.032369550
5979 Epoch: 5943 cost= 0.035508811
5980 Epoch: 5944 cost= 0.034673519
5981 Epoch: 5945 cost= 0.032455027
5982 Epoch: 5946 cost= 0.033567715
5983 Epoch: 5947 cost= 0.033693314
5984 Epoch: 5948 cost= 0.034943614
5985 Epoch: 5949 cost= 0.034981355
5986 Epoch: 5950 cost= 0.034956004
5987 Epoch: 5951 cost= 0.034212992
5988 Epoch: 5952 cost= 0.034367338
5989 Epoch: 5953 cost= 0.036185898
5990 Epoch: 5954 cost= 0.034565192
5991 Epoch: 5955 cost= 0.035296667
5992 Epoch: 5956 cost= 0.035901543
5993 Epoch: 5957 cost= 0.034590434
5994 Epoch: 5958 cost= 0.033686694
```

```
5995 Epoch: 5959 cost= 0.035031274
5996 Epoch: 5960 cost= 0.035081502
5997 Epoch: 5961 cost= 0.033598904
5998 Epoch: 5962 cost= 0.033653703
5999 Epoch: 5963 cost= 0.037466954
6000 Epoch: 5964 cost= 0.034287717
6001 Epoch: 5965 cost= 0.036177512
6002 Epoch: 5966 cost= 0.033158828
6003 Epoch: 5967 cost= 0.035115879
6004 Epoch: 5968 cost= 0.036095724
6005 Epoch: 5969 cost= 0.034980565
6006 Epoch: 5970 cost= 0.032820832
6007 Epoch: 5971 cost= 0.036109339
6008 Epoch: 5972 cost= 0.035684813
6009 Epoch: 5973 cost= 0.034952365
6010 Epoch: 5974 cost= 0.035687171
6011 Epoch: 5975 cost= 0.034150366
6012 Epoch: 5976 cost= 0.035141803
6013 Epoch: 5977 cost= 0.035190340
6014 Epoch: 5978 cost= 0.033551574
6015 Epoch: 5979 cost= 0.036630251
6016 Epoch: 5980 cost= 0.032746345
6017 Epoch: 5981 cost= 0.034533892
6018 Epoch: 5982 cost= 0.034155317
```

```
6019 Epoch: 5983 cost= 0.037438482
6020 Epoch: 5984 cost= 0.034887031
6021 Epoch: 5985 cost= 0.035796519
6022 Epoch: 5986 cost= 0.034009632
6023 Epoch: 5987 cost= 0.034470968
6024 Epoch: 5988 cost= 0.035838213
6025 Epoch: 5989 cost= 0.034353144
6026 Epoch: 5990 cost= 0.033380441
6027 Epoch: 5991 cost= 0.035096567
6028 Epoch: 5992 cost= 0.033815462
6029 Epoch: 5993 cost= 0.034824010
6030 Epoch: 5994 cost= 0.034589916
6031 Epoch: 5995 cost= 0.034076616
6032 Epoch: 5996 cost= 0.033977050
6033 Epoch: 5997 cost= 0.034321122
6034 Epoch: 5998 cost= 0.035808675
6035 Epoch: 5999 cost= 0.035413731
6036 Epoch: 6000 cost= 0.034822848
6037 Epoch: 6001 cost= 0.034797750
6038 Epoch: 6002 cost= 0.034589455
6039 Epoch: 6003 cost= 0.036117509
6040 Epoch: 6004 cost= 0.034578487
6041 Epoch: 6005 cost= 0.035617515
6042 Epoch: 6006 cost= 0.035598055
```



```
6043 Epoch: 6007 cost= 0.034918893
6044 Epoch: 6008 cost= 0.037017263
6045 Epoch: 6009 cost= 0.035157867
6046 Epoch: 6010 cost= 0.035421036
6047 Epoch: 6011 cost= 0.035178874
6048 Epoch: 6012 cost= 0.034187406
6049 Epoch: 6013 cost= 0.034405023
6050 Epoch: 6014 cost= 0.036251780
6051 Epoch: 6015 cost= 0.034971591
6052 Epoch: 6016 cost= 0.034499291
6053 Epoch: 6017 cost= 0.036204353
6054 Epoch: 6018 cost= 0.033672124
6055 Epoch: 6019 cost= 0.034584843
6056 Epoch: 6020 cost= 0.034934610
6057 Epoch: 6021 cost= 0.034452036
6058 Epoch: 6022 cost= 0.035031665
6059 Epoch: 6023 cost= 0.034783158
6060 Epoch: 6024 cost= 0.035078164
6061 Epoch: 6025 cost= 0.035505373
6062 Epoch: 6026 cost= 0.036564723
6063 Epoch: 6027 cost= 0.035575721
6064 Epoch: 6028 cost= 0.035398800
6065 Epoch: 6029 cost= 0.034730081
6066 Epoch: 6030 cost= 0.034677099
```



```
6067 Epoch: 6031 cost= 0.034839880
6068 Epoch: 6032 cost= 0.036718372
6069 Epoch: 6033 cost= 0.034290187
6070 Epoch: 6034 cost= 0.035094403
6071 Epoch: 6035 cost= 0.034359984
6072 Epoch: 6036 cost= 0.033077668
6073 Epoch: 6037 cost= 0.034966711
6074 Epoch: 6038 cost= 0.033912349
6075 Epoch: 6039 cost= 0.034612771
6076 Epoch: 6040 cost= 0.034185447
6077 Epoch: 6041 cost= 0.034443364
6078 Epoch: 6042 cost= 0.032985356
6079 Epoch: 6043 cost= 0.035065617
6080 Epoch: 6044 cost= 0.036299109
6081 Epoch: 6045 cost= 0.034233153
6082 Epoch: 6046 cost= 0.034323197
6083 Epoch: 6047 cost= 0.035936821
6084 Epoch: 6048 cost= 0.033288315
6085 Epoch: 6049 cost= 0.037045944
6086 Epoch: 6050 cost= 0.033898763
6087 Epoch: 6051 cost= 0.035083596
6088 Epoch: 6052 cost= 0.036695644
6089 Epoch: 6053 cost= 0.033711292
6090 Epoch: 6054 cost= 0.034309674
```

```
6091 Epoch: 6055 cost= 0.036258593
6092 Epoch: 6056 cost= 0.034610815
6093 Epoch: 6057 cost= 0.034004129
6094 Epoch: 6058 cost= 0.034591202
6095 Epoch: 6059 cost= 0.035328753
6096 Epoch: 6060 cost= 0.033551045
6097 Epoch: 6061 cost= 0.036229767
6098 Epoch: 6062 cost= 0.034941379
6099 Epoch: 6063 cost= 0.034935649
6100 Epoch: 6064 cost= 0.033836976
6101 Epoch: 6065 cost= 0.032904144
6102 Epoch: 6066 cost= 0.034197282
6103 Epoch: 6067 cost= 0.035529163
6104 Epoch: 6068 cost= 0.035165183
6105 Epoch: 6069 cost= 0.035798486
6106 Epoch: 6070 cost= 0.034284122
6107 Epoch: 6071 cost= 0.032603372
6108 Epoch: 6072 cost= 0.034001678
6109 Epoch: 6073 cost= 0.033870008
6110 Epoch: 6074 cost= 0.034955714
6111 Epoch: 6075 cost= 0.035547815
6112 Epoch: 6076 cost= 0.034340948
6113 Epoch: 6077 cost= 0.032346204
6114 Epoch: 6078 cost= 0.036010891
```

```
6115 Epoch: 6079 cost= 0.035821568
6116 Epoch: 6080 cost= 0.035872370
6117 Epoch: 6081 cost= 0.033125803
6118 Epoch: 6082 cost= 0.033431541
6119 Epoch: 6083 cost= 0.035448276
6120 Epoch: 6084 cost= 0.036130104
6121 Epoch: 6085 cost= 0.035510674
6122 Epoch: 6086 cost= 0.034759812
6123 Epoch: 6087 cost= 0.033667590
6124 Epoch: 6088 cost= 0.033945523
6125 Epoch: 6089 cost= 0.037050616
6126 Epoch: 6090 cost= 0.035363499
6127 Epoch: 6091 cost= 0.033496838
6128 Epoch: 6092 cost= 0.035024293
6129 Epoch: 6093 cost= 0.034560803
6130 Epoch: 6094 cost= 0.036481850
6131 Epoch: 6095 cost= 0.032667160
6132 Epoch: 6096 cost= 0.036555465
6133 Epoch: 6097 cost= 0.035175897
6134 Epoch: 6098 cost= 0.034786876
6135 Epoch: 6099 cost= 0.033911906
6136 Epoch: 6100 cost= 0.033820480
6137 Epoch: 6101 cost= 0.034287751
6138 Epoch: 6102 cost= 0.035601523
```

```
6139 Epoch: 6103 cost= 0.033874664
6140 Epoch: 6104 cost= 0.033919744
6141 Epoch: 6105 cost= 0.033423610
6142 Epoch: 6106 cost= 0.033397805
6143 Epoch: 6107 cost= 0.033423934
6144 Epoch: 6108 cost= 0.033927582
6145 Epoch: 6109 cost= 0.035289928
6146 Epoch: 6110 cost= 0.036967020
6147 Epoch: 6111 cost= 0.035246469
6148 Epoch: 6112 cost= 0.034650419
6149 Epoch: 6113 cost= 0.037160587
6150 Epoch: 6114 cost= 0.036345582
6151 Epoch: 6115 cost= 0.034829848
6152 Epoch: 6116 cost= 0.035362661
6153 Epoch: 6117 cost= 0.035565246
6154 Epoch: 6118 cost= 0.035481088
6155 Epoch: 6119 cost= 0.035373446
6156 Epoch: 6120 cost= 0.035761937
6157 Epoch: 6121 cost= 0.036467090
6158 Epoch: 6122 cost= 0.035218321
6159 Epoch: 6123 cost= 0.035059623
6160 Epoch: 6124 cost= 0.034719925
6161 Epoch: 6125 cost= 0.035041265
6162 Epoch: 6126 cost= 0.035677370
```

```
6163 Epoch: 6127 cost= 0.036435284
6164 Epoch: 6128 cost= 0.035203949
6165 Epoch: 6129 cost= 0.037378363
6166 Epoch: 6130 cost= 0.036109865
6167 Epoch: 6131 cost= 0.037598766
6168 Epoch: 6132 cost= 0.032749489
6169 Epoch: 6133 cost= 0.033573180
6170 Epoch: 6134 cost= 0.037175357
6171 Epoch: 6135 cost= 0.035660543
6172 Epoch: 6136 cost= 0.035860669
6173 Epoch: 6137 cost= 0.035478204
6174 Epoch: 6138 cost= 0.036724545
6175 Epoch: 6139 cost= 0.035208706
6176 Epoch: 6140 cost= 0.035822358
6177 Epoch: 6141 cost= 0.035242416
6178 Epoch: 6142 cost= 0.035907049
6179 Epoch: 6143 cost= 0.034486443
6180 Epoch: 6144 cost= 0.035461403
6181 Epoch: 6145 cost= 0.036753431
6182 Epoch: 6146 cost= 0.036607388
6183 Epoch: 6147 cost= 0.033981521
6184 Epoch: 6148 cost= 0.036687162
6185 Epoch: 6149 cost= 0.036346216
6186 Epoch: 6150 cost= 0.034902170
```

```
6187 Epoch: 6151 cost= 0.036036171
6188 Epoch: 6152 cost= 0.035364345
6189 Epoch: 6153 cost= 0.033256087
6190 Epoch: 6154 cost= 0.033725251
6191 Epoch: 6155 cost= 0.034411825
6192 Epoch: 6156 cost= 0.035995226
6193 Epoch: 6157 cost= 0.033350024
6194 Epoch: 6158 cost= 0.034101665
6195 Epoch: 6159 cost= 0.036862902
6196 Epoch: 6160 cost= 0.037222844
6197 Epoch: 6161 cost= 0.035519589
6198 Epoch: 6162 cost= 0.034795459
6199 Epoch: 6163 cost= 0.035463601
6200 Epoch: 6164 cost= 0.036594927
6201 Epoch: 6165 cost= 0.037436523
6202 Epoch: 6166 cost= 0.037535571
6203 Epoch: 6167 cost= 0.035217367
6204 Epoch: 6168 cost= 0.036497656
6205 Epoch: 6169 cost= 0.037420399
6206 Epoch: 6170 cost= 0.033883471
6207 Epoch: 6171 cost= 0.034617301
6208 Epoch: 6172 cost= 0.035187058
6209 Epoch: 6173 cost= 0.035324920
6210 Epoch: 6174 cost= 0.037173361
```

```
6211 Epoch: 6175 cost= 0.036066473
6212 Epoch: 6176 cost= 0.033361737
6213 Epoch: 6177 cost= 0.037037883
6214 Epoch: 6178 cost= 0.035603981
6215 Epoch: 6179 cost= 0.034127884
6216 Epoch: 6180 cost= 0.034207966
6217 Epoch: 6181 cost= 0.036504682
6218 Epoch: 6182 cost= 0.035443738
6219 Epoch: 6183 cost= 0.036098093
6220 Epoch: 6184 cost= 0.036595207
6221 Epoch: 6185 cost= 0.034513395
6222 Epoch: 6186 cost= 0.035930559
6223 Epoch: 6187 cost= 0.034198370
6224 Epoch: 6188 cost= 0.035724666
6225 Epoch: 6189 cost= 0.034834120
6226 Epoch: 6190 cost= 0.035964012
6227 Epoch: 6191 cost= 0.033343051
6228 Epoch: 6192 cost= 0.034311146
6229 Epoch: 6193 cost= 0.036917102
6230 Epoch: 6194 cost= 0.033115659
6231 Epoch: 6195 cost= 0.036747571
6232 Epoch: 6196 cost= 0.032031335
6233 Epoch: 6197 cost= 0.036150858
6234 Epoch: 6198 cost= 0.033361640
```



```
6235 Epoch: 6199 cost= 0.033224657
6236 Epoch: 6200 cost= 0.034891412
6237 Epoch: 6201 cost= 0.033773936
6238 Epoch: 6202 cost= 0.034825083
6239 Epoch: 6203 cost= 0.037416063
6240 Epoch: 6204 cost= 0.033813082
6241 Epoch: 6205 cost= 0.036173921
6242 Epoch: 6206 cost= 0.035770468
6243 Epoch: 6207 cost= 0.034038667
6244 Epoch: 6208 cost= 0.036863636
6245 Epoch: 6209 cost= 0.035781741
6246 Epoch: 6210 cost= 0.034514781
6247 Epoch: 6211 cost= 0.033780731
6248 Epoch: 6212 cost= 0.036229685
6249 Epoch: 6213 cost= 0.033768680
6250 Epoch: 6214 cost= 0.035525940
6251 Epoch: 6215 cost= 0.034661796
6252 Epoch: 6216 cost= 0.033903308
6253 Epoch: 6217 cost= 0.035656948
6254 Epoch: 6218 cost= 0.035208654
6255 Epoch: 6219 cost= 0.032968327
6256 Epoch: 6220 cost= 0.033388223
6257 Epoch: 6221 cost= 0.035434198
6258 Epoch: 6222 cost= 0.034786437
```



```
6259 Epoch: 6223 cost= 0.034956455
6260 Epoch: 6224 cost= 0.033887334
6261 Epoch: 6225 cost= 0.034148727
6262 Epoch: 6226 cost= 0.034178119
6263 Epoch: 6227 cost= 0.035934746
6264 Epoch: 6228 cost= 0.032943666
6265 Epoch: 6229 cost= 0.035226118
6266 Epoch: 6230 cost= 0.034310441
6267 Epoch: 6231 cost= 0.034607694
6268 Epoch: 6232 cost= 0.034357399
6269 Epoch: 6233 cost= 0.035892650
6270 Epoch: 6234 cost= 0.037257738
6271 Epoch: 6235 cost= 0.035884894
6272 Epoch: 6236 cost= 0.033956449
6273 Epoch: 6237 cost= 0.034788743
6274 Epoch: 6238 cost= 0.036215417
6275 Epoch: 6239 cost= 0.034265392
6276 Epoch: 6240 cost= 0.037217971
6277 Epoch: 6241 cost= 0.037651479
6278 Epoch: 6242 cost= 0.035893708
6279 Epoch: 6243 cost= 0.033241846
6280 Epoch: 6244 cost= 0.032268845
6281 Epoch: 6245 cost= 0.035018742
6282 Epoch: 6246 cost= 0.033976901
```

```
6283 Epoch: 6247 cost= 0.034930360
6284 Epoch: 6248 cost= 0.034728955
6285 Epoch: 6249 cost= 0.035593241
6286 Epoch: 6250 cost= 0.036206726
6287 Epoch: 6251 cost= 0.034338757
6288 Epoch: 6252 cost= 0.034717016
6289 Epoch: 6253 cost= 0.034090757
6290 Epoch: 6254 cost= 0.035106327
6291 Epoch: 6255 cost= 0.037278187
6292 Epoch: 6256 cost= 0.035000149
6293 Epoch: 6257 cost= 0.034662925
6294 Epoch: 6258 cost= 0.034196679
6295 Epoch: 6259 cost= 0.035658155
6296 Epoch: 6260 cost= 0.033936504
6297 Epoch: 6261 cost= 0.036647491
6298 Epoch: 6262 cost= 0.037613016
6299 Epoch: 6263 cost= 0.035236418
6300 Epoch: 6264 cost= 0.035738219
6301 Epoch: 6265 cost= 0.034083530
6302 Epoch: 6266 cost= 0.034525618
6303 Epoch: 6267 cost= 0.035853907
6304 Epoch: 6268 cost= 0.033579122
6305 Epoch: 6269 cost= 0.034960303
6306 Epoch: 6270 cost= 0.034467410
```

```
6307 Epoch: 6271 cost= 0.033445101
6308 Epoch: 6272 cost= 0.034964886
6309 Epoch: 6273 cost= 0.033998102
6310 Epoch: 6274 cost= 0.034131467
6311 Epoch: 6275 cost= 0.033222850
6312 Epoch: 6276 cost= 0.035022207
6313 Epoch: 6277 cost= 0.032773495
6314 Epoch: 6278 cost= 0.033121631
6315 Epoch: 6279 cost= 0.034753688
6316 Epoch: 6280 cost= 0.034508657
6317 Epoch: 6281 cost= 0.034387894
6318 Epoch: 6282 cost= 0.034180209
6319 Epoch: 6283 cost= 0.034275677
6320 Epoch: 6284 cost= 0.035377420
6321 Epoch: 6285 cost= 0.035462718
6322 Epoch: 6286 cost= 0.033262320
6323 Epoch: 6287 cost= 0.036090575
6324 Epoch: 6288 cost= 0.033901043
6325 Epoch: 6289 cost= 0.035206862
6326 Epoch: 6290 cost= 0.034627162
6327 Epoch: 6291 cost= 0.035921399
6328 Epoch: 6292 cost= 0.033435620
6329 Epoch: 6293 cost= 0.035457660
6330 Epoch: 6294 cost= 0.034690715
```

```
6331 Epoch: 6295 cost= 0.033964254
6332 Epoch: 6296 cost= 0.032829329
6333 Epoch: 6297 cost= 0.033845127
6334 Epoch: 6298 cost= 0.033923935
6335 Epoch: 6299 cost= 0.034324974
6336 Epoch: 6300 cost= 0.032798726
6337 Epoch: 6301 cost= 0.033501398
6338 Epoch: 6302 cost= 0.038301863
6339 Epoch: 6303 cost= 0.035727344
6340 Epoch: 6304 cost= 0.034961548
6341 Epoch: 6305 cost= 0.035417154
6342 Epoch: 6306 cost= 0.034590241
6343 Epoch: 6307 cost= 0.034282107
6344 Epoch: 6308 cost= 0.033566870
6345 Epoch: 6309 cost= 0.034962185
6346 Epoch: 6310 cost= 0.035404969
6347 Epoch: 6311 cost= 0.034594197
6348 Epoch: 6312 cost= 0.036191225
6349 Epoch: 6313 cost= 0.035511114
6350 Epoch: 6314 cost= 0.035618421
6351 Epoch: 6315 cost= 0.037115317
6352 Epoch: 6316 cost= 0.034782335
6353 Epoch: 6317 cost= 0.035565119
6354 Epoch: 6318 cost= 0.035334837
```

```
6355 Epoch: 6319 cost= 0.035396680
6356 Epoch: 6320 cost= 0.035581466
6357 Epoch: 6321 cost= 0.037433829
6358 Epoch: 6322 cost= 0.035544235
6359 Epoch: 6323 cost= 0.034251433
6360 Epoch: 6324 cost= 0.035078149
6361 Epoch: 6325 cost= 0.034877144
6362 Epoch: 6326 cost= 0.036267489
6363 Epoch: 6327 cost= 0.032763306
6364 Epoch: 6328 cost= 0.034509480
6365 Epoch: 6329 cost= 0.034104969
6366 Epoch: 6330 cost= 0.033738576
6367 Epoch: 6331 cost= 0.033438932
6368 Epoch: 6332 cost= 0.034055550
6369 Epoch: 6333 cost= 0.036439922
6370 Epoch: 6334 cost= 0.034370001
6371 Epoch: 6335 cost= 0.035287965
6372 Epoch: 6336 cost= 0.032532353
6373 Epoch: 6337 cost= 0.034023874
6374 Epoch: 6338 cost= 0.034940921
6375 Epoch: 6339 cost= 0.033912987
6376 Epoch: 6340 cost= 0.036335107
6377 Epoch: 6341 cost= 0.035308078
6378 Epoch: 6342 cost= 0.034838714
```

```
6379 Epoch: 6343 cost= 0.034022264
6380 Epoch: 6344 cost= 0.035325609
6381 Epoch: 6345 cost= 0.035229478
6382 Epoch: 6346 cost= 0.033516835
6383 Epoch: 6347 cost= 0.033601169
6384 Epoch: 6348 cost= 0.036382966
6385 Epoch: 6349 cost= 0.036247522
6386 Epoch: 6350 cost= 0.036526158
6387 Epoch: 6351 cost= 0.035788745
6388 Epoch: 6352 cost= 0.034918457
6389 Epoch: 6353 cost= 0.035529483
6390 Epoch: 6354 cost= 0.035991121
6391 Epoch: 6355 cost= 0.034707289
6392 Epoch: 6356 cost= 0.034117002
6393 Epoch: 6357 cost= 0.035208590
6394 Epoch: 6358 cost= 0.034693927
6395 Epoch: 6359 cost= 0.033877615
6396 Epoch: 6360 cost= 0.036109474
6397 Epoch: 6361 cost= 0.033661991
6398 Epoch: 6362 cost= 0.033728365
6399 Epoch: 6363 cost= 0.036514759
6400 Epoch: 6364 cost= 0.033281345
6401 Epoch: 6365 cost= 0.034489375
6402 Epoch: 6366 cost= 0.034796640
```

```
6403 Epoch: 6367 cost= 0.035012130
6404 Epoch: 6368 cost= 0.035086859
6405 Epoch: 6369 cost= 0.034870438
6406 Epoch: 6370 cost= 0.033608939
6407 Epoch: 6371 cost= 0.035696860
6408 Epoch: 6372 cost= 0.035539661
6409 Epoch: 6373 cost= 0.034123454
6410 Epoch: 6374 cost= 0.034529351
6411 Epoch: 6375 cost= 0.034120310
6412 Epoch: 6376 cost= 0.033613004
6413 Epoch: 6377 cost= 0.032496423
6414 Epoch: 6378 cost= 0.035480641
6415 Epoch: 6379 cost= 0.034319002
6416 Epoch: 6380 cost= 0.033349369
6417 Epoch: 6381 cost= 0.034675024
6418 Epoch: 6382 cost= 0.035608191
6419 Epoch: 6383 cost= 0.035270393
6420 Epoch: 6384 cost= 0.035192538
6421 Epoch: 6385 cost= 0.035929985
6422 Epoch: 6386 cost= 0.036162928
6423 Epoch: 6387 cost= 0.036880799
6424 Epoch: 6388 cost= 0.034575067
6425 Epoch: 6389 cost= 0.034414366
6426 Epoch: 6390 cost= 0.035051651
```



```
6427 Epoch: 6391 cost= 0.033249885
6428 Epoch: 6392 cost= 0.033848315
6429 Epoch: 6393 cost= 0.033641763
6430 Epoch: 6394 cost= 0.034128081
6431 Epoch: 6395 cost= 0.034285150
6432 Epoch: 6396 cost= 0.034162235
6433 Epoch: 6397 cost= 0.032585014
6434 Epoch: 6398 cost= 0.033946708
6435 Epoch: 6399 cost= 0.035732027
6436 Epoch: 6400 cost= 0.036111336
6437 Epoch: 6401 cost= 0.035051063
6438 Epoch: 6402 cost= 0.033676665
6439 Epoch: 6403 cost= 0.035096165
6440 Epoch: 6404 cost= 0.034331892
6441 Epoch: 6405 cost= 0.034523197
6442 Epoch: 6406 cost= 0.034734696
6443 Epoch: 6407 cost= 0.034073532
6444 Epoch: 6408 cost= 0.035171986
6445 Epoch: 6409 cost= 0.035916254
6446 Epoch: 6410 cost= 0.035491407
6447 Epoch: 6411 cost= 0.033734430
6448 Epoch: 6412 cost= 0.036870882
6449 Epoch: 6413 cost= 0.033914085
6450 Epoch: 6414 cost= 0.034047902
```



```
6451 Epoch: 6415 cost= 0.035370842
6452 Epoch: 6416 cost= 0.035426740
6453 Epoch: 6417 cost= 0.035386350
6454 Epoch: 6418 cost= 0.034456745
6455 Epoch: 6419 cost= 0.034762416
6456 Epoch: 6420 cost= 0.035374708
6457 Epoch: 6421 cost= 0.034152634
6458 Epoch: 6422 cost= 0.033470403
6459 Epoch: 6423 cost= 0.034472555
6460 Epoch: 6424 cost= 0.035476029
6461 Epoch: 6425 cost= 0.036538389
6462 Epoch: 6426 cost= 0.033311386
6463 Epoch: 6427 cost= 0.036382291
6464 Epoch: 6428 cost= 0.033898905
6465 Epoch: 6429 cost= 0.034514997
6466 Epoch: 6430 cost= 0.034940392
6467 Epoch: 6431 cost= 0.034319241
6468 Epoch: 6432 cost= 0.034476228
6469 Epoch: 6433 cost= 0.037668571
6470 Epoch: 6434 cost= 0.034165885
6471 Epoch: 6435 cost= 0.034709800
6472 Epoch: 6436 cost= 0.033515673
6473 Epoch: 6437 cost= 0.036332920
6474 Epoch: 6438 cost= 0.033878107
```

```
6475 Epoch: 6439 cost= 0.035565961
6476 Epoch: 6440 cost= 0.034072600
6477 Epoch: 6441 cost= 0.033764549
6478 Epoch: 6442 cost= 0.034737080
6479 Epoch: 6443 cost= 0.037024438
6480 Epoch: 6444 cost= 0.035171431
6481 Epoch: 6445 cost= 0.034130737
6482 Epoch: 6446 cost= 0.034869220
6483 Epoch: 6447 cost= 0.035569593
6484 Epoch: 6448 cost= 0.036941327
6485 Epoch: 6449 cost= 0.034250185
6486 Epoch: 6450 cost= 0.034825128
6487 Epoch: 6451 cost= 0.034170911
6488 Epoch: 6452 cost= 0.034836661
6489 Epoch: 6453 cost= 0.033495411
6490 Epoch: 6454 cost= 0.033063058
6491 Epoch: 6455 cost= 0.035413023
6492 Epoch: 6456 cost= 0.031913254
6493 Epoch: 6457 cost= 0.037074301
6494 Epoch: 6458 cost= 0.034719616
6495 Epoch: 6459 cost= 0.035860281
6496 Epoch: 6460 cost= 0.035961751
6497 Epoch: 6461 cost= 0.034377899
6498 Epoch: 6462 cost= 0.034408826
```

```
6499 Epoch: 6463 cost= 0.034214079
6500 Epoch: 6464 cost= 0.034345113
6501 Epoch: 6465 cost= 0.035097055
6502 Epoch: 6466 cost= 0.034071594
6503 Epoch: 6467 cost= 0.034958433
6504 Epoch: 6468 cost= 0.033533677
6505 Epoch: 6469 cost= 0.034681484
6506 Epoch: 6470 cost= 0.034115225
6507 Epoch: 6471 cost= 0.034675010
6508 Epoch: 6472 cost= 0.034346528
6509 Epoch: 6473 cost= 0.036126915
6510 Epoch: 6474 cost= 0.034193184
6511 Epoch: 6475 cost= 0.035332460
6512 Epoch: 6476 cost= 0.036030605
6513 Epoch: 6477 cost= 0.035113145
6514 Epoch: 6478 cost= 0.036033746
6515 Epoch: 6479 cost= 0.035808388
6516 Epoch: 6480 cost= 0.035485171
6517 Epoch: 6481 cost= 0.035564624
6518 Epoch: 6482 cost= 0.034950770
6519 Epoch: 6483 cost= 0.034176767
6520 Epoch: 6484 cost= 0.035888009
6521 Epoch: 6485 cost= 0.033848114
6522 Epoch: 6486 cost= 0.035168797
```

```
6523 Epoch: 6487 cost= 0.033222411
6524 Epoch: 6488 cost= 0.034903079
6525 Epoch: 6489 cost= 0.033081662
6526 Epoch: 6490 cost= 0.034420416
6527 Epoch: 6491 cost= 0.033515878
6528 Epoch: 6492 cost= 0.034906011
6529 Epoch: 6493 cost= 0.034565832
6530 Epoch: 6494 cost= 0.034050830
6531 Epoch: 6495 cost= 0.033843163
6532 Epoch: 6496 cost= 0.035098389
6533 Epoch: 6497 cost= 0.034084182
6534 Epoch: 6498 cost= 0.035459597
6535 Epoch: 6499 cost= 0.036212347
6536 Epoch: 6500 cost= 0.036241092
6537 Epoch: 6501 cost= 0.033741772
6538 Epoch: 6502 cost= 0.035069667
6539 Epoch: 6503 cost= 0.035167377
6540 Epoch: 6504 cost= 0.035450239
6541 Epoch: 6505 cost= 0.036564156
6542 Epoch: 6506 cost= 0.033457976
6543 Epoch: 6507 cost= 0.033060074
6544 Epoch: 6508 cost= 0.034038644
6545 Epoch: 6509 cost= 0.034254827
6546 Epoch: 6510 cost= 0.036018495
```

```
6547 Epoch: 6511 cost= 0.035929505
6548 Epoch: 6512 cost= 0.034335185
6549 Epoch: 6513 cost= 0.032953430
6550 Epoch: 6514 cost= 0.035434451
6551 Epoch: 6515 cost= 0.034408968
6552 Epoch: 6516 cost= 0.034813717
6553 Epoch: 6517 cost= 0.033304743
6554 Epoch: 6518 cost= 0.035134383
6555 Epoch: 6519 cost= 0.034284912
6556 Epoch: 6520 cost= 0.034688082
6557 Epoch: 6521 cost= 0.034709066
6558 Epoch: 6522 cost= 0.034667555
6559 Epoch: 6523 cost= 0.035615947
6560 Epoch: 6524 cost= 0.034611832
6561 Epoch: 6525 cost= 0.036677640
6562 Epoch: 6526 cost= 0.033926472
6563 Epoch: 6527 cost= 0.035799243
6564 Epoch: 6528 cost= 0.036057122
6565 Epoch: 6529 cost= 0.033080637
6566 Epoch: 6530 cost= 0.033880938
6567 Epoch: 6531 cost= 0.034343496
6568 Epoch: 6532 cost= 0.034439795
6569 Epoch: 6533 cost= 0.035372723
6570 Epoch: 6534 cost= 0.035967015
```

```
6571 Epoch: 6535 cost= 0.035550471
6572 Epoch: 6536 cost= 0.035766542
6573 Epoch: 6537 cost= 0.035362527
6574 Epoch: 6538 cost= 0.035062991
6575 Epoch: 6539 cost= 0.035908468
6576 Epoch: 6540 cost= 0.034018666
6577 Epoch: 6541 cost= 0.033297617
6578 Epoch: 6542 cost= 0.034491185
6579 Epoch: 6543 cost= 0.033340916
6580 Epoch: 6544 cost= 0.033272017
6581 Epoch: 6545 cost= 0.034142684
6582 Epoch: 6546 cost= 0.032540411
6583 Epoch: 6547 cost= 0.035555061
6584 Epoch: 6548 cost= 0.033332732
6585 Epoch: 6549 cost= 0.035183005
6586 Epoch: 6550 cost= 0.035061039
6587 Epoch: 6551 cost= 0.034133665
6588 Epoch: 6552 cost= 0.034823030
6589 Epoch: 6553 cost= 0.036102731
6590 Epoch: 6554 cost= 0.034122419
6591 Epoch: 6555 cost= 0.034735173
6592 Epoch: 6556 cost= 0.032724068
6593 Epoch: 6557 cost= 0.035787836
6594 Epoch: 6558 cost= 0.033999007
```

```
6595 Epoch: 6559 cost= 0.035776667
6596 Epoch: 6560 cost= 0.033463728
6597 Epoch: 6561 cost= 0.034756839
6598 Epoch: 6562 cost= 0.035026148
6599 Epoch: 6563 cost= 0.034823153
6600 Epoch: 6564 cost= 0.034472350
6601 Epoch: 6565 cost= 0.035259612
6602 Epoch: 6566 cost= 0.032910444
6603 Epoch: 6567 cost= 0.035402644
6604 Epoch: 6568 cost= 0.033888590
6605 Epoch: 6569 cost= 0.034680609
6606 Epoch: 6570 cost= 0.034553178
6607 Epoch: 6571 cost= 0.034753025
6608 Epoch: 6572 cost= 0.033402327
6609 Epoch: 6573 cost= 0.033871662
6610 Epoch: 6574 cost= 0.035067379
6611 Epoch: 6575 cost= 0.034397576
6612 Epoch: 6576 cost= 0.034394927
6613 Epoch: 6577 cost= 0.034500886
6614 Epoch: 6578 cost= 0.034358915
6615 Epoch: 6579 cost= 0.034691680
6616 Epoch: 6580 cost= 0.035107117
6617 Epoch: 6581 cost= 0.035109021
6618 Epoch: 6582 cost= 0.034112029
```



```
6619 Epoch: 6583 cost= 0.032394554
6620 Epoch: 6584 cost= 0.034139585
6621 Epoch: 6585 cost= 0.033374682
6622 Epoch: 6586 cost= 0.035062462
6623 Epoch: 6587 cost= 0.033676311
6624 Epoch: 6588 cost= 0.035109445
6625 Epoch: 6589 cost= 0.033515252
6626 Epoch: 6590 cost= 0.032321155
6627 Epoch: 6591 cost= 0.035208378
6628 Epoch: 6592 cost= 0.035232373
6629 Epoch: 6593 cost= 0.032348342
6630 Epoch: 6594 cost= 0.035120286
6631 Epoch: 6595 cost= 0.035500262
6632 Epoch: 6596 cost= 0.033864643
6633 Epoch: 6597 cost= 0.033325735
6634 Epoch: 6598 cost= 0.032962009
6635 Epoch: 6599 cost= 0.034414917
6636 Epoch: 6600 cost= 0.035733774
6637 Epoch: 6601 cost= 0.034613993
6638 Epoch: 6602 cost= 0.034809399
6639 Epoch: 6603 cost= 0.035222847
6640 Epoch: 6604 cost= 0.034460302
6641 Epoch: 6605 cost= 0.036926575
6642 Epoch: 6606 cost= 0.034719527
```



```
6643 Epoch: 6607 cost= 0.036694475
6644 Epoch: 6608 cost= 0.034173213
6645 Epoch: 6609 cost= 0.033464849
6646 Epoch: 6610 cost= 0.034105577
6647 Epoch: 6611 cost= 0.035112709
6648 Epoch: 6612 cost= 0.036271304
6649 Epoch: 6613 cost= 0.035574343
6650 Epoch: 6614 cost= 0.033433340
6651 Epoch: 6615 cost= 0.035232399
6652 Epoch: 6616 cost= 0.033737235
6653 Epoch: 6617 cost= 0.034446951
6654 Epoch: 6618 cost= 0.033468612
6655 Epoch: 6619 cost= 0.032206722
6656 Epoch: 6620 cost= 0.034671023
6657 Epoch: 6621 cost= 0.034850664
6658 Epoch: 6622 cost= 0.032689504
6659 Epoch: 6623 cost= 0.034997907
6660 Epoch: 6624 cost= 0.035174310
6661 Epoch: 6625 cost= 0.035748374
6662 Epoch: 6626 cost= 0.035918653
6663 Epoch: 6627 cost= 0.033425879
6664 Epoch: 6628 cost= 0.033685029
6665 Epoch: 6629 cost= 0.034004882
6666 Epoch: 6630 cost= 0.034309525
```

```
6667 Epoch: 6631 cost= 0.034345005
6668 Epoch: 6632 cost= 0.032578327
6669 Epoch: 6633 cost= 0.036439087
6670 Epoch: 6634 cost= 0.034052547
6671 Epoch: 6635 cost= 0.032965928
6672 Epoch: 6636 cost= 0.034393515
6673 Epoch: 6637 cost= 0.035279520
6674 Epoch: 6638 cost= 0.036330093
6675 Epoch: 6639 cost= 0.034819510
6676 Epoch: 6640 cost= 0.033959579
6677 Epoch: 6641 cost= 0.035775661
6678 Epoch: 6642 cost= 0.033292681
6679 Epoch: 6643 cost= 0.035110001
6680 Epoch: 6644 cost= 0.035226818
6681 Epoch: 6645 cost= 0.035651404
6682 Epoch: 6646 cost= 0.033822611
6683 Epoch: 6647 cost= 0.033875067
6684 Epoch: 6648 cost= 0.033785537
6685 Epoch: 6649 cost= 0.033887696
6686 Epoch: 6650 cost= 0.035340942
6687 Epoch: 6651 cost= 0.035788666
6688 Epoch: 6652 cost= 0.033966441
6689 Epoch: 6653 cost= 0.033581432
6690 Epoch: 6654 cost= 0.035074234
```

```
6691 Epoch: 6655 cost= 0.033504598
6692 Epoch: 6656 cost= 0.034964647
6693 Epoch: 6657 cost= 0.034054898
6694 Epoch: 6658 cost= 0.036857445
6695 Epoch: 6659 cost= 0.033493917
6696 Epoch: 6660 cost= 0.033017259
6697 Epoch: 6661 cost= 0.034756247
6698 Epoch: 6662 cost= 0.035256237
6699 Epoch: 6663 cost= 0.032807421
6700 Epoch: 6664 cost= 0.034649603
6701 Epoch: 6665 cost= 0.035761211
6702 Epoch: 6666 cost= 0.034854550
6703 Epoch: 6667 cost= 0.034758344
6704 Epoch: 6668 cost= 0.035877276
6705 Epoch: 6669 cost= 0.035797283
6706 Epoch: 6670 cost= 0.033972647
6707 Epoch: 6671 cost= 0.033284251
6708 Epoch: 6672 cost= 0.034937724
6709 Epoch: 6673 cost= 0.035659138
6710 Epoch: 6674 cost= 0.034666888
6711 Epoch: 6675 cost= 0.035293914
6712 Epoch: 6676 cost= 0.036157783
6713 Epoch: 6677 cost= 0.034155022
6714 Epoch: 6678 cost= 0.034686308
```

```
6715 Epoch: 6679 cost= 0.032721542
6716 Epoch: 6680 cost= 0.036237892
6717 Epoch: 6681 cost= 0.035214044
6718 Epoch: 6682 cost= 0.035098165
6719 Epoch: 6683 cost= 0.034494665
6720 Epoch: 6684 cost= 0.034879133
6721 Epoch: 6685 cost= 0.033744879
6722 Epoch: 6686 cost= 0.035395436
6723 Epoch: 6687 cost= 0.033871017
6724 Epoch: 6688 cost= 0.035327170
6725 Epoch: 6689 cost= 0.035731092
6726 Epoch: 6690 cost= 0.035490312
6727 Epoch: 6691 cost= 0.035396677
6728 Epoch: 6692 cost= 0.033472914
6729 Epoch: 6693 cost= 0.034086015
6730 Epoch: 6694 cost= 0.033846550
6731 Epoch: 6695 cost= 0.036361706
6732 Epoch: 6696 cost= 0.034306768
6733 Epoch: 6697 cost= 0.033526342
6734 Epoch: 6698 cost= 0.035209209
6735 Epoch: 6699 cost= 0.035321906
6736 Epoch: 6700 cost= 0.034341499
6737 Epoch: 6701 cost= 0.034225684
6738 Epoch: 6702 cost= 0.035953473
```

```
6739 Epoch: 6703 cost= 0.035124552
6740 Epoch: 6704 cost= 0.033094790
6741 Epoch: 6705 cost= 0.035298798
6742 Epoch: 6706 cost= 0.034259293
6743 Epoch: 6707 cost= 0.035232589
6744 Epoch: 6708 cost= 0.034375284
6745 Epoch: 6709 cost= 0.035226904
6746 Epoch: 6710 cost= 0.035125576
6747 Epoch: 6711 cost= 0.034319729
6748 Epoch: 6712 cost= 0.035765208
6749 Epoch: 6713 cost= 0.033112887
6750 Epoch: 6714 cost= 0.034733299
6751 Epoch: 6715 cost= 0.034312267
6752 Epoch: 6716 cost= 0.035840150
6753 Epoch: 6717 cost= 0.035157677
6754 Epoch: 6718 cost= 0.033791702
6755 Epoch: 6719 cost= 0.033554096
6756 Epoch: 6720 cost= 0.034656845
6757 Epoch: 6721 cost= 0.035839953
6758 Epoch: 6722 cost= 0.033591360
6759 Epoch: 6723 cost= 0.034489349
6760 Epoch: 6724 cost= 0.036342066
6761 Epoch: 6725 cost= 0.032817490
6762 Epoch: 6726 cost= 0.034369025
```

```
6763 Epoch: 6727 cost= 0.033894654
6764 Epoch: 6728 cost= 0.034757610
6765 Epoch: 6729 cost= 0.035622727
6766 Epoch: 6730 cost= 0.035623115
6767 Epoch: 6731 cost= 0.036626343
6768 Epoch: 6732 cost= 0.036140293
6769 Epoch: 6733 cost= 0.035289779
6770 Epoch: 6734 cost= 0.033638824
6771 Epoch: 6735 cost= 0.034677159
6772 Epoch: 6736 cost= 0.035268124
6773 Epoch: 6737 cost= 0.033786904
6774 Epoch: 6738 cost= 0.034384627
6775 Epoch: 6739 cost= 0.036617339
6776 Epoch: 6740 cost= 0.035170883
6777 Epoch: 6741 cost= 0.035627533
6778 Epoch: 6742 cost= 0.034418877
6779 Epoch: 6743 cost= 0.035704549
6780 Epoch: 6744 cost= 0.033661541
6781 Epoch: 6745 cost= 0.035002705
6782 Epoch: 6746 cost= 0.034537423
6783 Epoch: 6747 cost= 0.032802407
6784 Epoch: 6748 cost= 0.035452127
6785 Epoch: 6749 cost= 0.034081489
6786 Epoch: 6750 cost= 0.035287507
```

```
6787 Epoch: 6751 cost= 0.033368900
6788 Epoch: 6752 cost= 0.033018287
6789 Epoch: 6753 cost= 0.033652652
6790 Epoch: 6754 cost= 0.036154442
6791 Epoch: 6755 cost= 0.033350565
6792 Epoch: 6756 cost= 0.034319613
6793 Epoch: 6757 cost= 0.037549701
6794 Epoch: 6758 cost= 0.035552204
6795 Epoch: 6759 cost= 0.033745229
6796 Epoch: 6760 cost= 0.036633484
6797 Epoch: 6761 cost= 0.036061507
6798 Epoch: 6762 cost= 0.034847353
6799 Epoch: 6763 cost= 0.035048425
6800 Epoch: 6764 cost= 0.035126269
6801 Epoch: 6765 cost= 0.036203396
6802 Epoch: 6766 cost= 0.035326578
6803 Epoch: 6767 cost= 0.034772381
6804 Epoch: 6768 cost= 0.034927536
6805 Epoch: 6769 cost= 0.034136102
6806 Epoch: 6770 cost= 0.035885047
6807 Epoch: 6771 cost= 0.037516687
6808 Epoch: 6772 cost= 0.036194567
6809 Epoch: 6773 cost= 0.035257820
6810 Epoch: 6774 cost= 0.032636043
```



```
6811 Epoch: 6775 cost= 0.034728222
6812 Epoch: 6776 cost= 0.034263756
6813 Epoch: 6777 cost= 0.035437472
6814 Epoch: 6778 cost= 0.034562606
6815 Epoch: 6779 cost= 0.036235888
6816 Epoch: 6780 cost= 0.034880370
6817 Epoch: 6781 cost= 0.034666784
6818 Epoch: 6782 cost= 0.035090953
6819 Epoch: 6783 cost= 0.035117995
6820 Epoch: 6784 cost= 0.035791427
6821 Epoch: 6785 cost= 0.035871465
6822 Epoch: 6786 cost= 0.034928408
6823 Epoch: 6787 cost= 0.033623494
6824 Epoch: 6788 cost= 0.033572860
6825 Epoch: 6789 cost= 0.035411552
6826 Epoch: 6790 cost= 0.033907775
6827 Epoch: 6791 cost= 0.034335017
6828 Epoch: 6792 cost= 0.034079958
6829 Epoch: 6793 cost= 0.036111955
6830 Epoch: 6794 cost= 0.035453130
6831 Epoch: 6795 cost= 0.033813410
6832 Epoch: 6796 cost= 0.036829520
6833 Epoch: 6797 cost= 0.033251494
6834 Epoch: 6798 cost= 0.034006480
```



```
6835 Epoch: 6799 cost= 0.034010634
6836 Epoch: 6800 cost= 0.036350239
6837 Epoch: 6801 cost= 0.034237936
6838 Epoch: 6802 cost= 0.034877479
6839 Epoch: 6803 cost= 0.034969784
6840 Epoch: 6804 cost= 0.036622975
6841 Epoch: 6805 cost= 0.032530796
6842 Epoch: 6806 cost= 0.035537563
6843 Epoch: 6807 cost= 0.035128232
6844 Epoch: 6808 cost= 0.034486271
6845 Epoch: 6809 cost= 0.035889857
6846 Epoch: 6810 cost= 0.034573145
6847 Epoch: 6811 cost= 0.035860125
6848 Epoch: 6812 cost= 0.035855092
6849 Epoch: 6813 cost= 0.034155656
6850 Epoch: 6814 cost= 0.035191447
6851 Epoch: 6815 cost= 0.033810381
6852 Epoch: 6816 cost= 0.033808336
6853 Epoch: 6817 cost= 0.033968039
6854 Epoch: 6818 cost= 0.035589039
6855 Epoch: 6819 cost= 0.034319896
6856 Epoch: 6820 cost= 0.034945153
6857 Epoch: 6821 cost= 0.037019785
6858 Epoch: 6822 cost= 0.034740262
```

```
6859 Epoch: 6823 cost= 0.034596056
6860 Epoch: 6824 cost= 0.036432955
6861 Epoch: 6825 cost= 0.033774476
6862 Epoch: 6826 cost= 0.035947662
6863 Epoch: 6827 cost= 0.032160245
6864 Epoch: 6828 cost= 0.033171229
6865 Epoch: 6829 cost= 0.035673328
6866 Epoch: 6830 cost= 0.034311403
6867 Epoch: 6831 cost= 0.034557890
6868 Epoch: 6832 cost= 0.034544315
6869 Epoch: 6833 cost= 0.033730932
6870 Epoch: 6834 cost= 0.033494916
6871 Epoch: 6835 cost= 0.033841044
6872 Epoch: 6836 cost= 0.034952715
6873 Epoch: 6837 cost= 0.033471324
6874 Epoch: 6838 cost= 0.034019243
6875 Epoch: 6839 cost= 0.035174638
6876 Epoch: 6840 cost= 0.032583997
6877 Epoch: 6841 cost= 0.035752185
6878 Epoch: 6842 cost= 0.031774595
6879 Epoch: 6843 cost= 0.035575449
6880 Epoch: 6844 cost= 0.032539062
6881 Epoch: 6845 cost= 0.034655757
6882 Epoch: 6846 cost= 0.033885572
```

```
6883 Epoch: 6847 cost= 0.036219694
6884 Epoch: 6848 cost= 0.034189597
6885 Epoch: 6849 cost= 0.033841815
6886 Epoch: 6850 cost= 0.034924284
6887 Epoch: 6851 cost= 0.035951372
6888 Epoch: 6852 cost= 0.032316875
6889 Epoch: 6853 cost= 0.035528250
6890 Epoch: 6854 cost= 0.033859041
6891 Epoch: 6855 cost= 0.035299521
6892 Epoch: 6856 cost= 0.034825612
6893 Epoch: 6857 cost= 0.034415960
6894 Epoch: 6858 cost= 0.034030609
6895 Epoch: 6859 cost= 0.033187568
6896 Epoch: 6860 cost= 0.034811072
6897 Epoch: 6861 cost= 0.033651788
6898 Epoch: 6862 cost= 0.034369703
6899 Epoch: 6863 cost= 0.035330772
6900 Epoch: 6864 cost= 0.033196874
6901 Epoch: 6865 cost= 0.033513099
6902 Epoch: 6866 cost= 0.034956742
6903 Epoch: 6867 cost= 0.032152958
6904 Epoch: 6868 cost= 0.034818470
6905 Epoch: 6869 cost= 0.033859096
6906 Epoch: 6870 cost= 0.033962522
```

```
6907 Epoch: 6871 cost= 0.035202101
6908 Epoch: 6872 cost= 0.035888813
6909 Epoch: 6873 cost= 0.035987698
6910 Epoch: 6874 cost= 0.034033865
6911 Epoch: 6875 cost= 0.033810675
6912 Epoch: 6876 cost= 0.035230726
6913 Epoch: 6877 cost= 0.034059837
6914 Epoch: 6878 cost= 0.035145771
6915 Epoch: 6879 cost= 0.034860585
6916 Epoch: 6880 cost= 0.035030235
6917 Epoch: 6881 cost= 0.035635613
6918 Epoch: 6882 cost= 0.034351807
6919 Epoch: 6883 cost= 0.032502171
6920 Epoch: 6884 cost= 0.033157751
6921 Epoch: 6885 cost= 0.035613831
6922 Epoch: 6886 cost= 0.034986340
6923 Epoch: 6887 cost= 0.035814334
6924 Epoch: 6888 cost= 0.034813367
6925 Epoch: 6889 cost= 0.035599459
6926 Epoch: 6890 cost= 0.036006868
6927 Epoch: 6891 cost= 0.034842048
6928 Epoch: 6892 cost= 0.035446670
6929 Epoch: 6893 cost= 0.034878273
6930 Epoch: 6894 cost= 0.034343421
```

```
6931 Epoch: 6895 cost= 0.034286801
6932 Epoch: 6896 cost= 0.033476036
6933 Epoch: 6897 cost= 0.033535346
6934 Epoch: 6898 cost= 0.034307905
6935 Epoch: 6899 cost= 0.033561863
6936 Epoch: 6900 cost= 0.035386622
6937 Epoch: 6901 cost= 0.036512658
6938 Epoch: 6902 cost= 0.034441460
6939 Epoch: 6903 cost= 0.034871962
6940 Epoch: 6904 cost= 0.034467056
6941 Epoch: 6905 cost= 0.035672598
6942 Epoch: 6906 cost= 0.034365039
6943 Epoch: 6907 cost= 0.036116663
6944 Epoch: 6908 cost= 0.035259090
6945 Epoch: 6909 cost= 0.034573320
6946 Epoch: 6910 cost= 0.035532430
6947 Epoch: 6911 cost= 0.033198263
6948 Epoch: 6912 cost= 0.035366919
6949 Epoch: 6913 cost= 0.035136379
6950 Epoch: 6914 cost= 0.035598408
6951 Epoch: 6915 cost= 0.034963544
6952 Epoch: 6916 cost= 0.033427719
6953 Epoch: 6917 cost= 0.032307606
6954 Epoch: 6918 cost= 0.035874452
```

```
6955 Epoch: 6919 cost= 0.032750364
6956 Epoch: 6920 cost= 0.035302166
6957 Epoch: 6921 cost= 0.034484658
6958 Epoch: 6922 cost= 0.034664087
6959 Epoch: 6923 cost= 0.033366676
6960 Epoch: 6924 cost= 0.035540465
6961 Epoch: 6925 cost= 0.034157339
6962 Epoch: 6926 cost= 0.035045117
6963 Epoch: 6927 cost= 0.035001997
6964 Epoch: 6928 cost= 0.035155144
6965 Epoch: 6929 cost= 0.034313004
6966 Epoch: 6930 cost= 0.031953231
6967 Epoch: 6931 cost= 0.034807265
6968 Epoch: 6932 cost= 0.034483634
6969 Epoch: 6933 cost= 0.034416053
6970 Epoch: 6934 cost= 0.036615521
6971 Epoch: 6935 cost= 0.034436110
6972 Epoch: 6936 cost= 0.033953290
6973 Epoch: 6937 cost= 0.032927942
6974 Epoch: 6938 cost= 0.035127595
6975 Epoch: 6939 cost= 0.032575466
6976 Epoch: 6940 cost= 0.035805129
6977 Epoch: 6941 cost= 0.035135295
6978 Epoch: 6942 cost= 0.035272598
```

```
6979 Epoch: 6943 cost= 0.035645284
6980 Epoch: 6944 cost= 0.034998711
6981 Epoch: 6945 cost= 0.035595000
6982 Epoch: 6946 cost= 0.033381131
6983 Epoch: 6947 cost= 0.034450099
6984 Epoch: 6948 cost= 0.035360515
6985 Epoch: 6949 cost= 0.035035104
6986 Epoch: 6950 cost= 0.033832539
6987 Epoch: 6951 cost= 0.033716790
6988 Epoch: 6952 cost= 0.032591131
6989 Epoch: 6953 cost= 0.036038674
6990 Epoch: 6954 cost= 0.034421314
6991 Epoch: 6955 cost= 0.035312306
6992 Epoch: 6956 cost= 0.034479473
6993 Epoch: 6957 cost= 0.034234006
6994 Epoch: 6958 cost= 0.031948064
6995 Epoch: 6959 cost= 0.033515602
6996 Epoch: 6960 cost= 0.034767661
6997 Epoch: 6961 cost= 0.034390382
6998 Epoch: 6962 cost= 0.035005406
6999 Epoch: 6963 cost= 0.033348739
7000 Epoch: 6964 cost= 0.033344358
7001 Epoch: 6965 cost= 0.033796344
7002 Epoch: 6966 cost= 0.034792386
```



```
7003 Epoch: 6967 cost= 0.034196414
7004 Epoch: 6968 cost= 0.034389179
7005 Epoch: 6969 cost= 0.033608917
7006 Epoch: 6970 cost= 0.033675887
7007 Epoch: 6971 cost= 0.034265265
7008 Epoch: 6972 cost= 0.034107309
7009 Epoch: 6973 cost= 0.036447983
7010 Epoch: 6974 cost= 0.034618981
7011 Epoch: 6975 cost= 0.036678877
7012 Epoch: 6976 cost= 0.034903508
7013 Epoch: 6977 cost= 0.036530729
7014 Epoch: 6978 cost= 0.034280654
7015 Epoch: 6979 cost= 0.034785505
7016 Epoch: 6980 cost= 0.034634572
7017 Epoch: 6981 cost= 0.032156069
7018 Epoch: 6982 cost= 0.035484478
7019 Epoch: 6983 cost= 0.036071677
7020 Epoch: 6984 cost= 0.033653527
7021 Epoch: 6985 cost= 0.033369254
7022 Epoch: 6986 cost= 0.035003345
7023 Epoch: 6987 cost= 0.035226669
7024 Epoch: 6988 cost= 0.036421090
7025 Epoch: 6989 cost= 0.033748060
7026 Epoch: 6990 cost= 0.036380611
```



```
7027 Epoch: 6991 cost= 0.036230188
7028 Epoch: 6992 cost= 0.033265062
7029 Epoch: 6993 cost= 0.034825791
7030 Epoch: 6994 cost= 0.035199519
7031 Epoch: 6995 cost= 0.034806065
7032 Epoch: 6996 cost= 0.033573501
7033 Epoch: 6997 cost= 0.033324447
7034 Epoch: 6998 cost= 0.034202356
7035 Epoch: 6999 cost= 0.034613848
7036 Epoch: 7000 cost= 0.033411540
7037 Epoch: 7001 cost= 0.037076358
7038 Epoch: 7002 cost= 0.034387521
7039 Epoch: 7003 cost= 0.034085475
7040 Epoch: 7004 cost= 0.034480304
7041 Epoch: 7005 cost= 0.033407882
7042 Epoch: 7006 cost= 0.034892708
7043 Epoch: 7007 cost= 0.034779642
7044 Epoch: 7008 cost= 0.034963787
7045 Epoch: 7009 cost= 0.036177400
7046 Epoch: 7010 cost= 0.033386823
7047 Epoch: 7011 cost= 0.034116779
7048 Epoch: 7012 cost= 0.033415996
7049 Epoch: 7013 cost= 0.035236195
7050 Epoch: 7014 cost= 0.035063937
```

```
7051 Epoch: 7015 cost= 0.035037629
7052 Epoch: 7016 cost= 0.035583064
7053 Epoch: 7017 cost= 0.034229089
7054 Epoch: 7018 cost= 0.032563958
7055 Epoch: 7019 cost= 0.033242896
7056 Epoch: 7020 cost= 0.033513736
7057 Epoch: 7021 cost= 0.034140598
7058 Epoch: 7022 cost= 0.035057165
7059 Epoch: 7023 cost= 0.034019466
7060 Epoch: 7024 cost= 0.035105016
7061 Epoch: 7025 cost= 0.036209073
7062 Epoch: 7026 cost= 0.033754703
7063 Epoch: 7027 cost= 0.034751628
7064 Epoch: 7028 cost= 0.034514710
7065 Epoch: 7029 cost= 0.033387188
7066 Epoch: 7030 cost= 0.034490153
7067 Epoch: 7031 cost= 0.034611277
7068 Epoch: 7032 cost= 0.033596177
7069 Epoch: 7033 cost= 0.034888800
7070 Epoch: 7034 cost= 0.033238329
7071 Epoch: 7035 cost= 0.034686450
7072 Epoch: 7036 cost= 0.032427426
7073 Epoch: 7037 cost= 0.033054713
7074 Epoch: 7038 cost= 0.033024680
```

```
7075 Epoch: 7039 cost= 0.034311105
7076 Epoch: 7040 cost= 0.035710461
7077 Epoch: 7041 cost= 0.036397040
7078 Epoch: 7042 cost= 0.034927309
7079 Epoch: 7043 cost= 0.035560194
7080 Epoch: 7044 cost= 0.035833426
7081 Epoch: 7045 cost= 0.035393331
7082 Epoch: 7046 cost= 0.033449925
7083 Epoch: 7047 cost= 0.035073631
7084 Epoch: 7048 cost= 0.035967849
7085 Epoch: 7049 cost= 0.034173466
7086 Epoch: 7050 cost= 0.035074610
7087 Epoch: 7051 cost= 0.035609156
7088 Epoch: 7052 cost= 0.032853678
7089 Epoch: 7053 cost= 0.035218865
7090 Epoch: 7054 cost= 0.034264639
7091 Epoch: 7055 cost= 0.034402050
7092 Epoch: 7056 cost= 0.033892859
7093 Epoch: 7057 cost= 0.032729544
7094 Epoch: 7058 cost= 0.035693556
7095 Epoch: 7059 cost= 0.034429308
7096 Epoch: 7060 cost= 0.035843197
7097 Epoch: 7061 cost= 0.034321629
7098 Epoch: 7062 cost= 0.035502620
```

```
7099 Epoch: 7063 cost= 0.035377428
7100 Epoch: 7064 cost= 0.032824561
7101 Epoch: 7065 cost= 0.034234550
7102 Epoch: 7066 cost= 0.035839956
7103 Epoch: 7067 cost= 0.035649955
7104 Epoch: 7068 cost= 0.036473650
7105 Epoch: 7069 cost= 0.035072356
7106 Epoch: 7070 cost= 0.034806948
7107 Epoch: 7071 cost= 0.033117656
7108 Epoch: 7072 cost= 0.034190238
7109 Epoch: 7073 cost= 0.034040716
7110 Epoch: 7074 cost= 0.033091418
7111 Epoch: 7075 cost= 0.035631094
7112 Epoch: 7076 cost= 0.034760557
7113 Epoch: 7077 cost= 0.033212151
7114 Epoch: 7078 cost= 0.034069203
7115 Epoch: 7079 cost= 0.032277435
7116 Epoch: 7080 cost= 0.032789443
7117 Epoch: 7081 cost= 0.034488857
7118 Epoch: 7082 cost= 0.034168359
7119 Epoch: 7083 cost= 0.034289103
7120 Epoch: 7084 cost= 0.033451799
7121 Epoch: 7085 cost= 0.034488965
7122 Epoch: 7086 cost= 0.036056012
```

```
7123 Epoch: 7087 cost= 0.034983274
7124 Epoch: 7088 cost= 0.033706501
7125 Epoch: 7089 cost= 0.035890754
7126 Epoch: 7090 cost= 0.033844411
7127 Epoch: 7091 cost= 0.034528505
7128 Epoch: 7092 cost= 0.036165103
7129 Epoch: 7093 cost= 0.035870861
7130 Epoch: 7094 cost= 0.034914434
7131 Epoch: 7095 cost= 0.032988053
7132 Epoch: 7096 cost= 0.032763191
7133 Epoch: 7097 cost= 0.034592934
7134 Epoch: 7098 cost= 0.035361033
7135 Epoch: 7099 cost= 0.034886952
7136 Epoch: 7100 cost= 0.034503773
7137 Epoch: 7101 cost= 0.035425819
7138 Epoch: 7102 cost= 0.033413615
7139 Epoch: 7103 cost= 0.035131995
7140 Epoch: 7104 cost= 0.036302585
7141 Epoch: 7105 cost= 0.034170207
7142 Epoch: 7106 cost= 0.035791975
7143 Epoch: 7107 cost= 0.034857228
7144 Epoch: 7108 cost= 0.034420602
7145 Epoch: 7109 cost= 0.034878798
7146 Epoch: 7110 cost= 0.034346994
```

```
7147 Epoch: 7111 cost= 0.033593159
7148 Epoch: 7112 cost= 0.033086795
7149 Epoch: 7113 cost= 0.035059433
7150 Epoch: 7114 cost= 0.034151908
7151 Epoch: 7115 cost= 0.033263545
7152 Epoch: 7116 cost= 0.035831895
7153 Epoch: 7117 cost= 0.034555718
7154 Epoch: 7118 cost= 0.034322631
7155 Epoch: 7119 cost= 0.035610579
7156 Epoch: 7120 cost= 0.033216506
7157 Epoch: 7121 cost= 0.034186009
7158 Epoch: 7122 cost= 0.034155358
7159 Epoch: 7123 cost= 0.034501225
7160 Epoch: 7124 cost= 0.033457991
7161 Epoch: 7125 cost= 0.032792531
7162 Epoch: 7126 cost= 0.035506897
7163 Epoch: 7127 cost= 0.033738550
7164 Epoch: 7128 cost= 0.033417977
7165 Epoch: 7129 cost= 0.032881010
7166 Epoch: 7130 cost= 0.033604186
7167 Epoch: 7131 cost= 0.035468664
7168 Epoch: 7132 cost= 0.034852225
7169 Epoch: 7133 cost= 0.034783766
7170 Epoch: 7134 cost= 0.035525683
```

```
7171 Epoch: 7135 cost= 0.036353081
7172 Epoch: 7136 cost= 0.034604188
7173 Epoch: 7137 cost= 0.034097191
7174 Epoch: 7138 cost= 0.034089126
7175 Epoch: 7139 cost= 0.034684815
7176 Epoch: 7140 cost= 0.035116438
7177 Epoch: 7141 cost= 0.034086317
7178 Epoch: 7142 cost= 0.034255873
7179 Epoch: 7143 cost= 0.033641405
7180 Epoch: 7144 cost= 0.035076357
7181 Epoch: 7145 cost= 0.034130093
7182 Epoch: 7146 cost= 0.033725280
7183 Epoch: 7147 cost= 0.034571622
7184 Epoch: 7148 cost= 0.034945581
7185 Epoch: 7149 cost= 0.034297414
7186 Epoch: 7150 cost= 0.034970984
7187 Epoch: 7151 cost= 0.034105245
7188 Epoch: 7152 cost= 0.035265960
7189 Epoch: 7153 cost= 0.033429988
7190 Epoch: 7154 cost= 0.037690070
7191 Epoch: 7155 cost= 0.034399491
7192 Epoch: 7156 cost= 0.034325317
7193 Epoch: 7157 cost= 0.033982161
7194 Epoch: 7158 cost= 0.036489904
```

```
7195 Epoch: 7159 cost= 0.036245238
7196 Epoch: 7160 cost= 0.034584872
7197 Epoch: 7161 cost= 0.034210075
7198 Epoch: 7162 cost= 0.036265343
7199 Epoch: 7163 cost= 0.035747048
7200 Epoch: 7164 cost= 0.035197303
7201 Epoch: 7165 cost= 0.035549253
7202 Epoch: 7166 cost= 0.036089066
7203 Epoch: 7167 cost= 0.034840751
7204 Epoch: 7168 cost= 0.034402113
7205 Epoch: 7169 cost= 0.034854267
7206 Epoch: 7170 cost= 0.033185471
7207 Epoch: 7171 cost= 0.034320131
7208 Epoch: 7172 cost= 0.035271030
7209 Epoch: 7173 cost= 0.035262812
7210 Epoch: 7174 cost= 0.033555105
7211 Epoch: 7175 cost= 0.033270594
7212 Epoch: 7176 cost= 0.033266991
7213 Epoch: 7177 cost= 0.033643819
7214 Epoch: 7178 cost= 0.034887809
7215 Epoch: 7179 cost= 0.033350211
7216 Epoch: 7180 cost= 0.034259781
7217 Epoch: 7181 cost= 0.034495816
7218 Epoch: 7182 cost= 0.037263963
```



```
7219 Epoch: 7183 cost= 0.034758873
7220 Epoch: 7184 cost= 0.033070471
7221 Epoch: 7185 cost= 0.034620825
7222 Epoch: 7186 cost= 0.033186130
7223 Epoch: 7187 cost= 0.033332903
7224 Epoch: 7188 cost= 0.034411274
7225 Epoch: 7189 cost= 0.033952557
7226 Epoch: 7190 cost= 0.033284377
7227 Epoch: 7191 cost= 0.035346147
7228 Epoch: 7192 cost= 0.034688316
7229 Epoch: 7193 cost= 0.034575712
7230 Epoch: 7194 cost= 0.036241140
7231 Epoch: 7195 cost= 0.033418506
7232 Epoch: 7196 cost= 0.033823978
7233 Epoch: 7197 cost= 0.033361971
7234 Epoch: 7198 cost= 0.035390511
7235 Epoch: 7199 cost= 0.034214288
7236 Epoch: 7200 cost= 0.035022724
7237 Epoch: 7201 cost= 0.034830317
7238 Epoch: 7202 cost= 0.034363624
7239 Epoch: 7203 cost= 0.034430265
7240 Epoch: 7204 cost= 0.034582108
7241 Epoch: 7205 cost= 0.034171570
7242 Epoch: 7206 cost= 0.036706205
```

```
7243 Epoch: 7207 cost= 0.035053071
7244 Epoch: 7208 cost= 0.033590488
7245 Epoch: 7209 cost= 0.034309849
7246 Epoch: 7210 cost= 0.034600046
7247 Epoch: 7211 cost= 0.033176709
7248 Epoch: 7212 cost= 0.033976264
7249 Epoch: 7213 cost= 0.035040259
7250 Epoch: 7214 cost= 0.034804683
7251 Epoch: 7215 cost= 0.034710094
7252 Epoch: 7216 cost= 0.034753535
7253 Epoch: 7217 cost= 0.035108089
7254 Epoch: 7218 cost= 0.036304504
7255 Epoch: 7219 cost= 0.032805160
7256 Epoch: 7220 cost= 0.033968557
7257 Epoch: 7221 cost= 0.035852198
7258 Epoch: 7222 cost= 0.034512311
7259 Epoch: 7223 cost= 0.032983750
7260 Epoch: 7224 cost= 0.034189764
7261 Epoch: 7225 cost= 0.034571264
7262 Epoch: 7226 cost= 0.035598870
7263 Epoch: 7227 cost= 0.034164332
7264 Epoch: 7228 cost= 0.034018826
7265 Epoch: 7229 cost= 0.033897564
7266 Epoch: 7230 cost= 0.033336483
```

```
7267 Epoch: 7231 cost= 0.034765527
7268 Epoch: 7232 cost= 0.032114156
7269 Epoch: 7233 cost= 0.032708593
7270 Epoch: 7234 cost= 0.033119962
7271 Epoch: 7235 cost= 0.034552388
7272 Epoch: 7236 cost= 0.033975683
7273 Epoch: 7237 cost= 0.036605678
7274 Epoch: 7238 cost= 0.034515202
7275 Epoch: 7239 cost= 0.034438789
7276 Epoch: 7240 cost= 0.034726638
7277 Epoch: 7241 cost= 0.034683008
7278 Epoch: 7242 cost= 0.035440583
7279 Epoch: 7243 cost= 0.035248529
7280 Epoch: 7244 cost= 0.035420898
7281 Epoch: 7245 cost= 0.035767939
7282 Epoch: 7246 cost= 0.035179708
7283 Epoch: 7247 cost= 0.035461329
7284 Epoch: 7248 cost= 0.035664182
7285 Epoch: 7249 cost= 0.035278231
7286 Epoch: 7250 cost= 0.032898843
7287 Epoch: 7251 cost= 0.034230426
7288 Epoch: 7252 cost= 0.034529984
7289 Epoch: 7253 cost= 0.034202259
7290 Epoch: 7254 cost= 0.032953296
```

```
7291 Epoch: 7255 cost= 0.033967666
7292 Epoch: 7256 cost= 0.034979250
7293 Epoch: 7257 cost= 0.034280855
7294 Epoch: 7258 cost= 0.032915261
7295 Epoch: 7259 cost= 0.033815496
7296 Epoch: 7260 cost= 0.033749089
7297 Epoch: 7261 cost= 0.036410213
7298 Epoch: 7262 cost= 0.034738068
7299 Epoch: 7263 cost= 0.035506807
7300 Epoch: 7264 cost= 0.036809824
7301 Epoch: 7265 cost= 0.035290033
7302 Epoch: 7266 cost= 0.035080206
7303 Epoch: 7267 cost= 0.035116725
7304 Epoch: 7268 cost= 0.034574647
7305 Epoch: 7269 cost= 0.033664159
7306 Epoch: 7270 cost= 0.035195351
7307 Epoch: 7271 cost= 0.036341507
7308 Epoch: 7272 cost= 0.035570446
7309 Epoch: 7273 cost= 0.034321085
7310 Epoch: 7274 cost= 0.036695618
7311 Epoch: 7275 cost= 0.035044450
7312 Epoch: 7276 cost= 0.032538228
7313 Epoch: 7277 cost= 0.035282847
7314 Epoch: 7278 cost= 0.036249295
```

```
7315 Epoch: 7279 cost= 0.034630042
7316 Epoch: 7280 cost= 0.037108690
7317 Epoch: 7281 cost= 0.034890465
7318 Epoch: 7282 cost= 0.033472765
7319 Epoch: 7283 cost= 0.034402128
7320 Epoch: 7284 cost= 0.036904562
7321 Epoch: 7285 cost= 0.035974924
7322 Epoch: 7286 cost= 0.034901831
7323 Epoch: 7287 cost= 0.037127528
7324 Epoch: 7288 cost= 0.035853416
7325 Epoch: 7289 cost= 0.033134371
7326 Epoch: 7290 cost= 0.035110299
7327 Epoch: 7291 cost= 0.038058382
7328 Epoch: 7292 cost= 0.036074664
7329 Epoch: 7293 cost= 0.034609243
7330 Epoch: 7294 cost= 0.034945570
7331 Epoch: 7295 cost= 0.034352340
7332 Epoch: 7296 cost= 0.034789775
7333 Epoch: 7297 cost= 0.036649793
7334 Epoch: 7298 cost= 0.035670333
7335 Epoch: 7299 cost= 0.035317782
7336 Epoch: 7300 cost= 0.036039338
7337 Epoch: 7301 cost= 0.035932776
7338 Epoch: 7302 cost= 0.036089707
```

```
7339 Epoch: 7303 cost= 0.034656711
7340 Epoch: 7304 cost= 0.036377668
7341 Epoch: 7305 cost= 0.035099398
7342 Epoch: 7306 cost= 0.036548104
7343 Epoch: 7307 cost= 0.036462940
7344 Epoch: 7308 cost= 0.034443457
7345 Epoch: 7309 cost= 0.035679195
7346 Epoch: 7310 cost= 0.036108874
7347 Epoch: 7311 cost= 0.033590551
7348 Epoch: 7312 cost= 0.033923335
7349 Epoch: 7313 cost= 0.034684703
7350 Epoch: 7314 cost= 0.036234830
7351 Epoch: 7315 cost= 0.033339504
7352 Epoch: 7316 cost= 0.035318010
7353 Epoch: 7317 cost= 0.033890925
7354 Epoch: 7318 cost= 0.034028471
7355 Epoch: 7319 cost= 0.036220785
7356 Epoch: 7320 cost= 0.032628838
7357 Epoch: 7321 cost= 0.035408288
7358 Epoch: 7322 cost= 0.035281986
7359 Epoch: 7323 cost= 0.034969661
7360 Epoch: 7324 cost= 0.034488492
7361 Epoch: 7325 cost= 0.034032125
7362 Epoch: 7326 cost= 0.035320189
```

```
7363 Epoch: 7327 cost= 0.033733148
7364 Epoch: 7328 cost= 0.035480607
7365 Epoch: 7329 cost= 0.035716157
7366 Epoch: 7330 cost= 0.034685362
7367 Epoch: 7331 cost= 0.034789294
7368 Epoch: 7332 cost= 0.033507898
7369 Epoch: 7333 cost= 0.034864571
7370 Epoch: 7334 cost= 0.034606218
7371 Epoch: 7335 cost= 0.036154665
7372 Epoch: 7336 cost= 0.033942148
7373 Epoch: 7337 cost= 0.035693500
7374 Epoch: 7338 cost= 0.033424467
7375 Epoch: 7339 cost= 0.035308134
7376 Epoch: 7340 cost= 0.035736579
7377 Epoch: 7341 cost= 0.035270464
7378 Epoch: 7342 cost= 0.032769028
7379 Epoch: 7343 cost= 0.035592377
7380 Epoch: 7344 cost= 0.034207352
7381 Epoch: 7345 cost= 0.034072973
7382 Epoch: 7346 cost= 0.036811650
7383 Epoch: 7347 cost= 0.035331279
7384 Epoch: 7348 cost= 0.033136342
7385 Epoch: 7349 cost= 0.036042664
7386 Epoch: 7350 cost= 0.035744336
```

```
7387 Epoch: 7351 cost= 0.035027836
7388 Epoch: 7352 cost= 0.032920662
7389 Epoch: 7353 cost= 0.033257376
7390 Epoch: 7354 cost= 0.036489546
7391 Epoch: 7355 cost= 0.033594720
7392 Epoch: 7356 cost= 0.035946619
7393 Epoch: 7357 cost= 0.035422117
7394 Epoch: 7358 cost= 0.035978198
7395 Epoch: 7359 cost= 0.034330495
7396 Epoch: 7360 cost= 0.034381602
7397 Epoch: 7361 cost= 0.034076646
7398 Epoch: 7362 cost= 0.033095535
7399 Epoch: 7363 cost= 0.034885872
7400 Epoch: 7364 cost= 0.034189269
7401 Epoch: 7365 cost= 0.034548227
7402 Epoch: 7366 cost= 0.034373924
7403 Epoch: 7367 cost= 0.035451710
7404 Epoch: 7368 cost= 0.035872020
7405 Epoch: 7369 cost= 0.034780100
7406 Epoch: 7370 cost= 0.034028545
7407 Epoch: 7371 cost= 0.035991035
7408 Epoch: 7372 cost= 0.033178817
7409 Epoch: 7373 cost= 0.036772050
7410 Epoch: 7374 cost= 0.034816045
```



```
7411 Epoch: 7375 cost= 0.032515995
7412 Epoch: 7376 cost= 0.035021290
7413 Epoch: 7377 cost= 0.034257520
7414 Epoch: 7378 cost= 0.035430569
7415 Epoch: 7379 cost= 0.034987003
7416 Epoch: 7380 cost= 0.033765901
7417 Epoch: 7381 cost= 0.035392072
7418 Epoch: 7382 cost= 0.035934493
7419 Epoch: 7383 cost= 0.035113961
7420 Epoch: 7384 cost= 0.033584852
7421 Epoch: 7385 cost= 0.034308303
7422 Epoch: 7386 cost= 0.033934996
7423 Epoch: 7387 cost= 0.034295361
7424 Epoch: 7388 cost= 0.034832250
7425 Epoch: 7389 cost= 0.036740519
7426 Epoch: 7390 cost= 0.035027746
7427 Epoch: 7391 cost= 0.035517011
7428 Epoch: 7392 cost= 0.033775896
7429 Epoch: 7393 cost= 0.034595843
7430 Epoch: 7394 cost= 0.035676770
7431 Epoch: 7395 cost= 0.034729190
7432 Epoch: 7396 cost= 0.035531215
7433 Epoch: 7397 cost= 0.035615854
7434 Epoch: 7398 cost= 0.034858629
```

```
7435 Epoch: 7399 cost= 0.034664106
7436 Epoch: 7400 cost= 0.033462632
7437 Epoch: 7401 cost= 0.032614127
7438 Epoch: 7402 cost= 0.033653397
7439 Epoch: 7403 cost= 0.035745926
7440 Epoch: 7404 cost= 0.034262426
7441 Epoch: 7405 cost= 0.034355842
7442 Epoch: 7406 cost= 0.033326399
7443 Epoch: 7407 cost= 0.032949224
7444 Epoch: 7408 cost= 0.034763813
7445 Epoch: 7409 cost= 0.036069188
7446 Epoch: 7410 cost= 0.034067947
7447 Epoch: 7411 cost= 0.033903506
7448 Epoch: 7412 cost= 0.034104723
7449 Epoch: 7413 cost= 0.033640318
7450 Epoch: 7414 cost= 0.033981785
7451 Epoch: 7415 cost= 0.035076350
7452 Epoch: 7416 cost= 0.032350361
7453 Epoch: 7417 cost= 0.035050865
7454 Epoch: 7418 cost= 0.032356422
7455 Epoch: 7419 cost= 0.034591503
7456 Epoch: 7420 cost= 0.035261173
7457 Epoch: 7421 cost= 0.033727668
7458 Epoch: 7422 cost= 0.034226246
```

```
7459 Epoch: 7423 cost= 0.034583412
7460 Epoch: 7424 cost= 0.035234757
7461 Epoch: 7425 cost= 0.033683926
7462 Epoch: 7426 cost= 0.035382461
7463 Epoch: 7427 cost= 0.035464298
7464 Epoch: 7428 cost= 0.034763914
7465 Epoch: 7429 cost= 0.035604209
7466 Epoch: 7430 cost= 0.035536844
7467 Epoch: 7431 cost= 0.035844680
7468 Epoch: 7432 cost= 0.034935389
7469 Epoch: 7433 cost= 0.035634339
7470 Epoch: 7434 cost= 0.035132978
7471 Epoch: 7435 cost= 0.033783361
7472 Epoch: 7436 cost= 0.034639582
7473 Epoch: 7437 cost= 0.033260800
7474 Epoch: 7438 cost= 0.034510724
7475 Epoch: 7439 cost= 0.033988651
7476 Epoch: 7440 cost= 0.034076389
7477 Epoch: 7441 cost= 0.035162024
7478 Epoch: 7442 cost= 0.034627788
7479 Epoch: 7443 cost= 0.035371989
7480 Epoch: 7444 cost= 0.034305781
7481 Epoch: 7445 cost= 0.036013838
7482 Epoch: 7446 cost= 0.034131553
```

```
7483 Epoch: 7447 cost= 0.034340028
7484 Epoch: 7448 cost= 0.035412353
7485 Epoch: 7449 cost= 0.034651455
7486 Epoch: 7450 cost= 0.035389975
7487 Epoch: 7451 cost= 0.034639370
7488 Epoch: 7452 cost= 0.033970445
7489 Epoch: 7453 cost= 0.035182457
7490 Epoch: 7454 cost= 0.032467209
7491 Epoch: 7455 cost= 0.035782278
7492 Epoch: 7456 cost= 0.034884281
7493 Epoch: 7457 cost= 0.036109347
7494 Epoch: 7458 cost= 0.034674250
7495 Epoch: 7459 cost= 0.033433098
7496 Epoch: 7460 cost= 0.035556078
7497 Epoch: 7461 cost= 0.034504872
7498 Epoch: 7462 cost= 0.035169285
7499 Epoch: 7463 cost= 0.034580626
7500 Epoch: 7464 cost= 0.036212370
7501 Epoch: 7465 cost= 0.033124845
7502 Epoch: 7466 cost= 0.033282913
7503 Epoch: 7467 cost= 0.036006618
7504 Epoch: 7468 cost= 0.034107529
7505 Epoch: 7469 cost= 0.035383627
7506 Epoch: 7470 cost= 0.034554355
```

```
7507 Epoch: 7471 cost= 0.033016343
7508 Epoch: 7472 cost= 0.036293630
7509 Epoch: 7473 cost= 0.033946659
7510 Epoch: 7474 cost= 0.034894347
7511 Epoch: 7475 cost= 0.034703270
7512 Epoch: 7476 cost= 0.036614034
7513 Epoch: 7477 cost= 0.035904244
7514 Epoch: 7478 cost= 0.034693021
7515 Epoch: 7479 cost= 0.034738272
7516 Epoch: 7480 cost= 0.035470948
7517 Epoch: 7481 cost= 0.033953931
7518 Epoch: 7482 cost= 0.037246898
7519 Epoch: 7483 cost= 0.035483651
7520 Epoch: 7484 cost= 0.034383778
7521 Epoch: 7485 cost= 0.035319548
7522 Epoch: 7486 cost= 0.036661115
7523 Epoch: 7487 cost= 0.035748333
7524 Epoch: 7488 cost= 0.035531398
7525 Epoch: 7489 cost= 0.034785572
7526 Epoch: 7490 cost= 0.036502395
7527 Epoch: 7491 cost= 0.035021946
7528 Epoch: 7492 cost= 0.035192534
7529 Epoch: 7493 cost= 0.035735164
7530 Epoch: 7494 cost= 0.035196271
```

```
7531 Epoch: 7495 cost= 0.034558356
7532 Epoch: 7496 cost= 0.035183869
7533 Epoch: 7497 cost= 0.034279328
7534 Epoch: 7498 cost= 0.035308242
7535 Epoch: 7499 cost= 0.033132549
7536 Epoch: 7500 cost= 0.034356870
7537 Epoch: 7501 cost= 0.033846658
7538 Epoch: 7502 cost= 0.035508234
7539 Epoch: 7503 cost= 0.032699428
7540 Epoch: 7504 cost= 0.035113875
7541 Epoch: 7505 cost= 0.034225222
7542 Epoch: 7506 cost= 0.034520399
7543 Epoch: 7507 cost= 0.035610925
7544 Epoch: 7508 cost= 0.034140278
7545 Epoch: 7509 cost= 0.033422559
7546 Epoch: 7510 cost= 0.033658430
7547 Epoch: 7511 cost= 0.033172134
7548 Epoch: 7512 cost= 0.034077626
7549 Epoch: 7513 cost= 0.034366310
7550 Epoch: 7514 cost= 0.035759743
7551 Epoch: 7515 cost= 0.035219561
7552 Epoch: 7516 cost= 0.034918748
7553 Epoch: 7517 cost= 0.034907658
7554 Epoch: 7518 cost= 0.035785347
```

```
7555 Epoch: 7519 cost= 0.033878654
7556 Epoch: 7520 cost= 0.033441458
7557 Epoch: 7521 cost= 0.035612635
7558 Epoch: 7522 cost= 0.034987461
7559 Epoch: 7523 cost= 0.036042850
7560 Epoch: 7524 cost= 0.035508215
7561 Epoch: 7525 cost= 0.034897178
7562 Epoch: 7526 cost= 0.034545384
7563 Epoch: 7527 cost= 0.035960410
7564 Epoch: 7528 cost= 0.034400705
7565 Epoch: 7529 cost= 0.034683261
7566 Epoch: 7530 cost= 0.034776557
7567 Epoch: 7531 cost= 0.032837886
7568 Epoch: 7532 cost= 0.032987211
7569 Epoch: 7533 cost= 0.034636993
7570 Epoch: 7534 cost= 0.032462310
7571 Epoch: 7535 cost= 0.034187872
7572 Epoch: 7536 cost= 0.035037667
7573 Epoch: 7537 cost= 0.035399642
7574 Epoch: 7538 cost= 0.035765778
7575 Epoch: 7539 cost= 0.037559226
7576 Epoch: 7540 cost= 0.035372879
7577 Epoch: 7541 cost= 0.034212369
7578 Epoch: 7542 cost= 0.035199001
```

```
7579 Epoch: 7543 cost= 0.033036903
7580 Epoch: 7544 cost= 0.033620454
7581 Epoch: 7545 cost= 0.034517590
7582 Epoch: 7546 cost= 0.033827525
7583 Epoch: 7547 cost= 0.033499096
7584 Epoch: 7548 cost= 0.033206258
7585 Epoch: 7549 cost= 0.035266146
7586 Epoch: 7550 cost= 0.034120653
7587 Epoch: 7551 cost= 0.035174213
7588 Epoch: 7552 cost= 0.035411008
7589 Epoch: 7553 cost= 0.032954808
7590 Epoch: 7554 cost= 0.033083513
7591 Epoch: 7555 cost= 0.034607511
7592 Epoch: 7556 cost= 0.033390000
7593 Epoch: 7557 cost= 0.033247184
7594 Epoch: 7558 cost= 0.035370782
7595 Epoch: 7559 cost= 0.033272095
7596 Epoch: 7560 cost= 0.034834050
7597 Epoch: 7561 cost= 0.033665899
7598 Epoch: 7562 cost= 0.036240980
7599 Epoch: 7563 cost= 0.035055216
7600 Epoch: 7564 cost= 0.036151953
7601 Epoch: 7565 cost= 0.034937765
7602 Epoch: 7566 cost= 0.035378214
```



```
7603 Epoch: 7567 cost= 0.035405032
7604 Epoch: 7568 cost= 0.035804976
7605 Epoch: 7569 cost= 0.035124358
7606 Epoch: 7570 cost= 0.034472961
7607 Epoch: 7571 cost= 0.033507809
7608 Epoch: 7572 cost= 0.032772418
7609 Epoch: 7573 cost= 0.036386967
7610 Epoch: 7574 cost= 0.035601690
7611 Epoch: 7575 cost= 0.035238985
7612 Epoch: 7576 cost= 0.038119480
7613 Epoch: 7577 cost= 0.032561678
7614 Epoch: 7578 cost= 0.034647014
7615 Epoch: 7579 cost= 0.035193168
7616 Epoch: 7580 cost= 0.034035180
7617 Epoch: 7581 cost= 0.034503073
7618 Epoch: 7582 cost= 0.035429552
7619 Epoch: 7583 cost= 0.032473408
7620 Epoch: 7584 cost= 0.035272371
7621 Epoch: 7585 cost= 0.034897417
7622 Epoch: 7586 cost= 0.037205484
7623 Epoch: 7587 cost= 0.033396728
7624 Epoch: 7588 cost= 0.036601912
7625 Epoch: 7589 cost= 0.034440126
7626 Epoch: 7590 cost= 0.035307758
```

```
7627 Epoch: 7591 cost= 0.033367068
7628 Epoch: 7592 cost= 0.035236754
7629 Epoch: 7593 cost= 0.036373101
7630 Epoch: 7594 cost= 0.034988694
7631 Epoch: 7595 cost= 0.034768116
7632 Epoch: 7596 cost= 0.033917472
7633 Epoch: 7597 cost= 0.036290266
7634 Epoch: 7598 cost= 0.035852309
7635 Epoch: 7599 cost= 0.035948243
7636 Epoch: 7600 cost= 0.033325285
7637 Epoch: 7601 cost= 0.033254273
7638 Epoch: 7602 cost= 0.034870900
7639 Epoch: 7603 cost= 0.034467172
7640 Epoch: 7604 cost= 0.033730555
7641 Epoch: 7605 cost= 0.034243897
7642 Epoch: 7606 cost= 0.033459187
7643 Epoch: 7607 cost= 0.035227571
7644 Epoch: 7608 cost= 0.035563711
7645 Epoch: 7609 cost= 0.035661947
7646 Epoch: 7610 cost= 0.033687048
7647 Epoch: 7611 cost= 0.035302602
7648 Epoch: 7612 cost= 0.034132671
7649 Epoch: 7613 cost= 0.033845302
7650 Epoch: 7614 cost= 0.033107229
```

```
7651 Epoch: 7615 cost= 0.033347625
7652 Epoch: 7616 cost= 0.032175545
7653 Epoch: 7617 cost= 0.034191839
7654 Epoch: 7618 cost= 0.034656145
7655 Epoch: 7619 cost= 0.033062860
7656 Epoch: 7620 cost= 0.033983134
7657 Epoch: 7621 cost= 0.034337770
7658 Epoch: 7622 cost= 0.035964828
7659 Epoch: 7623 cost= 0.034256570
7660 Epoch: 7624 cost= 0.034768663
7661 Epoch: 7625 cost= 0.035105415
7662 Epoch: 7626 cost= 0.035551526
7663 Epoch: 7627 cost= 0.034547556
7664 Epoch: 7628 cost= 0.034188773
7665 Epoch: 7629 cost= 0.035002805
7666 Epoch: 7630 cost= 0.035057895
7667 Epoch: 7631 cost= 0.035498198
7668 Epoch: 7632 cost= 0.035734437
7669 Epoch: 7633 cost= 0.038057260
7670 Epoch: 7634 cost= 0.033251066
7671 Epoch: 7635 cost= 0.035515536
7672 Epoch: 7636 cost= 0.036301583
7673 Epoch: 7637 cost= 0.034113042
7674 Epoch: 7638 cost= 0.035418794
```

```
7675 Epoch: 7639 cost= 0.035067324
7676 Epoch: 7640 cost= 0.035299126
7677 Epoch: 7641 cost= 0.033511471
7678 Epoch: 7642 cost= 0.038167264
7679 Epoch: 7643 cost= 0.033730600
7680 Epoch: 7644 cost= 0.036311716
7681 Epoch: 7645 cost= 0.034936175
7682 Epoch: 7646 cost= 0.034333467
7683 Epoch: 7647 cost= 0.034346648
7684 Epoch: 7648 cost= 0.034257893
7685 Epoch: 7649 cost= 0.033616703
7686 Epoch: 7650 cost= 0.035828639
7687 Epoch: 7651 cost= 0.034247842
7688 Epoch: 7652 cost= 0.036105867
7689 Epoch: 7653 cost= 0.035056084
7690 Epoch: 7654 cost= 0.032764249
7691 Epoch: 7655 cost= 0.033954274
7692 Epoch: 7656 cost= 0.033926297
7693 Epoch: 7657 cost= 0.034752008
7694 Epoch: 7658 cost= 0.033572461
7695 Epoch: 7659 cost= 0.035632543
7696 Epoch: 7660 cost= 0.034035757
7697 Epoch: 7661 cost= 0.035706058
7698 Epoch: 7662 cost= 0.036274508
```

```
7699 Epoch: 7663 cost= 0.035330459
7700 Epoch: 7664 cost= 0.033344336
7701 Epoch: 7665 cost= 0.035425667
7702 Epoch: 7666 cost= 0.035132769
7703 Epoch: 7667 cost= 0.035857707
7704 Epoch: 7668 cost= 0.032364763
7705 Epoch: 7669 cost= 0.033317380
7706 Epoch: 7670 cost= 0.035695326
7707 Epoch: 7671 cost= 0.035672061
7708 Epoch: 7672 cost= 0.034768268
7709 Epoch: 7673 cost= 0.036375683
7710 Epoch: 7674 cost= 0.035267152
7711 Epoch: 7675 cost= 0.034554120
7712 Epoch: 7676 cost= 0.034170695
7713 Epoch: 7677 cost= 0.034869626
7714 Epoch: 7678 cost= 0.034039624
7715 Epoch: 7679 cost= 0.035420407
7716 Epoch: 7680 cost= 0.034869451
7717 Epoch: 7681 cost= 0.035271630
7718 Epoch: 7682 cost= 0.035092264
7719 Epoch: 7683 cost= 0.035241731
7720 Epoch: 7684 cost= 0.035567418
7721 Epoch: 7685 cost= 0.035102937
7722 Epoch: 7686 cost= 0.037135415
```

```
7723 Epoch: 7687 cost= 0.034057971
7724 Epoch: 7688 cost= 0.034653913
7725 Epoch: 7689 cost= 0.035003960
7726 Epoch: 7690 cost= 0.033613253
7727 Epoch: 7691 cost= 0.034076955
7728 Epoch: 7692 cost= 0.033341791
7729 Epoch: 7693 cost= 0.035460860
7730 Epoch: 7694 cost= 0.034110676
7731 Epoch: 7695 cost= 0.034984663
7732 Epoch: 7696 cost= 0.033671066
7733 Epoch: 7697 cost= 0.037448999
7734 Epoch: 7698 cost= 0.034639932
7735 Epoch: 7699 cost= 0.034899261
7736 Epoch: 7700 cost= 0.033854719
7737 Epoch: 7701 cost= 0.035514642
7738 Epoch: 7702 cost= 0.036692545
7739 Epoch: 7703 cost= 0.034841247
7740 Epoch: 7704 cost= 0.034102473
7741 Epoch: 7705 cost= 0.036380898
7742 Epoch: 7706 cost= 0.036852986
7743 Epoch: 7707 cost= 0.035628084
7744 Epoch: 7708 cost= 0.033289589
7745 Epoch: 7709 cost= 0.034507889
7746 Epoch: 7710 cost= 0.036542732
```

```
7747 Epoch: 7711 cost= 0.036513742
7748 Epoch: 7712 cost= 0.035279367
7749 Epoch: 7713 cost= 0.033081800
7750 Epoch: 7714 cost= 0.035469946
7751 Epoch: 7715 cost= 0.035879832
7752 Epoch: 7716 cost= 0.035619114
7753 Epoch: 7717 cost= 0.034257676
7754 Epoch: 7718 cost= 0.033730377
7755 Epoch: 7719 cost= 0.035100918
7756 Epoch: 7720 cost= 0.035351537
7757 Epoch: 7721 cost= 0.036910087
7758 Epoch: 7722 cost= 0.035934892
7759 Epoch: 7723 cost= 0.034020960
7760 Epoch: 7724 cost= 0.037402641
7761 Epoch: 7725 cost= 0.034181599
7762 Epoch: 7726 cost= 0.036280897
7763 Epoch: 7727 cost= 0.032518435
7764 Epoch: 7728 cost= 0.034843702
7765 Epoch: 7729 cost= 0.035810061
7766 Epoch: 7730 cost= 0.036816996
7767 Epoch: 7731 cost= 0.035057116
7768 Epoch: 7732 cost= 0.036391322
7769 Epoch: 7733 cost= 0.034992706
7770 Epoch: 7734 cost= 0.034579560
```

```
7771 Epoch: 7735 cost= 0.036272530
7772 Epoch: 7736 cost= 0.034647699
7773 Epoch: 7737 cost= 0.033330698
7774 Epoch: 7738 cost= 0.035261784
7775 Epoch: 7739 cost= 0.035671700
7776 Epoch: 7740 cost= 0.035637747
7777 Epoch: 7741 cost= 0.033928569
7778 Epoch: 7742 cost= 0.036005866
7779 Epoch: 7743 cost= 0.032979921
7780 Epoch: 7744 cost= 0.035715897
7781 Epoch: 7745 cost= 0.035676762
7782 Epoch: 7746 cost= 0.035100583
7783 Epoch: 7747 cost= 0.036398947
7784 Epoch: 7748 cost= 0.035928983
7785 Epoch: 7749 cost= 0.036107052
7786 Epoch: 7750 cost= 0.036418214
7787 Epoch: 7751 cost= 0.032466494
7788 Epoch: 7752 cost= 0.034985308
7789 Epoch: 7753 cost= 0.036256615
7790 Epoch: 7754 cost= 0.037693132
7791 Epoch: 7755 cost= 0.036302745
7792 Epoch: 7756 cost= 0.034057327
7793 Epoch: 7757 cost= 0.034747120
7794 Epoch: 7758 cost= 0.035732679
```



```
7795 Epoch: 7759 cost= 0.035898354
7796 Epoch: 7760 cost= 0.036080264
7797 Epoch: 7761 cost= 0.037266195
7798 Epoch: 7762 cost= 0.034031499
7799 Epoch: 7763 cost= 0.036253043
7800 Epoch: 7764 cost= 0.035382252
7801 Epoch: 7765 cost= 0.035681032
7802 Epoch: 7766 cost= 0.036427870
7803 Epoch: 7767 cost= 0.035460811
7804 Epoch: 7768 cost= 0.036628522
7805 Epoch: 7769 cost= 0.036889963
7806 Epoch: 7770 cost= 0.037550032
7807 Epoch: 7771 cost= 0.036355738
7808 Epoch: 7772 cost= 0.037166018
7809 Epoch: 7773 cost= 0.035840962
7810 Epoch: 7774 cost= 0.035393603
7811 Epoch: 7775 cost= 0.036487926
7812 Epoch: 7776 cost= 0.035716083
7813 Epoch: 7777 cost= 0.035123717
7814 Epoch: 7778 cost= 0.036605671
7815 Epoch: 7779 cost= 0.033981111
7816 Epoch: 7780 cost= 0.035700828
7817 Epoch: 7781 cost= 0.032903977
7818 Epoch: 7782 cost= 0.036156248
```

```
7819 Epoch: 7783 cost= 0.036644001
7820 Epoch: 7784 cost= 0.034350824
7821 Epoch: 7785 cost= 0.037110936
7822 Epoch: 7786 cost= 0.036219418
7823 Epoch: 7787 cost= 0.038431868
7824 Epoch: 7788 cost= 0.036551774
7825 Epoch: 7789 cost= 0.035321113
7826 Epoch: 7790 cost= 0.035807740
7827 Epoch: 7791 cost= 0.037927572
7828 Epoch: 7792 cost= 0.034059707
7829 Epoch: 7793 cost= 0.033823505
7830 Epoch: 7794 cost= 0.033429727
7831 Epoch: 7795 cost= 0.036112137
7832 Epoch: 7796 cost= 0.034543503
7833 Epoch: 7797 cost= 0.034882773
7834 Epoch: 7798 cost= 0.034481529
7835 Epoch: 7799 cost= 0.035712272
7836 Epoch: 7800 cost= 0.034973878
7837 Epoch: 7801 cost= 0.034483023
7838 Epoch: 7802 cost= 0.036585201
7839 Epoch: 7803 cost= 0.034396056
7840 Epoch: 7804 cost= 0.035987604
7841 Epoch: 7805 cost= 0.035314295
7842 Epoch: 7806 cost= 0.036957260
```

```
7843 Epoch: 7807 cost= 0.036182877
7844 Epoch: 7808 cost= 0.036415908
7845 Epoch: 7809 cost= 0.035680756
7846 Epoch: 7810 cost= 0.035494991
7847 Epoch: 7811 cost= 0.035848707
7848 Epoch: 7812 cost= 0.037995853
7849 Epoch: 7813 cost= 0.034907829
7850 Epoch: 7814 cost= 0.034826305
7851 Epoch: 7815 cost= 0.034880482
7852 Epoch: 7816 cost= 0.036813963
7853 Epoch: 7817 cost= 0.034185834
7854 Epoch: 7818 cost= 0.035454459
7855 Epoch: 7819 cost= 0.034503430
7856 Epoch: 7820 cost= 0.034782600
7857 Epoch: 7821 cost= 0.034615386
7858 Epoch: 7822 cost= 0.037457511
7859 Epoch: 7823 cost= 0.035988651
7860 Epoch: 7824 cost= 0.036365431
7861 Epoch: 7825 cost= 0.036282290
7862 Epoch: 7826 cost= 0.035891011
7863 Epoch: 7827 cost= 0.034203619
7864 Epoch: 7828 cost= 0.035320096
7865 Epoch: 7829 cost= 0.035857540
7866 Epoch: 7830 cost= 0.035102218
```

```
7867 Epoch: 7831 cost= 0.034818146
7868 Epoch: 7832 cost= 0.035388332
7869 Epoch: 7833 cost= 0.035105009
7870 Epoch: 7834 cost= 0.035475463
7871 Epoch: 7835 cost= 0.037325837
7872 Epoch: 7836 cost= 0.035740487
7873 Epoch: 7837 cost= 0.035070505
7874 Epoch: 7838 cost= 0.036773946
7875 Epoch: 7839 cost= 0.034203526
7876 Epoch: 7840 cost= 0.034569256
7877 Epoch: 7841 cost= 0.037625518
7878 Epoch: 7842 cost= 0.036099754
7879 Epoch: 7843 cost= 0.037621494
7880 Epoch: 7844 cost= 0.035083942
7881 Epoch: 7845 cost= 0.036314800
7882 Epoch: 7846 cost= 0.036669813
7883 Epoch: 7847 cost= 0.035848882
7884 Epoch: 7848 cost= 0.034636069
7885 Epoch: 7849 cost= 0.037444197
7886 Epoch: 7850 cost= 0.035298724
7887 Epoch: 7851 cost= 0.034650330
7888 Epoch: 7852 cost= 0.036329430
7889 Epoch: 7853 cost= 0.036133576
7890 Epoch: 7854 cost= 0.035462007
```

```
7891 Epoch: 7855 cost= 0.036425382
7892 Epoch: 7856 cost= 0.035789937
7893 Epoch: 7857 cost= 0.036090102
7894 Epoch: 7858 cost= 0.036609750
7895 Epoch: 7859 cost= 0.034270898
7896 Epoch: 7860 cost= 0.035817303
7897 Epoch: 7861 cost= 0.035229277
7898 Epoch: 7862 cost= 0.033864073
7899 Epoch: 7863 cost= 0.035672780
7900 Epoch: 7864 cost= 0.034244813
7901 Epoch: 7865 cost= 0.034312773
7902 Epoch: 7866 cost= 0.035911988
7903 Epoch: 7867 cost= 0.035712160
7904 Epoch: 7868 cost= 0.034378488
7905 Epoch: 7869 cost= 0.034615289
7906 Epoch: 7870 cost= 0.034621552
7907 Epoch: 7871 cost= 0.035034429
7908 Epoch: 7872 cost= 0.034855079
7909 Epoch: 7873 cost= 0.035517491
7910 Epoch: 7874 cost= 0.037133440
7911 Epoch: 7875 cost= 0.035673611
7912 Epoch: 7876 cost= 0.037195385
7913 Epoch: 7877 cost= 0.035044890
7914 Epoch: 7878 cost= 0.034896839
```

```
7915 Epoch: 7879 cost= 0.033546738
7916 Epoch: 7880 cost= 0.037253886
7917 Epoch: 7881 cost= 0.034190442
7918 Epoch: 7882 cost= 0.033987790
7919 Epoch: 7883 cost= 0.035848670
7920 Epoch: 7884 cost= 0.036961321
7921 Epoch: 7885 cost= 0.036474071
7922 Epoch: 7886 cost= 0.035350468
7923 Epoch: 7887 cost= 0.036652025
7924 Epoch: 7888 cost= 0.034259617
7925 Epoch: 7889 cost= 0.034560382
7926 Epoch: 7890 cost= 0.036612336
7927 Epoch: 7891 cost= 0.035588000
7928 Epoch: 7892 cost= 0.034982439
7929 Epoch: 7893 cost= 0.034188781
7930 Epoch: 7894 cost= 0.033477295
7931 Epoch: 7895 cost= 0.034927439
7932 Epoch: 7896 cost= 0.036175627
7933 Epoch: 7897 cost= 0.036075190
7934 Epoch: 7898 cost= 0.034762964
7935 Epoch: 7899 cost= 0.035382379
7936 Epoch: 7900 cost= 0.036100280
7937 Epoch: 7901 cost= 0.035872642
7938 Epoch: 7902 cost= 0.034944121
```

```
7939 Epoch: 7903 cost= 0.034993779
7940 Epoch: 7904 cost= 0.035250541
7941 Epoch: 7905 cost= 0.037071817
7942 Epoch: 7906 cost= 0.034632482
7943 Epoch: 7907 cost= 0.036664691
7944 Epoch: 7908 cost= 0.033810705
7945 Epoch: 7909 cost= 0.036025830
7946 Epoch: 7910 cost= 0.035128783
7947 Epoch: 7911 cost= 0.036276367
7948 Epoch: 7912 cost= 0.037206355
7949 Epoch: 7913 cost= 0.034697570
7950 Epoch: 7914 cost= 0.035507295
7951 Epoch: 7915 cost= 0.034335036
7952 Epoch: 7916 cost= 0.035391249
7953 Epoch: 7917 cost= 0.034642715
7954 Epoch: 7918 cost= 0.035051145
7955 Epoch: 7919 cost= 0.035651155
7956 Epoch: 7920 cost= 0.036113638
7957 Epoch: 7921 cost= 0.035985678
7958 Epoch: 7922 cost= 0.033019099
7959 Epoch: 7923 cost= 0.034765590
7960 Epoch: 7924 cost= 0.036112580
7961 Epoch: 7925 cost= 0.034851946
7962 Epoch: 7926 cost= 0.035268087
```



```
7963 Epoch: 7927 cost= 0.036385752
7964 Epoch: 7928 cost= 0.035136469
7965 Epoch: 7929 cost= 0.036017593
7966 Epoch: 7930 cost= 0.035920210
7967 Epoch: 7931 cost= 0.036106233
7968 Epoch: 7932 cost= 0.035063680
7969 Epoch: 7933 cost= 0.035570443
7970 Epoch: 7934 cost= 0.035552170
7971 Epoch: 7935 cost= 0.037085500
7972 Epoch: 7936 cost= 0.036692139
7973 Epoch: 7937 cost= 0.035576902
7974 Epoch: 7938 cost= 0.034929883
7975 Epoch: 7939 cost= 0.035988167
7976 Epoch: 7940 cost= 0.033858951
7977 Epoch: 7941 cost= 0.034836296
7978 Epoch: 7942 cost= 0.033923488
7979 Epoch: 7943 cost= 0.035843309
7980 Epoch: 7944 cost= 0.035292778
7981 Epoch: 7945 cost= 0.032969743
7982 Epoch: 7946 cost= 0.035184547
7983 Epoch: 7947 cost= 0.033606891
7984 Epoch: 7948 cost= 0.032960244
7985 Epoch: 7949 cost= 0.032927353
7986 Epoch: 7950 cost= 0.035440177
```



```
7987 Epoch: 7951 cost= 0.037070207
7988 Epoch: 7952 cost= 0.036332849
7989 Epoch: 7953 cost= 0.033014119
7990 Epoch: 7954 cost= 0.034525257
7991 Epoch: 7955 cost= 0.035762593
7992 Epoch: 7956 cost= 0.036125846
7993 Epoch: 7957 cost= 0.035235591
7994 Epoch: 7958 cost= 0.035327278
7995 Epoch: 7959 cost= 0.036219865
7996 Epoch: 7960 cost= 0.036525078
7997 Epoch: 7961 cost= 0.035196006
7998 Epoch: 7962 cost= 0.034958836
7999 Epoch: 7963 cost= 0.035576049
8000 Epoch: 7964 cost= 0.035180803
8001 Epoch: 7965 cost= 0.033931322
8002 Epoch: 7966 cost= 0.037651889
8003 Epoch: 7967 cost= 0.035995584
8004 Epoch: 7968 cost= 0.037075326
8005 Epoch: 7969 cost= 0.035412047
8006 Epoch: 7970 cost= 0.034858931
8007 Epoch: 7971 cost= 0.034681015
8008 Epoch: 7972 cost= 0.033718694
8009 Epoch: 7973 cost= 0.035042949
8010 Epoch: 7974 cost= 0.034871612
```

```
8011 Epoch: 7975 cost= 0.035937235
8012 Epoch: 7976 cost= 0.035976529
8013 Epoch: 7977 cost= 0.034278996
8014 Epoch: 7978 cost= 0.035097148
8015 Epoch: 7979 cost= 0.034992281
8016 Epoch: 7980 cost= 0.036342222
8017 Epoch: 7981 cost= 0.036446251
8018 Epoch: 7982 cost= 0.035425682
8019 Epoch: 7983 cost= 0.034437090
8020 Epoch: 7984 cost= 0.035905786
8021 Epoch: 7985 cost= 0.034865186
8022 Epoch: 7986 cost= 0.035121221
8023 Epoch: 7987 cost= 0.034175154
8024 Epoch: 7988 cost= 0.033940446
8025 Epoch: 7989 cost= 0.036026455
8026 Epoch: 7990 cost= 0.033592425
8027 Epoch: 7991 cost= 0.034380764
8028 Epoch: 7992 cost= 0.034832679
8029 Epoch: 7993 cost= 0.033587519
8030 Epoch: 7994 cost= 0.035097521
8031 Epoch: 7995 cost= 0.036902010
8032 Epoch: 7996 cost= 0.036269866
8033 Epoch: 7997 cost= 0.035936806
8034 Epoch: 7998 cost= 0.034949195
```

```
8035 Epoch: 7999 cost= 0.034366850
8036 Epoch: 8000 cost= 0.034114916
8037 Epoch: 8001 cost= 0.036177937
8038 Epoch: 8002 cost= 0.033992961
8039 Epoch: 8003 cost= 0.035545863
8040 Epoch: 8004 cost= 0.033674750
8041 Epoch: 8005 cost= 0.033358183
8042 Epoch: 8006 cost= 0.034514174
8043 Epoch: 8007 cost= 0.035598937
8044 Epoch: 8008 cost= 0.036187578
8045 Epoch: 8009 cost= 0.038024809
8046 Epoch: 8010 cost= 0.034883041
8047 Epoch: 8011 cost= 0.034823321
8048 Epoch: 8012 cost= 0.033810705
8049 Epoch: 8013 cost= 0.034915991
8050 Epoch: 8014 cost= 0.035759084
8051 Epoch: 8015 cost= 0.033850282
8052 Epoch: 8016 cost= 0.036038112
8053 Epoch: 8017 cost= 0.036332212
8054 Epoch: 8018 cost= 0.036118545
8055 Epoch: 8019 cost= 0.034561921
8056 Epoch: 8020 cost= 0.036049172
8057 Epoch: 8021 cost= 0.035031889
8058 Epoch: 8022 cost= 0.034840375
```

```
8059 Epoch: 8023 cost= 0.034993835
8060 Epoch: 8024 cost= 0.035034914
8061 Epoch: 8025 cost= 0.035920765
8062 Epoch: 8026 cost= 0.034331530
8063 Epoch: 8027 cost= 0.032501329
8064 Epoch: 8028 cost= 0.036462534
8065 Epoch: 8029 cost= 0.035642456
8066 Epoch: 8030 cost= 0.035008367
8067 Epoch: 8031 cost= 0.036270488
8068 Epoch: 8032 cost= 0.036063116
8069 Epoch: 8033 cost= 0.035847057
8070 Epoch: 8034 cost= 0.035961490
8071 Epoch: 8035 cost= 0.036964007
8072 Epoch: 8036 cost= 0.034474246
8073 Epoch: 8037 cost= 0.036154967
8074 Epoch: 8038 cost= 0.033894368
8075 Epoch: 8039 cost= 0.033946559
8076 Epoch: 8040 cost= 0.033570088
8077 Epoch: 8041 cost= 0.033597577
8078 Epoch: 8042 cost= 0.034405086
8079 Epoch: 8043 cost= 0.036505397
8080 Epoch: 8044 cost= 0.036814846
8081 Epoch: 8045 cost= 0.034427725
8082 Epoch: 8046 cost= 0.034844283
```

```
8083 Epoch: 8047 cost= 0.034223273
8084 Epoch: 8048 cost= 0.035776548
8085 Epoch: 8049 cost= 0.036211979
8086 Epoch: 8050 cost= 0.032848798
8087 Epoch: 8051 cost= 0.036086868
8088 Epoch: 8052 cost= 0.034489896
8089 Epoch: 8053 cost= 0.036161773
8090 Epoch: 8054 cost= 0.031188209
8091 Epoch: 8055 cost= 0.035415940
8092 Epoch: 8056 cost= 0.034486789
8093 Epoch: 8057 cost= 0.035423905
8094 Epoch: 8058 cost= 0.034131300
8095 Epoch: 8059 cost= 0.034266073
8096 Epoch: 8060 cost= 0.035530202
8097 Epoch: 8061 cost= 0.035245813
8098 Epoch: 8062 cost= 0.035336412
8099 Epoch: 8063 cost= 0.033177156
8100 Epoch: 8064 cost= 0.035748132
8101 Epoch: 8065 cost= 0.035685707
8102 Epoch: 8066 cost= 0.034968793
8103 Epoch: 8067 cost= 0.032363672
8104 Epoch: 8068 cost= 0.036864158
8105 Epoch: 8069 cost= 0.034179870
8106 Epoch: 8070 cost= 0.033517819
```

```
8107 Epoch: 8071 cost= 0.035008337
8108 Epoch: 8072 cost= 0.033552594
8109 Epoch: 8073 cost= 0.034911554
8110 Epoch: 8074 cost= 0.033908412
8111 Epoch: 8075 cost= 0.036219705
8112 Epoch: 8076 cost= 0.036422599
8113 Epoch: 8077 cost= 0.035570830
8114 Epoch: 8078 cost= 0.035059385
8115 Epoch: 8079 cost= 0.033762325
8116 Epoch: 8080 cost= 0.034429498
8117 Epoch: 8081 cost= 0.033925895
8118 Epoch: 8082 cost= 0.034262303
8119 Epoch: 8083 cost= 0.033552337
8120 Epoch: 8084 cost= 0.035152197
8121 Epoch: 8085 cost= 0.033842675
8122 Epoch: 8086 cost= 0.033657204
8123 Epoch: 8087 cost= 0.034728251
8124 Epoch: 8088 cost= 0.036367327
8125 Epoch: 8089 cost= 0.035003126
8126 Epoch: 8090 cost= 0.034088120
8127 Epoch: 8091 cost= 0.035048846
8128 Epoch: 8092 cost= 0.036437131
8129 Epoch: 8093 cost= 0.035865597
8130 Epoch: 8094 cost= 0.036562245
```

```
8131 Epoch: 8095 cost= 0.034847710
8132 Epoch: 8096 cost= 0.033547480
8133 Epoch: 8097 cost= 0.034438260
8134 Epoch: 8098 cost= 0.035981338
8135 Epoch: 8099 cost= 0.036518555
8136 Epoch: 8100 cost= 0.034393918
8137 Epoch: 8101 cost= 0.036824193
8138 Epoch: 8102 cost= 0.035444774
8139 Epoch: 8103 cost= 0.034311496
8140 Epoch: 8104 cost= 0.036893565
8141 Epoch: 8105 cost= 0.035980873
8142 Epoch: 8106 cost= 0.034238797
8143 Epoch: 8107 cost= 0.035315581
8144 Epoch: 8108 cost= 0.035313617
8145 Epoch: 8109 cost= 0.035415828
8146 Epoch: 8110 cost= 0.034073435
8147 Epoch: 8111 cost= 0.036644220
8148 Epoch: 8112 cost= 0.034049023
8149 Epoch: 8113 cost= 0.033866908
8150 Epoch: 8114 cost= 0.033932310
8151 Epoch: 8115 cost= 0.034812797
8152 Epoch: 8116 cost= 0.034075730
8153 Epoch: 8117 cost= 0.036413681
8154 Epoch: 8118 cost= 0.035577744
```



```
8155 Epoch: 8119 cost= 0.036356010
8156 Epoch: 8120 cost= 0.036168132
8157 Epoch: 8121 cost= 0.033735454
8158 Epoch: 8122 cost= 0.034886263
8159 Epoch: 8123 cost= 0.034794409
8160 Epoch: 8124 cost= 0.035191178
8161 Epoch: 8125 cost= 0.035902053
8162 Epoch: 8126 cost= 0.034047376
8163 Epoch: 8127 cost= 0.034173541
8164 Epoch: 8128 cost= 0.032023437
8165 Epoch: 8129 cost= 0.034464285
8166 Epoch: 8130 cost= 0.035130236
8167 Epoch: 8131 cost= 0.033852786
8168 Epoch: 8132 cost= 0.033207770
8169 Epoch: 8133 cost= 0.033159111
8170 Epoch: 8134 cost= 0.034653004
8171 Epoch: 8135 cost= 0.033195294
8172 Epoch: 8136 cost= 0.033941049
8173 Epoch: 8137 cost= 0.033958185
8174 Epoch: 8138 cost= 0.034874529
8175 Epoch: 8139 cost= 0.034460738
8176 Epoch: 8140 cost= 0.034658745
8177 Epoch: 8141 cost= 0.033796392
8178 Epoch: 8142 cost= 0.032964017
```



```
8179 Epoch: 8143 cost= 0.036433995
8180 Epoch: 8144 cost= 0.034542818
8181 Epoch: 8145 cost= 0.035908144
8182 Epoch: 8146 cost= 0.036281001
8183 Epoch: 8147 cost= 0.033329695
8184 Epoch: 8148 cost= 0.032824546
8185 Epoch: 8149 cost= 0.037011668
8186 Epoch: 8150 cost= 0.035850242
8187 Epoch: 8151 cost= 0.035337649
8188 Epoch: 8152 cost= 0.034478050
8189 Epoch: 8153 cost= 0.033602219
8190 Epoch: 8154 cost= 0.034604210
8191 Epoch: 8155 cost= 0.035828531
8192 Epoch: 8156 cost= 0.033578347
8193 Epoch: 8157 cost= 0.034612976
8194 Epoch: 8158 cost= 0.035484709
8195 Epoch: 8159 cost= 0.034838911
8196 Epoch: 8160 cost= 0.035283633
8197 Epoch: 8161 cost= 0.036055598
8198 Epoch: 8162 cost= 0.034500830
8199 Epoch: 8163 cost= 0.035050727
8200 Epoch: 8164 cost= 0.033354342
8201 Epoch: 8165 cost= 0.033389952
8202 Epoch: 8166 cost= 0.035932511
```

```
8203 Epoch: 8167 cost= 0.033372238
8204 Epoch: 8168 cost= 0.034825932
8205 Epoch: 8169 cost= 0.033426885
8206 Epoch: 8170 cost= 0.034559213
8207 Epoch: 8171 cost= 0.035187561
8208 Epoch: 8172 cost= 0.033749834
8209 Epoch: 8173 cost= 0.034699727
8210 Epoch: 8174 cost= 0.034777302
8211 Epoch: 8175 cost= 0.034847572
8212 Epoch: 8176 cost= 0.034570027
8213 Epoch: 8177 cost= 0.034304727
8214 Epoch: 8178 cost= 0.034637600
8215 Epoch: 8179 cost= 0.033533435
8216 Epoch: 8180 cost= 0.035541825
8217 Epoch: 8181 cost= 0.033700146
8218 Epoch: 8182 cost= 0.032445066
8219 Epoch: 8183 cost= 0.034889285
8220 Epoch: 8184 cost= 0.037511561
8221 Epoch: 8185 cost= 0.034003034
8222 Epoch: 8186 cost= 0.034505110
8223 Epoch: 8187 cost= 0.034028310
8224 Epoch: 8188 cost= 0.035142250
8225 Epoch: 8189 cost= 0.033938222
8226 Epoch: 8190 cost= 0.033675864
```

```
8227 Epoch: 8191 cost= 0.035707425
8228 Epoch: 8192 cost= 0.034408607
8229 Epoch: 8193 cost= 0.036445994
8230 Epoch: 8194 cost= 0.036189951
8231 Epoch: 8195 cost= 0.032961048
8232 Epoch: 8196 cost= 0.034667164
8233 Epoch: 8197 cost= 0.034653518
8234 Epoch: 8198 cost= 0.033857334
8235 Epoch: 8199 cost= 0.035332453
8236 Epoch: 8200 cost= 0.036290329
8237 Epoch: 8201 cost= 0.032503337
8238 Epoch: 8202 cost= 0.034438584
8239 Epoch: 8203 cost= 0.034641467
8240 Epoch: 8204 cost= 0.034034260
8241 Epoch: 8205 cost= 0.034961276
8242 Epoch: 8206 cost= 0.033712715
8243 Epoch: 8207 cost= 0.034498550
8244 Epoch: 8208 cost= 0.034018520
8245 Epoch: 8209 cost= 0.034873717
8246 Epoch: 8210 cost= 0.035198223
8247 Epoch: 8211 cost= 0.034160294
8248 Epoch: 8212 cost= 0.034675613
8249 Epoch: 8213 cost= 0.034802049
8250 Epoch: 8214 cost= 0.034389786
```

```
8251 Epoch: 8215 cost= 0.034381676
8252 Epoch: 8216 cost= 0.034826163
8253 Epoch: 8217 cost= 0.033793062
8254 Epoch: 8218 cost= 0.034577534
8255 Epoch: 8219 cost= 0.034129765
8256 Epoch: 8220 cost= 0.032952636
8257 Epoch: 8221 cost= 0.035858918
8258 Epoch: 8222 cost= 0.034091156
8259 Epoch: 8223 cost= 0.034352910
8260 Epoch: 8224 cost= 0.032500781
8261 Epoch: 8225 cost= 0.034429196
8262 Epoch: 8226 cost= 0.033803429
8263 Epoch: 8227 cost= 0.033854440
8264 Epoch: 8228 cost= 0.034616031
8265 Epoch: 8229 cost= 0.034117915
8266 Epoch: 8230 cost= 0.034492519
8267 Epoch: 8231 cost= 0.034151573
8268 Epoch: 8232 cost= 0.035731498
8269 Epoch: 8233 cost= 0.034709767
8270 Epoch: 8234 cost= 0.033499051
8271 Epoch: 8235 cost= 0.034359772
8272 Epoch: 8236 cost= 0.034231074
8273 Epoch: 8237 cost= 0.033661790
8274 Epoch: 8238 cost= 0.034773957
```

```
8275 Epoch: 8239 cost= 0.034687299
8276 Epoch: 8240 cost= 0.034515195
8277 Epoch: 8241 cost= 0.034483220
8278 Epoch: 8242 cost= 0.034524087
8279 Epoch: 8243 cost= 0.033648107
8280 Epoch: 8244 cost= 0.037682246
8281 Epoch: 8245 cost= 0.032469384
8282 Epoch: 8246 cost= 0.034424875
8283 Epoch: 8247 cost= 0.034700185
8284 Epoch: 8248 cost= 0.034481965
8285 Epoch: 8249 cost= 0.034735303
8286 Epoch: 8250 cost= 0.033586953
8287 Epoch: 8251 cost= 0.034844395
8288 Epoch: 8252 cost= 0.034996163
8289 Epoch: 8253 cost= 0.034777243
8290 Epoch: 8254 cost= 0.035841517
8291 Epoch: 8255 cost= 0.034347042
8292 Epoch: 8256 cost= 0.037597705
8293 Epoch: 8257 cost= 0.034643218
8294 Epoch: 8258 cost= 0.035084628
8295 Epoch: 8259 cost= 0.035097770
8296 Epoch: 8260 cost= 0.033744823
8297 Epoch: 8261 cost= 0.033097602
8298 Epoch: 8262 cost= 0.034238558
```

```
8299 Epoch: 8263 cost= 0.035356335
8300 Epoch: 8264 cost= 0.033976633
8301 Epoch: 8265 cost= 0.034195427
8302 Epoch: 8266 cost= 0.034733951
8303 Epoch: 8267 cost= 0.034993131
8304 Epoch: 8268 cost= 0.034354996
8305 Epoch: 8269 cost= 0.036031835
8306 Epoch: 8270 cost= 0.034775905
8307 Epoch: 8271 cost= 0.033847190
8308 Epoch: 8272 cost= 0.034577336
8309 Epoch: 8273 cost= 0.034380004
8310 Epoch: 8274 cost= 0.035379406
8311 Epoch: 8275 cost= 0.033778980
8312 Epoch: 8276 cost= 0.034046963
8313 Epoch: 8277 cost= 0.034675092
8314 Epoch: 8278 cost= 0.034478247
8315 Epoch: 8279 cost= 0.034393836
8316 Epoch: 8280 cost= 0.033666998
8317 Epoch: 8281 cost= 0.033066332
8318 Epoch: 8282 cost= 0.032493126
8319 Epoch: 8283 cost= 0.033501551
8320 Epoch: 8284 cost= 0.036009252
8321 Epoch: 8285 cost= 0.033556003
8322 Epoch: 8286 cost= 0.034533549
```

```
8323 Epoch: 8287 cost= 0.035685841
8324 Epoch: 8288 cost= 0.034988716
8325 Epoch: 8289 cost= 0.036204372
8326 Epoch: 8290 cost= 0.033360932
8327 Epoch: 8291 cost= 0.034182295
8328 Epoch: 8292 cost= 0.034555979
8329 Epoch: 8293 cost= 0.034561314
8330 Epoch: 8294 cost= 0.034899630
8331 Epoch: 8295 cost= 0.033247508
8332 Epoch: 8296 cost= 0.036954083
8333 Epoch: 8297 cost= 0.035456683
8334 Epoch: 8298 cost= 0.035517655
8335 Epoch: 8299 cost= 0.035235424
8336 Epoch: 8300 cost= 0.036067553
8337 Epoch: 8301 cost= 0.035024248
8338 Epoch: 8302 cost= 0.032621283
8339 Epoch: 8303 cost= 0.035097573
8340 Epoch: 8304 cost= 0.034555186
8341 Epoch: 8305 cost= 0.033643384
8342 Epoch: 8306 cost= 0.033287037
8343 Epoch: 8307 cost= 0.034795146
8344 Epoch: 8308 cost= 0.033480767
8345 Epoch: 8309 cost= 0.034704495
8346 Epoch: 8310 cost= 0.033086631
```



```
8347 Epoch: 8311 cost= 0.037175659
8348 Epoch: 8312 cost= 0.035224069
8349 Epoch: 8313 cost= 0.034141887
8350 Epoch: 8314 cost= 0.034494959
8351 Epoch: 8315 cost= 0.033894796
8352 Epoch: 8316 cost= 0.034675498
8353 Epoch: 8317 cost= 0.034759864
8354 Epoch: 8318 cost= 0.036109790
8355 Epoch: 8319 cost= 0.034273192
8356 Epoch: 8320 cost= 0.035555713
8357 Epoch: 8321 cost= 0.034779113
8358 Epoch: 8322 cost= 0.035008840
8359 Epoch: 8323 cost= 0.034595210
8360 Epoch: 8324 cost= 0.033389658
8361 Epoch: 8325 cost= 0.034718473
8362 Epoch: 8326 cost= 0.032991052
8363 Epoch: 8327 cost= 0.033702839
8364 Epoch: 8328 cost= 0.035264540
8365 Epoch: 8329 cost= 0.035711516
8366 Epoch: 8330 cost= 0.034224197
8367 Epoch: 8331 cost= 0.035523966
8368 Epoch: 8332 cost= 0.034960810
8369 Epoch: 8333 cost= 0.035695016
8370 Epoch: 8334 cost= 0.036068633
```



```
8371 Epoch: 8335 cost= 0.034048833
8372 Epoch: 8336 cost= 0.034460608
8373 Epoch: 8337 cost= 0.035059214
8374 Epoch: 8338 cost= 0.036108095
8375 Epoch: 8339 cost= 0.035849139
8376 Epoch: 8340 cost= 0.036095314
8377 Epoch: 8341 cost= 0.034271389
8378 Epoch: 8342 cost= 0.035563186
8379 Epoch: 8343 cost= 0.033791009
8380 Epoch: 8344 cost= 0.035276335
8381 Epoch: 8345 cost= 0.034239355
8382 Epoch: 8346 cost= 0.035167791
8383 Epoch: 8347 cost= 0.034388285
8384 Epoch: 8348 cost= 0.034350120
8385 Epoch: 8349 cost= 0.034845766
8386 Epoch: 8350 cost= 0.035370428
8387 Epoch: 8351 cost= 0.033360165
8388 Epoch: 8352 cost= 0.033092257
8389 Epoch: 8353 cost= 0.033885568
8390 Epoch: 8354 cost= 0.033947766
8391 Epoch: 8355 cost= 0.033220399
8392 Epoch: 8356 cost= 0.034763884
8393 Epoch: 8357 cost= 0.035449550
8394 Epoch: 8358 cost= 0.032164440
```

```
8395 Epoch: 8359 cost= 0.035168000
8396 Epoch: 8360 cost= 0.033620019
8397 Epoch: 8361 cost= 0.033758305
8398 Epoch: 8362 cost= 0.035390101
8399 Epoch: 8363 cost= 0.033654463
8400 Epoch: 8364 cost= 0.035788134
8401 Epoch: 8365 cost= 0.033962294
8402 Epoch: 8366 cost= 0.032732662
8403 Epoch: 8367 cost= 0.033371918
8404 Epoch: 8368 cost= 0.033775128
8405 Epoch: 8369 cost= 0.034836531
8406 Epoch: 8370 cost= 0.034801606
8407 Epoch: 8371 cost= 0.034423210
8408 Epoch: 8372 cost= 0.033513129
8409 Epoch: 8373 cost= 0.034966994
8410 Epoch: 8374 cost= 0.034125414
8411 Epoch: 8375 cost= 0.032735445
8412 Epoch: 8376 cost= 0.034855064
8413 Epoch: 8377 cost= 0.034073189
8414 Epoch: 8378 cost= 0.033762340
8415 Epoch: 8379 cost= 0.033964507
8416 Epoch: 8380 cost= 0.034381621
8417 Epoch: 8381 cost= 0.036284376
8418 Epoch: 8382 cost= 0.035520993
```

```
8419 Epoch: 8383 cost= 0.034532052
8420 Epoch: 8384 cost= 0.034134552
8421 Epoch: 8385 cost= 0.034594748
8422 Epoch: 8386 cost= 0.033709541
8423 Epoch: 8387 cost= 0.035151914
8424 Epoch: 8388 cost= 0.032937564
8425 Epoch: 8389 cost= 0.035422310
8426 Epoch: 8390 cost= 0.033060677
8427 Epoch: 8391 cost= 0.034152698
8428 Epoch: 8392 cost= 0.033021860
8429 Epoch: 8393 cost= 0.032395434
8430 Epoch: 8394 cost= 0.034489565
8431 Epoch: 8395 cost= 0.034446929
8432 Epoch: 8396 cost= 0.034020558
8433 Epoch: 8397 cost= 0.031713236
8434 Epoch: 8398 cost= 0.035376452
8435 Epoch: 8399 cost= 0.033261817
8436 Epoch: 8400 cost= 0.033315536
8437 Epoch: 8401 cost= 0.031532697
8438 Epoch: 8402 cost= 0.034054108
8439 Epoch: 8403 cost= 0.033756126
8440 Epoch: 8404 cost= 0.034579579
8441 Epoch: 8405 cost= 0.035033368
8442 Epoch: 8406 cost= 0.036194295
```

```
8443 Epoch: 8407 cost= 0.034841169
8444 Epoch: 8408 cost= 0.033722397
8445 Epoch: 8409 cost= 0.036381073
8446 Epoch: 8410 cost= 0.034702677
8447 Epoch: 8411 cost= 0.034709148
8448 Epoch: 8412 cost= 0.034999434
8449 Epoch: 8413 cost= 0.034481414
8450 Epoch: 8414 cost= 0.035285503
8451 Epoch: 8415 cost= 0.036500126
8452 Epoch: 8416 cost= 0.034559742
8453 Epoch: 8417 cost= 0.034206063
8454 Epoch: 8418 cost= 0.032259047
8455 Epoch: 8419 cost= 0.035581678
8456 Epoch: 8420 cost= 0.034750506
8457 Epoch: 8421 cost= 0.035281293
8458 Epoch: 8422 cost= 0.034453541
8459 Epoch: 8423 cost= 0.033644356
8460 Epoch: 8424 cost= 0.033851836
8461 Epoch: 8425 cost= 0.033601433
8462 Epoch: 8426 cost= 0.034608923
8463 Epoch: 8427 cost= 0.034800217
8464 Epoch: 8428 cost= 0.034748837
8465 Epoch: 8429 cost= 0.034007140
8466 Epoch: 8430 cost= 0.034269989
```

```
8467 Epoch: 8431 cost= 0.034656279
8468 Epoch: 8432 cost= 0.035723746
8469 Epoch: 8433 cost= 0.032970637
8470 Epoch: 8434 cost= 0.034621816
8471 Epoch: 8435 cost= 0.032913346
8472 Epoch: 8436 cost= 0.034897324
8473 Epoch: 8437 cost= 0.034205537
8474 Epoch: 8438 cost= 0.032903507
8475 Epoch: 8439 cost= 0.034392558
8476 Epoch: 8440 cost= 0.033594660
8477 Epoch: 8441 cost= 0.034080572
8478 Epoch: 8442 cost= 0.034040641
8479 Epoch: 8443 cost= 0.033959426
8480 Epoch: 8444 cost= 0.036383990
8481 Epoch: 8445 cost= 0.033058058
8482 Epoch: 8446 cost= 0.034416981
8483 Epoch: 8447 cost= 0.035750546
8484 Epoch: 8448 cost= 0.035687570
8485 Epoch: 8449 cost= 0.034516077
8486 Epoch: 8450 cost= 0.035088412
8487 Epoch: 8451 cost= 0.033494636
8488 Epoch: 8452 cost= 0.034561269
8489 Epoch: 8453 cost= 0.036915995
8490 Epoch: 8454 cost= 0.035659101
```

```
8491 Epoch: 8455 cost= 0.036389131
8492 Epoch: 8456 cost= 0.033799313
8493 Epoch: 8457 cost= 0.032652508
8494 Epoch: 8458 cost= 0.034216993
8495 Epoch: 8459 cost= 0.036146875
8496 Epoch: 8460 cost= 0.035231173
8497 Epoch: 8461 cost= 0.033713065
8498 Epoch: 8462 cost= 0.034732740
8499 Epoch: 8463 cost= 0.035533864
8500 Epoch: 8464 cost= 0.033454943
8501 Epoch: 8465 cost= 0.035248965
8502 Epoch: 8466 cost= 0.034217168
8503 Epoch: 8467 cost= 0.033782564
8504 Epoch: 8468 cost= 0.033673733
8505 Epoch: 8469 cost= 0.035071917
8506 Epoch: 8470 cost= 0.034018040
8507 Epoch: 8471 cost= 0.035428025
8508 Epoch: 8472 cost= 0.036319956
8509 Epoch: 8473 cost= 0.033908617
8510 Epoch: 8474 cost= 0.034016401
8511 Epoch: 8475 cost= 0.035773616
8512 Epoch: 8476 cost= 0.034331735
8513 Epoch: 8477 cost= 0.034033231
8514 Epoch: 8478 cost= 0.036082022
```

```
8515 Epoch: 8479 cost= 0.034538444
8516 Epoch: 8480 cost= 0.033010226
8517 Epoch: 8481 cost= 0.033851206
8518 Epoch: 8482 cost= 0.035020806
8519 Epoch: 8483 cost= 0.033562139
8520 Epoch: 8484 cost= 0.036718238
8521 Epoch: 8485 cost= 0.035023972
8522 Epoch: 8486 cost= 0.034449659
8523 Epoch: 8487 cost= 0.034189206
8524 Epoch: 8488 cost= 0.035674062
8525 Epoch: 8489 cost= 0.034935705
8526 Epoch: 8490 cost= 0.034888327
8527 Epoch: 8491 cost= 0.035653304
8528 Epoch: 8492 cost= 0.036491733
8529 Epoch: 8493 cost= 0.035060883
8530 Epoch: 8494 cost= 0.033971768
8531 Epoch: 8495 cost= 0.033856150
8532 Epoch: 8496 cost= 0.035570521
8533 Epoch: 8497 cost= 0.035384845
8534 Epoch: 8498 cost= 0.034802776
8535 Epoch: 8499 cost= 0.033928432
8536 Epoch: 8500 cost= 0.034132816
8537 Epoch: 8501 cost= 0.035156991
8538 Epoch: 8502 cost= 0.034906991
```



```
8539 Epoch: 8503 cost= 0.036619585
8540 Epoch: 8504 cost= 0.035557173
8541 Epoch: 8505 cost= 0.033724345
8542 Epoch: 8506 cost= 0.035616908
8543 Epoch: 8507 cost= 0.036099505
8544 Epoch: 8508 cost= 0.034406498
8545 Epoch: 8509 cost= 0.033615761
8546 Epoch: 8510 cost= 0.035197161
8547 Epoch: 8511 cost= 0.033536360
8548 Epoch: 8512 cost= 0.035319671
8549 Epoch: 8513 cost= 0.036204625
8550 Epoch: 8514 cost= 0.034279391
8551 Epoch: 8515 cost= 0.035769261
8552 Epoch: 8516 cost= 0.032786269
8553 Epoch: 8517 cost= 0.033811294
8554 Epoch: 8518 cost= 0.034166738
8555 Epoch: 8519 cost= 0.034622680
8556 Epoch: 8520 cost= 0.035703775
8557 Epoch: 8521 cost= 0.034101967
8558 Epoch: 8522 cost= 0.034924656
8559 Epoch: 8523 cost= 0.035644244
8560 Epoch: 8524 cost= 0.035923079
8561 Epoch: 8525 cost= 0.034036197
8562 Epoch: 8526 cost= 0.033952218
```



```
8563 Epoch: 8527 cost= 0.033900090
8564 Epoch: 8528 cost= 0.034941334
8565 Epoch: 8529 cost= 0.034678891
8566 Epoch: 8530 cost= 0.034833036
8567 Epoch: 8531 cost= 0.034800783
8568 Epoch: 8532 cost= 0.033947140
8569 Epoch: 8533 cost= 0.034791019
8570 Epoch: 8534 cost= 0.036027525
8571 Epoch: 8535 cost= 0.036231179
8572 Epoch: 8536 cost= 0.035624348
8573 Epoch: 8537 cost= 0.035520963
8574 Epoch: 8538 cost= 0.034441125
8575 Epoch: 8539 cost= 0.034609821
8576 Epoch: 8540 cost= 0.035212751
8577 Epoch: 8541 cost= 0.035381719
8578 Epoch: 8542 cost= 0.035774119
8579 Epoch: 8543 cost= 0.033550043
8580 Epoch: 8544 cost= 0.034656305
8581 Epoch: 8545 cost= 0.034192801
8582 Epoch: 8546 cost= 0.033353671
8583 Epoch: 8547 cost= 0.035978198
8584 Epoch: 8548 cost= 0.034367684
8585 Epoch: 8549 cost= 0.036376536
8586 Epoch: 8550 cost= 0.035131011
```

```
8587 Epoch: 8551 cost= 0.034923773
8588 Epoch: 8552 cost= 0.036015753
8589 Epoch: 8553 cost= 0.033977766
8590 Epoch: 8554 cost= 0.034534529
8591 Epoch: 8555 cost= 0.036313988
8592 Epoch: 8556 cost= 0.034583356
8593 Epoch: 8557 cost= 0.035289340
8594 Epoch: 8558 cost= 0.037114114
8595 Epoch: 8559 cost= 0.035195656
8596 Epoch: 8560 cost= 0.035639942
8597 Epoch: 8561 cost= 0.034839116
8598 Epoch: 8562 cost= 0.035030805
8599 Epoch: 8563 cost= 0.036491070
8600 Epoch: 8564 cost= 0.034704622
8601 Epoch: 8565 cost= 0.034910850
8602 Epoch: 8566 cost= 0.035104454
8603 Epoch: 8567 cost= 0.033881288
8604 Epoch: 8568 cost= 0.034500826
8605 Epoch: 8569 cost= 0.036288433
8606 Epoch: 8570 cost= 0.035600439
8607 Epoch: 8571 cost= 0.034690529
8608 Epoch: 8572 cost= 0.034103427
8609 Epoch: 8573 cost= 0.033064988
8610 Epoch: 8574 cost= 0.036902290
```

```
8611 Epoch: 8575 cost= 0.033324938
8612 Epoch: 8576 cost= 0.035207603
8613 Epoch: 8577 cost= 0.033811003
8614 Epoch: 8578 cost= 0.034471046
8615 Epoch: 8579 cost= 0.037581339
8616 Epoch: 8580 cost= 0.033648573
8617 Epoch: 8581 cost= 0.034051560
8618 Epoch: 8582 cost= 0.035741098
8619 Epoch: 8583 cost= 0.034240704
8620 Epoch: 8584 cost= 0.034975413
8621 Epoch: 8585 cost= 0.035419278
8622 Epoch: 8586 cost= 0.033800028
8623 Epoch: 8587 cost= 0.036456604
8624 Epoch: 8588 cost= 0.034034599
8625 Epoch: 8589 cost= 0.034544196
8626 Epoch: 8590 cost= 0.034139715
8627 Epoch: 8591 cost= 0.035899937
8628 Epoch: 8592 cost= 0.036322143
8629 Epoch: 8593 cost= 0.035256889
8630 Epoch: 8594 cost= 0.034719311
8631 Epoch: 8595 cost= 0.034025002
8632 Epoch: 8596 cost= 0.035102662
8633 Epoch: 8597 cost= 0.034931965
8634 Epoch: 8598 cost= 0.032404687
```

```
8635 Epoch: 8599 cost= 0.034406811
8636 Epoch: 8600 cost= 0.035580032
8637 Epoch: 8601 cost= 0.036606260
8638 Epoch: 8602 cost= 0.034963544
8639 Epoch: 8603 cost= 0.032992605
8640 Epoch: 8604 cost= 0.033777803
8641 Epoch: 8605 cost= 0.035648525
8642 Epoch: 8606 cost= 0.035424110
8643 Epoch: 8607 cost= 0.033987749
8644 Epoch: 8608 cost= 0.036009472
8645 Epoch: 8609 cost= 0.034686148
8646 Epoch: 8610 cost= 0.035037879
8647 Epoch: 8611 cost= 0.034908269
8648 Epoch: 8612 cost= 0.032492865
8649 Epoch: 8613 cost= 0.034723446
8650 Epoch: 8614 cost= 0.034865636
8651 Epoch: 8615 cost= 0.032038022
8652 Epoch: 8616 cost= 0.034368910
8653 Epoch: 8617 cost= 0.032767817
8654 Epoch: 8618 cost= 0.034889717
8655 Epoch: 8619 cost= 0.034625951
8656 Epoch: 8620 cost= 0.032668266
8657 Epoch: 8621 cost= 0.034109391
8658 Epoch: 8622 cost= 0.035745796
```

```
8659 Epoch: 8623 cost= 0.035785466
8660 Epoch: 8624 cost= 0.035262503
8661 Epoch: 8625 cost= 0.034229428
8662 Epoch: 8626 cost= 0.034712538
8663 Epoch: 8627 cost= 0.034466863
8664 Epoch: 8628 cost= 0.034884762
8665 Epoch: 8629 cost= 0.036976982
8666 Epoch: 8630 cost= 0.034530532
8667 Epoch: 8631 cost= 0.035354707
8668 Epoch: 8632 cost= 0.036054552
8669 Epoch: 8633 cost= 0.035599738
8670 Epoch: 8634 cost= 0.034577526
8671 Epoch: 8635 cost= 0.034065966
8672 Epoch: 8636 cost= 0.033966202
8673 Epoch: 8637 cost= 0.035765707
8674 Epoch: 8638 cost= 0.036683109
8675 Epoch: 8639 cost= 0.036685500
8676 Epoch: 8640 cost= 0.034191690
8677 Epoch: 8641 cost= 0.034347109
8678 Epoch: 8642 cost= 0.032336686
8679 Epoch: 8643 cost= 0.033864897
8680 Epoch: 8644 cost= 0.034531265
8681 Epoch: 8645 cost= 0.033430122
8682 Epoch: 8646 cost= 0.034801736
```

```
8683 Epoch: 8647 cost= 0.035212163
8684 Epoch: 8648 cost= 0.034459893
8685 Epoch: 8649 cost= 0.036570881
8686 Epoch: 8650 cost= 0.033893239
8687 Epoch: 8651 cost= 0.035907585
8688 Epoch: 8652 cost= 0.034656957
8689 Epoch: 8653 cost= 0.034583703
8690 Epoch: 8654 cost= 0.033496361
8691 Epoch: 8655 cost= 0.033637442
8692 Epoch: 8656 cost= 0.035053365
8693 Epoch: 8657 cost= 0.036347929
8694 Epoch: 8658 cost= 0.033091534
8695 Epoch: 8659 cost= 0.033688404
8696 Epoch: 8660 cost= 0.034313086
8697 Epoch: 8661 cost= 0.034015268
8698 Epoch: 8662 cost= 0.035539288
8699 Epoch: 8663 cost= 0.034702282
8700 Epoch: 8664 cost= 0.036526557
8701 Epoch: 8665 cost= 0.035347287
8702 Epoch: 8666 cost= 0.036486797
8703 Epoch: 8667 cost= 0.035899777
8704 Epoch: 8668 cost= 0.035675861
8705 Epoch: 8669 cost= 0.032827288
8706 Epoch: 8670 cost= 0.032917507
```

```
8707 Epoch: 8671 cost= 0.031204559
8708 Epoch: 8672 cost= 0.036191124
8709 Epoch: 8673 cost= 0.034139525
8710 Epoch: 8674 cost= 0.036174420
8711 Epoch: 8675 cost= 0.034075886
8712 Epoch: 8676 cost= 0.034233201
8713 Epoch: 8677 cost= 0.033513691
8714 Epoch: 8678 cost= 0.036530182
8715 Epoch: 8679 cost= 0.035739563
8716 Epoch: 8680 cost= 0.034888364
8717 Epoch: 8681 cost= 0.034935761
8718 Epoch: 8682 cost= 0.033823062
8719 Epoch: 8683 cost= 0.033433806
8720 Epoch: 8684 cost= 0.034367811
8721 Epoch: 8685 cost= 0.033856377
8722 Epoch: 8686 cost= 0.035367392
8723 Epoch: 8687 cost= 0.035725169
8724 Epoch: 8688 cost= 0.034655947
8725 Epoch: 8689 cost= 0.033138119
8726 Epoch: 8690 cost= 0.035367168
8727 Epoch: 8691 cost= 0.034882817
8728 Epoch: 8692 cost= 0.035051715
8729 Epoch: 8693 cost= 0.035444275
8730 Epoch: 8694 cost= 0.036122404
```



```
8731 Epoch: 8695 cost= 0.033723217
8732 Epoch: 8696 cost= 0.034670811
8733 Epoch: 8697 cost= 0.035055701
8734 Epoch: 8698 cost= 0.033157200
8735 Epoch: 8699 cost= 0.035481997
8736 Epoch: 8700 cost= 0.033635475
8737 Epoch: 8701 cost= 0.034769021
8738 Epoch: 8702 cost= 0.035601407
8739 Epoch: 8703 cost= 0.036819939
8740 Epoch: 8704 cost= 0.035516165
8741 Epoch: 8705 cost= 0.034423880
8742 Epoch: 8706 cost= 0.033887926
8743 Epoch: 8707 cost= 0.036724184
8744 Epoch: 8708 cost= 0.035237066
8745 Epoch: 8709 cost= 0.033835780
8746 Epoch: 8710 cost= 0.035328284
8747 Epoch: 8711 cost= 0.035578139
8748 Epoch: 8712 cost= 0.033734962
8749 Epoch: 8713 cost= 0.033321280
8750 Epoch: 8714 cost= 0.034252770
8751 Epoch: 8715 cost= 0.033373944
8752 Epoch: 8716 cost= 0.035530906
8753 Epoch: 8717 cost= 0.032927550
8754 Epoch: 8718 cost= 0.034188710
```



```
8755 Epoch: 8719 cost= 0.035123713
8756 Epoch: 8720 cost= 0.034348462
8757 Epoch: 8721 cost= 0.035201702
8758 Epoch: 8722 cost= 0.033811510
8759 Epoch: 8723 cost= 0.035714280
8760 Epoch: 8724 cost= 0.033966143
8761 Epoch: 8725 cost= 0.036324721
8762 Epoch: 8726 cost= 0.034368355
8763 Epoch: 8727 cost= 0.036208536
8764 Epoch: 8728 cost= 0.033986706
8765 Epoch: 8729 cost= 0.035854492
8766 Epoch: 8730 cost= 0.033407722
8767 Epoch: 8731 cost= 0.033917107
8768 Epoch: 8732 cost= 0.035807118
8769 Epoch: 8733 cost= 0.035601724
8770 Epoch: 8734 cost= 0.033774149
8771 Epoch: 8735 cost= 0.036274780
8772 Epoch: 8736 cost= 0.036394719
8773 Epoch: 8737 cost= 0.032956772
8774 Epoch: 8738 cost= 0.036808535
8775 Epoch: 8739 cost= 0.033657443
8776 Epoch: 8740 cost= 0.035107743
8777 Epoch: 8741 cost= 0.035899080
8778 Epoch: 8742 cost= 0.035586625
```

```
8779 Epoch: 8743 cost= 0.033821713
8780 Epoch: 8744 cost= 0.035953257
8781 Epoch: 8745 cost= 0.034372453
8782 Epoch: 8746 cost= 0.036219496
8783 Epoch: 8747 cost= 0.038134124
8784 Epoch: 8748 cost= 0.033820372
8785 Epoch: 8749 cost= 0.035437588
8786 Epoch: 8750 cost= 0.036381152
8787 Epoch: 8751 cost= 0.034071576
8788 Epoch: 8752 cost= 0.035114717
8789 Epoch: 8753 cost= 0.035121620
8790 Epoch: 8754 cost= 0.033052877
8791 Epoch: 8755 cost= 0.035006605
8792 Epoch: 8756 cost= 0.034542579
8793 Epoch: 8757 cost= 0.034854934
8794 Epoch: 8758 cost= 0.034506582
8795 Epoch: 8759 cost= 0.035784744
8796 Epoch: 8760 cost= 0.035309438
8797 Epoch: 8761 cost= 0.037429661
8798 Epoch: 8762 cost= 0.034832280
8799 Epoch: 8763 cost= 0.034711674
8800 Epoch: 8764 cost= 0.036375672
8801 Epoch: 8765 cost= 0.035233103
8802 Epoch: 8766 cost= 0.033934861
```

```
8803 Epoch: 8767 cost= 0.036370188
8804 Epoch: 8768 cost= 0.034870893
8805 Epoch: 8769 cost= 0.034987763
8806 Epoch: 8770 cost= 0.032776162
8807 Epoch: 8771 cost= 0.034683663
8808 Epoch: 8772 cost= 0.034430120
8809 Epoch: 8773 cost= 0.034827374
8810 Epoch: 8774 cost= 0.034315761
8811 Epoch: 8775 cost= 0.033324577
8812 Epoch: 8776 cost= 0.034803141
8813 Epoch: 8777 cost= 0.034671724
8814 Epoch: 8778 cost= 0.037037987
8815 Epoch: 8779 cost= 0.034747940
8816 Epoch: 8780 cost= 0.034066074
8817 Epoch: 8781 cost= 0.035583232
8818 Epoch: 8782 cost= 0.034150124
8819 Epoch: 8783 cost= 0.033121157
8820 Epoch: 8784 cost= 0.035365894
8821 Epoch: 8785 cost= 0.036043886
8822 Epoch: 8786 cost= 0.035866503
8823 Epoch: 8787 cost= 0.034739960
8824 Epoch: 8788 cost= 0.035881948
8825 Epoch: 8789 cost= 0.036324356
8826 Epoch: 8790 cost= 0.035443891
```

```
8827 Epoch: 8791 cost= 0.036153380
8828 Epoch: 8792 cost= 0.036126666
8829 Epoch: 8793 cost= 0.037305471
8830 Epoch: 8794 cost= 0.034866333
8831 Epoch: 8795 cost= 0.034410886
8832 Epoch: 8796 cost= 0.036540668
8833 Epoch: 8797 cost= 0.034383774
8834 Epoch: 8798 cost= 0.035282623
8835 Epoch: 8799 cost= 0.036478620
8836 Epoch: 8800 cost= 0.034284689
8837 Epoch: 8801 cost= 0.034856912
8838 Epoch: 8802 cost= 0.035913378
8839 Epoch: 8803 cost= 0.033879254
8840 Epoch: 8804 cost= 0.035273120
8841 Epoch: 8805 cost= 0.035963990
8842 Epoch: 8806 cost= 0.035161100
8843 Epoch: 8807 cost= 0.034851514
8844 Epoch: 8808 cost= 0.034971640
8845 Epoch: 8809 cost= 0.034484956
8846 Epoch: 8810 cost= 0.033936571
8847 Epoch: 8811 cost= 0.034420025
8848 Epoch: 8812 cost= 0.034742910
8849 Epoch: 8813 cost= 0.034359362
8850 Epoch: 8814 cost= 0.034280330
```

```
8851 Epoch: 8815 cost= 0.036726877
8852 Epoch: 8816 cost= 0.035357207
8853 Epoch: 8817 cost= 0.033489898
8854 Epoch: 8818 cost= 0.034604091
8855 Epoch: 8819 cost= 0.032554515
8856 Epoch: 8820 cost= 0.034572612
8857 Epoch: 8821 cost= 0.034286179
8858 Epoch: 8822 cost= 0.033602327
8859 Epoch: 8823 cost= 0.035123114
8860 Epoch: 8824 cost= 0.036802243
8861 Epoch: 8825 cost= 0.033964626
8862 Epoch: 8826 cost= 0.036354143
8863 Epoch: 8827 cost= 0.034001645
8864 Epoch: 8828 cost= 0.034906574
8865 Epoch: 8829 cost= 0.036258992
8866 Epoch: 8830 cost= 0.033630311
8867 Epoch: 8831 cost= 0.033748869
8868 Epoch: 8832 cost= 0.034846127
8869 Epoch: 8833 cost= 0.034744468
8870 Epoch: 8834 cost= 0.034422338
8871 Epoch: 8835 cost= 0.034208875
8872 Epoch: 8836 cost= 0.032377191
8873 Epoch: 8837 cost= 0.034995265
8874 Epoch: 8838 cost= 0.033427052
```

```
8875 Epoch: 8839 cost= 0.035218474
8876 Epoch: 8840 cost= 0.036428321
8877 Epoch: 8841 cost= 0.031228684
8878 Epoch: 8842 cost= 0.034785736
8879 Epoch: 8843 cost= 0.034121953
8880 Epoch: 8844 cost= 0.034810860
8881 Epoch: 8845 cost= 0.034814101
8882 Epoch: 8846 cost= 0.033346623
8883 Epoch: 8847 cost= 0.032488350
8884 Epoch: 8848 cost= 0.033272184
8885 Epoch: 8849 cost= 0.033182651
8886 Epoch: 8850 cost= 0.032782283
8887 Epoch: 8851 cost= 0.034955170
8888 Epoch: 8852 cost= 0.034175083
8889 Epoch: 8853 cost= 0.035744175
8890 Epoch: 8854 cost= 0.037278801
8891 Epoch: 8855 cost= 0.035238881
8892 Epoch: 8856 cost= 0.034716845
8893 Epoch: 8857 cost= 0.035352051
8894 Epoch: 8858 cost= 0.033428594
8895 Epoch: 8859 cost= 0.034151409
8896 Epoch: 8860 cost= 0.034987114
8897 Epoch: 8861 cost= 0.034490678
8898 Epoch: 8862 cost= 0.034339957
```

```
8899 Epoch: 8863 cost= 0.034287456
8900 Epoch: 8864 cost= 0.036245678
8901 Epoch: 8865 cost= 0.032829929
8902 Epoch: 8866 cost= 0.032260522
8903 Epoch: 8867 cost= 0.035523657
8904 Epoch: 8868 cost= 0.033270244
8905 Epoch: 8869 cost= 0.033509891
8906 Epoch: 8870 cost= 0.032734733
8907 Epoch: 8871 cost= 0.034569249
8908 Epoch: 8872 cost= 0.034907822
8909 Epoch: 8873 cost= 0.034437638
8910 Epoch: 8874 cost= 0.035447899
8911 Epoch: 8875 cost= 0.037438910
8912 Epoch: 8876 cost= 0.034723151
8913 Epoch: 8877 cost= 0.033226352
8914 Epoch: 8878 cost= 0.034330368
8915 Epoch: 8879 cost= 0.034732588
8916 Epoch: 8880 cost= 0.034751996
8917 Epoch: 8881 cost= 0.033835962
8918 Epoch: 8882 cost= 0.033807844
8919 Epoch: 8883 cost= 0.035426978
8920 Epoch: 8884 cost= 0.033364039
8921 Epoch: 8885 cost= 0.033565510
8922 Epoch: 8886 cost= 0.034596249
```



```
8923 Epoch: 8887 cost= 0.034847409
8924 Epoch: 8888 cost= 0.032104734
8925 Epoch: 8889 cost= 0.035186913
8926 Epoch: 8890 cost= 0.034875516
8927 Epoch: 8891 cost= 0.034704495
8928 Epoch: 8892 cost= 0.034888923
8929 Epoch: 8893 cost= 0.033306550
8930 Epoch: 8894 cost= 0.034733184
8931 Epoch: 8895 cost= 0.032796975
8932 Epoch: 8896 cost= 0.033672635
8933 Epoch: 8897 cost= 0.033742256
8934 Epoch: 8898 cost= 0.033848304
8935 Epoch: 8899 cost= 0.033242062
8936 Epoch: 8900 cost= 0.033285491
8937 Epoch: 8901 cost= 0.034011472
8938 Epoch: 8902 cost= 0.034521058
8939 Epoch: 8903 cost= 0.033598069
8940 Epoch: 8904 cost= 0.033810642
8941 Epoch: 8905 cost= 0.035790354
8942 Epoch: 8906 cost= 0.034196056
8943 Epoch: 8907 cost= 0.033647049
8944 Epoch: 8908 cost= 0.035119187
8945 Epoch: 8909 cost= 0.033487294
8946 Epoch: 8910 cost= 0.033496331
```



```
8947 Epoch: 8911 cost= 0.033558302
8948 Epoch: 8912 cost= 0.034122344
8949 Epoch: 8913 cost= 0.035408560
8950 Epoch: 8914 cost= 0.033106353
8951 Epoch: 8915 cost= 0.036514334
8952 Epoch: 8916 cost= 0.034092031
8953 Epoch: 8917 cost= 0.035018496
8954 Epoch: 8918 cost= 0.034071330
8955 Epoch: 8919 cost= 0.034365322
8956 Epoch: 8920 cost= 0.032673176
8957 Epoch: 8921 cost= 0.034490027
8958 Epoch: 8922 cost= 0.033733476
8959 Epoch: 8923 cost= 0.034753256
8960 Epoch: 8924 cost= 0.033839818
8961 Epoch: 8925 cost= 0.034657653
8962 Epoch: 8926 cost= 0.035783701
8963 Epoch: 8927 cost= 0.033939444
8964 Epoch: 8928 cost= 0.033760130
8965 Epoch: 8929 cost= 0.035968825
8966 Epoch: 8930 cost= 0.033565279
8967 Epoch: 8931 cost= 0.035638828
8968 Epoch: 8932 cost= 0.035639733
8969 Epoch: 8933 cost= 0.034359176
8970 Epoch: 8934 cost= 0.035827540
```

```
8971 Epoch: 8935 cost= 0.034835100
8972 Epoch: 8936 cost= 0.035056397
8973 Epoch: 8937 cost= 0.034485281
8974 Epoch: 8938 cost= 0.032489493
8975 Epoch: 8939 cost= 0.036042813
8976 Epoch: 8940 cost= 0.035333224
8977 Epoch: 8941 cost= 0.033862155
8978 Epoch: 8942 cost= 0.036687113
8979 Epoch: 8943 cost= 0.035434421
8980 Epoch: 8944 cost= 0.034165815
8981 Epoch: 8945 cost= 0.034624659
8982 Epoch: 8946 cost= 0.035089411
8983 Epoch: 8947 cost= 0.033640701
8984 Epoch: 8948 cost= 0.034957569
8985 Epoch: 8949 cost= 0.032883052
8986 Epoch: 8950 cost= 0.035079010
8987 Epoch: 8951 cost= 0.037183736
8988 Epoch: 8952 cost= 0.034708273
8989 Epoch: 8953 cost= 0.035070408
8990 Epoch: 8954 cost= 0.033405352
8991 Epoch: 8955 cost= 0.036047049
8992 Epoch: 8956 cost= 0.034588113
8993 Epoch: 8957 cost= 0.033899374
8994 Epoch: 8958 cost= 0.035351243
```

```
8995 Epoch: 8959 cost= 0.032919601
8996 Epoch: 8960 cost= 0.035060551
8997 Epoch: 8961 cost= 0.034259751
8998 Epoch: 8962 cost= 0.034796834
8999 Epoch: 8963 cost= 0.033671048
9000 Epoch: 8964 cost= 0.034496877
9001 Epoch: 8965 cost= 0.034084231
9002 Epoch: 8966 cost= 0.035538811
9003 Epoch: 8967 cost= 0.034019005
9004 Epoch: 8968 cost= 0.032683179
9005 Epoch: 8969 cost= 0.035020899
9006 Epoch: 8970 cost= 0.033828322
9007 Epoch: 8971 cost= 0.035106283
9008 Epoch: 8972 cost= 0.034527570
9009 Epoch: 8973 cost= 0.034364775
9010 Epoch: 8974 cost= 0.034002967
9011 Epoch: 8975 cost= 0.037342928
9012 Epoch: 8976 cost= 0.035234232
9013 Epoch: 8977 cost= 0.032946374
9014 Epoch: 8978 cost= 0.034541145
9015 Epoch: 8979 cost= 0.034972299
9016 Epoch: 8980 cost= 0.033979043
9017 Epoch: 8981 cost= 0.035296991
9018 Epoch: 8982 cost= 0.035233069
```

```
9019 Epoch: 8983 cost= 0.034624074
9020 Epoch: 8984 cost= 0.035303406
9021 Epoch: 8985 cost= 0.035560358
9022 Epoch: 8986 cost= 0.035922665
9023 Epoch: 8987 cost= 0.034179557
9024 Epoch: 8988 cost= 0.032774519
9025 Epoch: 8989 cost= 0.035637300
9026 Epoch: 8990 cost= 0.034356903
9027 Epoch: 8991 cost= 0.035326280
9028 Epoch: 8992 cost= 0.035938628
9029 Epoch: 8993 cost= 0.034766659
9030 Epoch: 8994 cost= 0.032680154
9031 Epoch: 8995 cost= 0.033375472
9032 Epoch: 8996 cost= 0.035612457
9033 Epoch: 8997 cost= 0.035980515
9034 Epoch: 8998 cost= 0.034995005
9035 Epoch: 8999 cost= 0.033201974
9036 Epoch: 9000 cost= 0.035080526
9037 Epoch: 9001 cost= 0.033827584
9038 Epoch: 9002 cost= 0.033853371
9039 Epoch: 9003 cost= 0.035235342
9040 Epoch: 9004 cost= 0.035350602
9041 Epoch: 9005 cost= 0.034641735
9042 Epoch: 9006 cost= 0.036002465
```

```
9043 Epoch: 9007 cost= 0.034097038
9044 Epoch: 9008 cost= 0.034525126
9045 Epoch: 9009 cost= 0.034469206
9046 Epoch: 9010 cost= 0.037102118
9047 Epoch: 9011 cost= 0.034405090
9048 Epoch: 9012 cost= 0.034072958
9049 Epoch: 9013 cost= 0.034886170
9050 Epoch: 9014 cost= 0.035786897
9051 Epoch: 9015 cost= 0.032457411
9052 Epoch: 9016 cost= 0.034238648
9053 Epoch: 9017 cost= 0.034464549
9054 Epoch: 9018 cost= 0.033188090
9055 Epoch: 9019 cost= 0.033805717
9056 Epoch: 9020 cost= 0.034094643
9057 Epoch: 9021 cost= 0.034120563
9058 Epoch: 9022 cost= 0.034809344
9059 Epoch: 9023 cost= 0.036453351
9060 Epoch: 9024 cost= 0.033501476
9061 Epoch: 9025 cost= 0.032874335
9062 Epoch: 9026 cost= 0.035906989
9063 Epoch: 9027 cost= 0.036060065
9064 Epoch: 9028 cost= 0.034979977
9065 Epoch: 9029 cost= 0.035345282
9066 Epoch: 9030 cost= 0.033454940
```

```
9067 Epoch: 9031 cost= 0.033974197
9068 Epoch: 9032 cost= 0.033908661
9069 Epoch: 9033 cost= 0.033491138
9070 Epoch: 9034 cost= 0.035634257
9071 Epoch: 9035 cost= 0.035541385
9072 Epoch: 9036 cost= 0.034889281
9073 Epoch: 9037 cost= 0.035133436
9074 Epoch: 9038 cost= 0.034045752
9075 Epoch: 9039 cost= 0.034187440
9076 Epoch: 9040 cost= 0.034839757
9077 Epoch: 9041 cost= 0.034345489
9078 Epoch: 9042 cost= 0.033878140
9079 Epoch: 9043 cost= 0.034587119
9080 Epoch: 9044 cost= 0.034399614
9081 Epoch: 9045 cost= 0.033706281
9082 Epoch: 9046 cost= 0.033901151
9083 Epoch: 9047 cost= 0.036373504
9084 Epoch: 9048 cost= 0.035997439
9085 Epoch: 9049 cost= 0.037225313
9086 Epoch: 9050 cost= 0.033344734
9087 Epoch: 9051 cost= 0.035940025
9088 Epoch: 9052 cost= 0.035764903
9089 Epoch: 9053 cost= 0.036895819
9090 Epoch: 9054 cost= 0.034957264
```

```
9091 Epoch: 9055 cost= 0.035324037
9092 Epoch: 9056 cost= 0.036515765
9093 Epoch: 9057 cost= 0.036302969
9094 Epoch: 9058 cost= 0.035018664
9095 Epoch: 9059 cost= 0.036296334
9096 Epoch: 9060 cost= 0.035678979
9097 Epoch: 9061 cost= 0.032899249
9098 Epoch: 9062 cost= 0.033459798
9099 Epoch: 9063 cost= 0.033103872
9100 Epoch: 9064 cost= 0.032261349
9101 Epoch: 9065 cost= 0.033246133
9102 Epoch: 9066 cost= 0.036781996
9103 Epoch: 9067 cost= 0.035413831
9104 Epoch: 9068 cost= 0.033673454
9105 Epoch: 9069 cost= 0.037089814
9106 Epoch: 9070 cost= 0.036148153
9107 Epoch: 9071 cost= 0.032567397
9108 Epoch: 9072 cost= 0.034465093
9109 Epoch: 9073 cost= 0.032911394
9110 Epoch: 9074 cost= 0.033949599
9111 Epoch: 9075 cost= 0.034570601
9112 Epoch: 9076 cost= 0.034252577
9113 Epoch: 9077 cost= 0.033791754
9114 Epoch: 9078 cost= 0.033908371
```



```
9115 Epoch: 9079 cost= 0.036178663
9116 Epoch: 9080 cost= 0.034782525
9117 Epoch: 9081 cost= 0.034156069
9118 Epoch: 9082 cost= 0.036285050
9119 Epoch: 9083 cost= 0.031655330
9120 Epoch: 9084 cost= 0.033446807
9121 Epoch: 9085 cost= 0.033632372
9122 Epoch: 9086 cost= 0.035457574
9123 Epoch: 9087 cost= 0.034261264
9124 Epoch: 9088 cost= 0.033622611
9125 Epoch: 9089 cost= 0.034349974
9126 Epoch: 9090 cost= 0.034550987
9127 Epoch: 9091 cost= 0.034332357
9128 Epoch: 9092 cost= 0.036390990
9129 Epoch: 9093 cost= 0.035161406
9130 Epoch: 9094 cost= 0.035264939
9131 Epoch: 9095 cost= 0.034889605
9132 Epoch: 9096 cost= 0.034610603
9133 Epoch: 9097 cost= 0.035116296
9134 Epoch: 9098 cost= 0.036368515
9135 Epoch: 9099 cost= 0.033587065
9136 Epoch: 9100 cost= 0.035278134
9137 Epoch: 9101 cost= 0.034541778
9138 Epoch: 9102 cost= 0.033865966
```



```
9139 Epoch: 9103 cost= 0.034183219
9140 Epoch: 9104 cost= 0.032721858
9141 Epoch: 9105 cost= 0.035624724
9142 Epoch: 9106 cost= 0.034604091
9143 Epoch: 9107 cost= 0.033412840
9144 Epoch: 9108 cost= 0.036148369
9145 Epoch: 9109 cost= 0.035342965
9146 Epoch: 9110 cost= 0.034683261
9147 Epoch: 9111 cost= 0.035180330
9148 Epoch: 9112 cost= 0.033759136
9149 Epoch: 9113 cost= 0.036500886
9150 Epoch: 9114 cost= 0.036420692
9151 Epoch: 9115 cost= 0.034296121
9152 Epoch: 9116 cost= 0.036662459
9153 Epoch: 9117 cost= 0.032934532
9154 Epoch: 9118 cost= 0.035850957
9155 Epoch: 9119 cost= 0.034153901
9156 Epoch: 9120 cost= 0.034572683
9157 Epoch: 9121 cost= 0.033723619
9158 Epoch: 9122 cost= 0.034388300
9159 Epoch: 9123 cost= 0.035335273
9160 Epoch: 9124 cost= 0.034856174
9161 Epoch: 9125 cost= 0.034565613
9162 Epoch: 9126 cost= 0.034071736
```

```
9163 Epoch: 9127 cost= 0.032580562
9164 Epoch: 9128 cost= 0.034684218
9165 Epoch: 9129 cost= 0.035120476
9166 Epoch: 9130 cost= 0.035735834
9167 Epoch: 9131 cost= 0.034620553
9168 Epoch: 9132 cost= 0.034875497
9169 Epoch: 9133 cost= 0.034994312
9170 Epoch: 9134 cost= 0.036147330
9171 Epoch: 9135 cost= 0.036408667
9172 Epoch: 9136 cost= 0.036528714
9173 Epoch: 9137 cost= 0.035959844
9174 Epoch: 9138 cost= 0.034335427
9175 Epoch: 9139 cost= 0.035081644
9176 Epoch: 9140 cost= 0.037150491
9177 Epoch: 9141 cost= 0.035165887
9178 Epoch: 9142 cost= 0.033433136
9179 Epoch: 9143 cost= 0.033225503
9180 Epoch: 9144 cost= 0.032812815
9181 Epoch: 9145 cost= 0.034934081
9182 Epoch: 9146 cost= 0.036727220
9183 Epoch: 9147 cost= 0.036261242
9184 Epoch: 9148 cost= 0.036596745
9185 Epoch: 9149 cost= 0.035787355
9186 Epoch: 9150 cost= 0.034557834
```

```
9187 Epoch: 9151 cost= 0.034095410
9188 Epoch: 9152 cost= 0.034626011
9189 Epoch: 9153 cost= 0.034402598
9190 Epoch: 9154 cost= 0.033687189
9191 Epoch: 9155 cost= 0.033734966
9192 Epoch: 9156 cost= 0.032898884
9193 Epoch: 9157 cost= 0.035372932
9194 Epoch: 9158 cost= 0.033857435
9195 Epoch: 9159 cost= 0.036058057
9196 Epoch: 9160 cost= 0.035426226
9197 Epoch: 9161 cost= 0.035055324
9198 Epoch: 9162 cost= 0.034296799
9199 Epoch: 9163 cost= 0.032369100
9200 Epoch: 9164 cost= 0.033887412
9201 Epoch: 9165 cost= 0.034224115
9202 Epoch: 9166 cost= 0.033929639
9203 Epoch: 9167 cost= 0.035459369
9204 Epoch: 9168 cost= 0.035419289
9205 Epoch: 9169 cost= 0.033595752
9206 Epoch: 9170 cost= 0.033393212
9207 Epoch: 9171 cost= 0.036369618
9208 Epoch: 9172 cost= 0.034358397
9209 Epoch: 9173 cost= 0.033517506
9210 Epoch: 9174 cost= 0.034334738
```

```
9211 Epoch: 9175 cost= 0.034307271
9212 Epoch: 9176 cost= 0.033872019
9213 Epoch: 9177 cost= 0.036265008
9214 Epoch: 9178 cost= 0.036418471
9215 Epoch: 9179 cost= 0.034800090
9216 Epoch: 9180 cost= 0.035196841
9217 Epoch: 9181 cost= 0.034442522
9218 Epoch: 9182 cost= 0.036767866
9219 Epoch: 9183 cost= 0.033999890
9220 Epoch: 9184 cost= 0.035555389
9221 Epoch: 9185 cost= 0.035009701
9222 Epoch: 9186 cost= 0.034534592
9223 Epoch: 9187 cost= 0.035946038
9224 Epoch: 9188 cost= 0.033851080
9225 Epoch: 9189 cost= 0.036855433
9226 Epoch: 9190 cost= 0.034501042
9227 Epoch: 9191 cost= 0.035778616
9228 Epoch: 9192 cost= 0.035586108
9229 Epoch: 9193 cost= 0.037006572
9230 Epoch: 9194 cost= 0.036669813
9231 Epoch: 9195 cost= 0.035547268
9232 Epoch: 9196 cost= 0.034762159
9233 Epoch: 9197 cost= 0.034862861
9234 Epoch: 9198 cost= 0.033882890
```

```
9235 Epoch: 9199 cost= 0.034116589
9236 Epoch: 9200 cost= 0.033169076
9237 Epoch: 9201 cost= 0.033956911
9238 Epoch: 9202 cost= 0.035135601
9239 Epoch: 9203 cost= 0.034471579
9240 Epoch: 9204 cost= 0.034976281
9241 Epoch: 9205 cost= 0.033605039
9242 Epoch: 9206 cost= 0.034336444
9243 Epoch: 9207 cost= 0.034809589
9244 Epoch: 9208 cost= 0.033233054
9245 Epoch: 9209 cost= 0.036865085
9246 Epoch: 9210 cost= 0.035059910
9247 Epoch: 9211 cost= 0.034545399
9248 Epoch: 9212 cost= 0.035713390
9249 Epoch: 9213 cost= 0.035702504
9250 Epoch: 9214 cost= 0.033932921
9251 Epoch: 9215 cost= 0.033426210
9252 Epoch: 9216 cost= 0.034131978
9253 Epoch: 9217 cost= 0.034800403
9254 Epoch: 9218 cost= 0.033528343
9255 Epoch: 9219 cost= 0.035722934
9256 Epoch: 9220 cost= 0.035368271
9257 Epoch: 9221 cost= 0.034706075
9258 Epoch: 9222 cost= 0.035035007
```

```
9259 Epoch: 9223 cost= 0.034359291
9260 Epoch: 9224 cost= 0.033382040
9261 Epoch: 9225 cost= 0.034853518
9262 Epoch: 9226 cost= 0.035009410
9263 Epoch: 9227 cost= 0.035873480
9264 Epoch: 9228 cost= 0.036735419
9265 Epoch: 9229 cost= 0.034588706
9266 Epoch: 9230 cost= 0.036385991
9267 Epoch: 9231 cost= 0.034648165
9268 Epoch: 9232 cost= 0.035221506
9269 Epoch: 9233 cost= 0.034473650
9270 Epoch: 9234 cost= 0.036106464
9271 Epoch: 9235 cost= 0.032583725
9272 Epoch: 9236 cost= 0.035029504
9273 Epoch: 9237 cost= 0.035342094
9274 Epoch: 9238 cost= 0.035479803
9275 Epoch: 9239 cost= 0.035342969
9276 Epoch: 9240 cost= 0.034332436
9277 Epoch: 9241 cost= 0.035712086
9278 Epoch: 9242 cost= 0.035152148
9279 Epoch: 9243 cost= 0.038671695
9280 Epoch: 9244 cost= 0.036508627
9281 Epoch: 9245 cost= 0.033180177
9282 Epoch: 9246 cost= 0.035132196
```

```
9283 Epoch: 9247 cost= 0.036673073
9284 Epoch: 9248 cost= 0.034769826
9285 Epoch: 9249 cost= 0.032744311
9286 Epoch: 9250 cost= 0.035786007
9287 Epoch: 9251 cost= 0.035535078
9288 Epoch: 9252 cost= 0.035574600
9289 Epoch: 9253 cost= 0.034276865
9290 Epoch: 9254 cost= 0.035622884
9291 Epoch: 9255 cost= 0.034761924
9292 Epoch: 9256 cost= 0.034674823
9293 Epoch: 9257 cost= 0.035397302
9294 Epoch: 9258 cost= 0.034363329
9295 Epoch: 9259 cost= 0.036064819
9296 Epoch: 9260 cost= 0.033718776
9297 Epoch: 9261 cost= 0.035412576
9298 Epoch: 9262 cost= 0.034746200
9299 Epoch: 9263 cost= 0.035521194
9300 Epoch: 9264 cost= 0.035282854
9301 Epoch: 9265 cost= 0.035578176
9302 Epoch: 9266 cost= 0.035627540
9303 Epoch: 9267 cost= 0.034569558
9304 Epoch: 9268 cost= 0.034807712
9305 Epoch: 9269 cost= 0.035259467
9306 Epoch: 9270 cost= 0.036369897
```



```
9307 Epoch: 9271 cost= 0.034461293
9308 Epoch: 9272 cost= 0.033188965
9309 Epoch: 9273 cost= 0.035204187
9310 Epoch: 9274 cost= 0.033546161
9311 Epoch: 9275 cost= 0.033797607
9312 Epoch: 9276 cost= 0.032804683
9313 Epoch: 9277 cost= 0.035725687
9314 Epoch: 9278 cost= 0.034368433
9315 Epoch: 9279 cost= 0.033153147
9316 Epoch: 9280 cost= 0.033760328
9317 Epoch: 9281 cost= 0.034053203
9318 Epoch: 9282 cost= 0.035630208
9319 Epoch: 9283 cost= 0.035922825
9320 Epoch: 9284 cost= 0.035287838
9321 Epoch: 9285 cost= 0.033425119
9322 Epoch: 9286 cost= 0.034902271
9323 Epoch: 9287 cost= 0.033239044
9324 Epoch: 9288 cost= 0.033730540
9325 Epoch: 9289 cost= 0.036157642
9326 Epoch: 9290 cost= 0.036621384
9327 Epoch: 9291 cost= 0.035111651
9328 Epoch: 9292 cost= 0.033964012
9329 Epoch: 9293 cost= 0.033776477
9330 Epoch: 9294 cost= 0.035813984
```



```
9331 Epoch: 9295 cost= 0.034566730
9332 Epoch: 9296 cost= 0.035434887
9333 Epoch: 9297 cost= 0.035277128
9334 Epoch: 9298 cost= 0.035359997
9335 Epoch: 9299 cost= 0.034940675
9336 Epoch: 9300 cost= 0.033890307
9337 Epoch: 9301 cost= 0.038569551
9338 Epoch: 9302 cost= 0.034952417
9339 Epoch: 9303 cost= 0.035817176
9340 Epoch: 9304 cost= 0.035861567
9341 Epoch: 9305 cost= 0.034118794
9342 Epoch: 9306 cost= 0.035015460
9343 Epoch: 9307 cost= 0.035316534
9344 Epoch: 9308 cost= 0.036180407
9345 Epoch: 9309 cost= 0.035115629
9346 Epoch: 9310 cost= 0.038268324
9347 Epoch: 9311 cost= 0.034967218
9348 Epoch: 9312 cost= 0.034467369
9349 Epoch: 9313 cost= 0.035861559
9350 Epoch: 9314 cost= 0.033893939
9351 Epoch: 9315 cost= 0.033557173
9352 Epoch: 9316 cost= 0.034419838
9353 Epoch: 9317 cost= 0.036778145
9354 Epoch: 9318 cost= 0.036867984
```

```
9355 Epoch: 9319 cost= 0.035559755
9356 Epoch: 9320 cost= 0.034149740
9357 Epoch: 9321 cost= 0.035384238
9358 Epoch: 9322 cost= 0.035033826
9359 Epoch: 9323 cost= 0.035830561
9360 Epoch: 9324 cost= 0.035917241
9361 Epoch: 9325 cost= 0.033311449
9362 Epoch: 9326 cost= 0.035615575
9363 Epoch: 9327 cost= 0.036808446
9364 Epoch: 9328 cost= 0.034665972
9365 Epoch: 9329 cost= 0.034617394
9366 Epoch: 9330 cost= 0.035246480
9367 Epoch: 9331 cost= 0.035374947
9368 Epoch: 9332 cost= 0.035415374
9369 Epoch: 9333 cost= 0.034684394
9370 Epoch: 9334 cost= 0.034719720
9371 Epoch: 9335 cost= 0.036445685
9372 Epoch: 9336 cost= 0.034578130
9373 Epoch: 9337 cost= 0.034032091
9374 Epoch: 9338 cost= 0.035237879
9375 Epoch: 9339 cost= 0.036877099
9376 Epoch: 9340 cost= 0.033893742
9377 Epoch: 9341 cost= 0.035328209
9378 Epoch: 9342 cost= 0.034743432
```

```
9379 Epoch: 9343 cost= 0.033689290
9380 Epoch: 9344 cost= 0.034075759
9381 Epoch: 9345 cost= 0.034549240
9382 Epoch: 9346 cost= 0.034259792
9383 Epoch: 9347 cost= 0.036000177
9384 Epoch: 9348 cost= 0.032279376
9385 Epoch: 9349 cost= 0.034497190
9386 Epoch: 9350 cost= 0.033740982
9387 Epoch: 9351 cost= 0.033685759
9388 Epoch: 9352 cost= 0.032824058
9389 Epoch: 9353 cost= 0.035145573
9390 Epoch: 9354 cost= 0.032929018
9391 Epoch: 9355 cost= 0.033663020
9392 Epoch: 9356 cost= 0.033424929
9393 Epoch: 9357 cost= 0.035024151
9394 Epoch: 9358 cost= 0.033852402
9395 Epoch: 9359 cost= 0.032241244
9396 Epoch: 9360 cost= 0.033576250
9397 Epoch: 9361 cost= 0.034929257
9398 Epoch: 9362 cost= 0.034540523
9399 Epoch: 9363 cost= 0.034938239
9400 Epoch: 9364 cost= 0.034158941
9401 Epoch: 9365 cost= 0.033025056
9402 Epoch: 9366 cost= 0.034970775
```

```
9403 Epoch: 9367 cost= 0.035379514
9404 Epoch: 9368 cost= 0.033033244
9405 Epoch: 9369 cost= 0.036168870
9406 Epoch: 9370 cost= 0.033482790
9407 Epoch: 9371 cost= 0.036473170
9408 Epoch: 9372 cost= 0.033679679
9409 Epoch: 9373 cost= 0.035007808
9410 Epoch: 9374 cost= 0.035547879
9411 Epoch: 9375 cost= 0.034962982
9412 Epoch: 9376 cost= 0.033529542
9413 Epoch: 9377 cost= 0.033615123
9414 Epoch: 9378 cost= 0.035692245
9415 Epoch: 9379 cost= 0.035371397
9416 Epoch: 9380 cost= 0.034255859
9417 Epoch: 9381 cost= 0.033983782
9418 Epoch: 9382 cost= 0.034679286
9419 Epoch: 9383 cost= 0.035741340
9420 Epoch: 9384 cost= 0.033638261
9421 Epoch: 9385 cost= 0.034966115
9422 Epoch: 9386 cost= 0.035672717
9423 Epoch: 9387 cost= 0.034988098
9424 Epoch: 9388 cost= 0.036263216
9425 Epoch: 9389 cost= 0.035415307
9426 Epoch: 9390 cost= 0.034895558
```

```
9427 Epoch: 9391 cost= 0.035749018
9428 Epoch: 9392 cost= 0.035266951
9429 Epoch: 9393 cost= 0.035048157
9430 Epoch: 9394 cost= 0.034673013
9431 Epoch: 9395 cost= 0.035021778
9432 Epoch: 9396 cost= 0.033168696
9433 Epoch: 9397 cost= 0.035379294
9434 Epoch: 9398 cost= 0.034511276
9435 Epoch: 9399 cost= 0.033078399
9436 Epoch: 9400 cost= 0.032917883
9437 Epoch: 9401 cost= 0.035073459
9438 Epoch: 9402 cost= 0.035677575
9439 Epoch: 9403 cost= 0.034584194
9440 Epoch: 9404 cost= 0.035636500
9441 Epoch: 9405 cost= 0.033290587
9442 Epoch: 9406 cost= 0.033207461
9443 Epoch: 9407 cost= 0.035250716
9444 Epoch: 9408 cost= 0.035141103
9445 Epoch: 9409 cost= 0.034183063
9446 Epoch: 9410 cost= 0.033267517
9447 Epoch: 9411 cost= 0.034330036
9448 Epoch: 9412 cost= 0.034344297
9449 Epoch: 9413 cost= 0.033924673
9450 Epoch: 9414 cost= 0.035192497
```

```
9451 Epoch: 9415 cost= 0.031148531
9452 Epoch: 9416 cost= 0.032790355
9453 Epoch: 9417 cost= 0.033616472
9454 Epoch: 9418 cost= 0.033379313
9455 Epoch: 9419 cost= 0.034666937
9456 Epoch: 9420 cost= 0.034611493
9457 Epoch: 9421 cost= 0.034350395
9458 Epoch: 9422 cost= 0.033695471
9459 Epoch: 9423 cost= 0.033074263
9460 Epoch: 9424 cost= 0.034783401
9461 Epoch: 9425 cost= 0.033320710
9462 Epoch: 9426 cost= 0.035598639
9463 Epoch: 9427 cost= 0.032126211
9464 Epoch: 9428 cost= 0.032053124
9465 Epoch: 9429 cost= 0.034412753
9466 Epoch: 9430 cost= 0.033977915
9467 Epoch: 9431 cost= 0.036639750
9468 Epoch: 9432 cost= 0.033920228
9469 Epoch: 9433 cost= 0.036906820
9470 Epoch: 9434 cost= 0.034931172
9471 Epoch: 9435 cost= 0.034625828
9472 Epoch: 9436 cost= 0.035211131
9473 Epoch: 9437 cost= 0.033888407
9474 Epoch: 9438 cost= 0.035360850
```

```
9475 Epoch: 9439 cost= 0.034880280
9476 Epoch: 9440 cost= 0.036937162
9477 Epoch: 9441 cost= 0.036505844
9478 Epoch: 9442 cost= 0.034237247
9479 Epoch: 9443 cost= 0.035208363
9480 Epoch: 9444 cost= 0.034261722
9481 Epoch: 9445 cost= 0.035476491
9482 Epoch: 9446 cost= 0.034864873
9483 Epoch: 9447 cost= 0.035202418
9484 Epoch: 9448 cost= 0.036865823
9485 Epoch: 9449 cost= 0.035168234
9486 Epoch: 9450 cost= 0.034252163
9487 Epoch: 9451 cost= 0.036363691
9488 Epoch: 9452 cost= 0.035932902
9489 Epoch: 9453 cost= 0.035118368
9490 Epoch: 9454 cost= 0.036381632
9491 Epoch: 9455 cost= 0.032819960
9492 Epoch: 9456 cost= 0.034656148
9493 Epoch: 9457 cost= 0.035610408
9494 Epoch: 9458 cost= 0.036402542
9495 Epoch: 9459 cost= 0.036143363
9496 Epoch: 9460 cost= 0.036437277
9497 Epoch: 9461 cost= 0.033325162
9498 Epoch: 9462 cost= 0.035167713
```



```
9499 Epoch: 9463 cost= 0.035755377
9500 Epoch: 9464 cost= 0.033819266
9501 Epoch: 9465 cost= 0.034340948
9502 Epoch: 9466 cost= 0.035809632
9503 Epoch: 9467 cost= 0.033746276
9504 Epoch: 9468 cost= 0.033815723
9505 Epoch: 9469 cost= 0.035336163
9506 Epoch: 9470 cost= 0.035587750
9507 Epoch: 9471 cost= 0.034373049
9508 Epoch: 9472 cost= 0.034928180
9509 Epoch: 9473 cost= 0.034445260
9510 Epoch: 9474 cost= 0.034777611
9511 Epoch: 9475 cost= 0.033822428
9512 Epoch: 9476 cost= 0.035141259
9513 Epoch: 9477 cost= 0.032483399
9514 Epoch: 9478 cost= 0.035370596
9515 Epoch: 9479 cost= 0.035978440
9516 Epoch: 9480 cost= 0.035255905
9517 Epoch: 9481 cost= 0.035800550
9518 Epoch: 9482 cost= 0.035196021
9519 Epoch: 9483 cost= 0.036795933
9520 Epoch: 9484 cost= 0.034699682
9521 Epoch: 9485 cost= 0.035642754
9522 Epoch: 9486 cost= 0.035681535
```



```
9523 Epoch: 9487 cost= 0.036255427
9524 Epoch: 9488 cost= 0.035139143
9525 Epoch: 9489 cost= 0.034577128
9526 Epoch: 9490 cost= 0.036224786
9527 Epoch: 9491 cost= 0.035501756
9528 Epoch: 9492 cost= 0.035612848
9529 Epoch: 9493 cost= 0.034409106
9530 Epoch: 9494 cost= 0.034159411
9531 Epoch: 9495 cost= 0.034885090
9532 Epoch: 9496 cost= 0.036250051
9533 Epoch: 9497 cost= 0.033244375
9534 Epoch: 9498 cost= 0.034791846
9535 Epoch: 9499 cost= 0.034808133
9536 Epoch: 9500 cost= 0.034901403
9537 Epoch: 9501 cost= 0.033000451
9538 Epoch: 9502 cost= 0.032137763
9539 Epoch: 9503 cost= 0.035816893
9540 Epoch: 9504 cost= 0.033409961
9541 Epoch: 9505 cost= 0.033462111
9542 Epoch: 9506 cost= 0.033788919
9543 Epoch: 9507 cost= 0.034496803
9544 Epoch: 9508 cost= 0.035290807
9545 Epoch: 9509 cost= 0.035429124
9546 Epoch: 9510 cost= 0.035887368
```

```
9547 Epoch: 9511 cost= 0.034658473
9548 Epoch: 9512 cost= 0.033666503
9549 Epoch: 9513 cost= 0.037286293
9550 Epoch: 9514 cost= 0.033953518
9551 Epoch: 9515 cost= 0.035908367
9552 Epoch: 9516 cost= 0.033510815
9553 Epoch: 9517 cost= 0.034695055
9554 Epoch: 9518 cost= 0.035302550
9555 Epoch: 9519 cost= 0.034559745
9556 Epoch: 9520 cost= 0.035283245
9557 Epoch: 9521 cost= 0.035109084
9558 Epoch: 9522 cost= 0.035874750
9559 Epoch: 9523 cost= 0.035846032
9560 Epoch: 9524 cost= 0.033358689
9561 Epoch: 9525 cost= 0.033568799
9562 Epoch: 9526 cost= 0.036176454
9563 Epoch: 9527 cost= 0.035585195
9564 Epoch: 9528 cost= 0.035029650
9565 Epoch: 9529 cost= 0.033049252
9566 Epoch: 9530 cost= 0.034518130
9567 Epoch: 9531 cost= 0.034931257
9568 Epoch: 9532 cost= 0.034725171
9569 Epoch: 9533 cost= 0.035544295
9570 Epoch: 9534 cost= 0.032280352
```

```
9571 Epoch: 9535 cost= 0.035871159
9572 Epoch: 9536 cost= 0.034465380
9573 Epoch: 9537 cost= 0.034244463
9574 Epoch: 9538 cost= 0.034715105
9575 Epoch: 9539 cost= 0.035048582
9576 Epoch: 9540 cost= 0.037363306
9577 Epoch: 9541 cost= 0.037276734
9578 Epoch: 9542 cost= 0.034782287
9579 Epoch: 9543 cost= 0.035418190
9580 Epoch: 9544 cost= 0.035275090
9581 Epoch: 9545 cost= 0.034781281
9582 Epoch: 9546 cost= 0.034366883
9583 Epoch: 9547 cost= 0.033220056
9584 Epoch: 9548 cost= 0.035199177
9585 Epoch: 9549 cost= 0.036057133
9586 Epoch: 9550 cost= 0.033448197
9587 Epoch: 9551 cost= 0.034745537
9588 Epoch: 9552 cost= 0.036050458
9589 Epoch: 9553 cost= 0.032872885
9590 Epoch: 9554 cost= 0.034761224
9591 Epoch: 9555 cost= 0.034699462
9592 Epoch: 9556 cost= 0.033643097
9593 Epoch: 9557 cost= 0.035310224
9594 Epoch: 9558 cost= 0.034836493
```

```
9595 Epoch: 9559 cost= 0.034447074
9596 Epoch: 9560 cost= 0.033141967
9597 Epoch: 9561 cost= 0.035286013
9598 Epoch: 9562 cost= 0.033655424
9599 Epoch: 9563 cost= 0.035317570
9600 Epoch: 9564 cost= 0.034107331
9601 Epoch: 9565 cost= 0.033844799
9602 Epoch: 9566 cost= 0.035682283
9603 Epoch: 9567 cost= 0.036500596
9604 Epoch: 9568 cost= 0.035803545
9605 Epoch: 9569 cost= 0.033848900
9606 Epoch: 9570 cost= 0.033210382
9607 Epoch: 9571 cost= 0.034662735
9608 Epoch: 9572 cost= 0.033493165
9609 Epoch: 9573 cost= 0.035418354
9610 Epoch: 9574 cost= 0.033150353
9611 Epoch: 9575 cost= 0.035525195
9612 Epoch: 9576 cost= 0.034967002
9613 Epoch: 9577 cost= 0.034723938
9614 Epoch: 9578 cost= 0.032607432
9615 Epoch: 9579 cost= 0.034514204
9616 Epoch: 9580 cost= 0.034345277
9617 Epoch: 9581 cost= 0.035303619
9618 Epoch: 9582 cost= 0.035038013
```

```
9619 Epoch: 9583 cost= 0.037128638
9620 Epoch: 9584 cost= 0.034527157
9621 Epoch: 9585 cost= 0.032915276
9622 Epoch: 9586 cost= 0.032548364
9623 Epoch: 9587 cost= 0.033990055
9624 Epoch: 9588 cost= 0.036349487
9625 Epoch: 9589 cost= 0.032534562
9626 Epoch: 9590 cost= 0.033481866
9627 Epoch: 9591 cost= 0.034364283
9628 Epoch: 9592 cost= 0.034168296
9629 Epoch: 9593 cost= 0.031841107
9630 Epoch: 9594 cost= 0.033537373
9631 Epoch: 9595 cost= 0.033380035
9632 Epoch: 9596 cost= 0.033232130
9633 Epoch: 9597 cost= 0.034428142
9634 Epoch: 9598 cost= 0.034369752
9635 Epoch: 9599 cost= 0.034531008
9636 Epoch: 9600 cost= 0.036047410
9637 Epoch: 9601 cost= 0.032754909
9638 Epoch: 9602 cost= 0.035905689
9639 Epoch: 9603 cost= 0.036648687
9640 Epoch: 9604 cost= 0.034911133
9641 Epoch: 9605 cost= 0.036995459
9642 Epoch: 9606 cost= 0.034081962
```

```
9643 Epoch: 9607 cost= 0.032712724
9644 Epoch: 9608 cost= 0.034182932
9645 Epoch: 9609 cost= 0.037681520
9646 Epoch: 9610 cost= 0.035283916
9647 Epoch: 9611 cost= 0.036993466
9648 Epoch: 9612 cost= 0.036303557
9649 Epoch: 9613 cost= 0.036032777
9650 Epoch: 9614 cost= 0.035834853
9651 Epoch: 9615 cost= 0.035991069
9652 Epoch: 9616 cost= 0.035137638
9653 Epoch: 9617 cost= 0.033910543
9654 Epoch: 9618 cost= 0.038268022
9655 Epoch: 9619 cost= 0.035147566
9656 Epoch: 9620 cost= 0.033723675
9657 Epoch: 9621 cost= 0.037796684
9658 Epoch: 9622 cost= 0.033507090
9659 Epoch: 9623 cost= 0.034262419
9660 Epoch: 9624 cost= 0.036195677
9661 Epoch: 9625 cost= 0.032729361
9662 Epoch: 9626 cost= 0.036834396
9663 Epoch: 9627 cost= 0.036802419
9664 Epoch: 9628 cost= 0.034354921
9665 Epoch: 9629 cost= 0.036027484
9666 Epoch: 9630 cost= 0.037254766
```

```
9667 Epoch: 9631 cost= 0.034359124
9668 Epoch: 9632 cost= 0.035214756
9669 Epoch: 9633 cost= 0.036359761
9670 Epoch: 9634 cost= 0.034010168
9671 Epoch: 9635 cost= 0.032913279
9672 Epoch: 9636 cost= 0.035691015
9673 Epoch: 9637 cost= 0.035813794
9674 Epoch: 9638 cost= 0.035745885
9675 Epoch: 9639 cost= 0.036645304
9676 Epoch: 9640 cost= 0.035565209
9677 Epoch: 9641 cost= 0.035039153
9678 Epoch: 9642 cost= 0.035377074
9679 Epoch: 9643 cost= 0.035380963
9680 Epoch: 9644 cost= 0.036091857
9681 Epoch: 9645 cost= 0.035737440
9682 Epoch: 9646 cost= 0.033807591
9683 Epoch: 9647 cost= 0.034194745
9684 Epoch: 9648 cost= 0.035049971
9685 Epoch: 9649 cost= 0.035290893
9686 Epoch: 9650 cost= 0.033868119
9687 Epoch: 9651 cost= 0.033676412
9688 Epoch: 9652 cost= 0.034219459
9689 Epoch: 9653 cost= 0.035488985
9690 Epoch: 9654 cost= 0.032513909
```



```
9691 Epoch: 9655 cost= 0.032704104
9692 Epoch: 9656 cost= 0.037180267
9693 Epoch: 9657 cost= 0.035311233
9694 Epoch: 9658 cost= 0.035724040
9695 Epoch: 9659 cost= 0.035522811
9696 Epoch: 9660 cost= 0.036035523
9697 Epoch: 9661 cost= 0.033915140
9698 Epoch: 9662 cost= 0.035440076
9699 Epoch: 9663 cost= 0.036961183
9700 Epoch: 9664 cost= 0.034843717
9701 Epoch: 9665 cost= 0.035767168
9702 Epoch: 9666 cost= 0.034853939
9703 Epoch: 9667 cost= 0.035942648
9704 Epoch: 9668 cost= 0.034770183
9705 Epoch: 9669 cost= 0.032760512
9706 Epoch: 9670 cost= 0.035687983
9707 Epoch: 9671 cost= 0.034795925
9708 Epoch: 9672 cost= 0.036333129
9709 Epoch: 9673 cost= 0.035546392
9710 Epoch: 9674 cost= 0.034556516
9711 Epoch: 9675 cost= 0.035053585
9712 Epoch: 9676 cost= 0.035046276
9713 Epoch: 9677 cost= 0.035488892
9714 Epoch: 9678 cost= 0.037301213
```



```
9715 Epoch: 9679 cost= 0.035361342
9716 Epoch: 9680 cost= 0.035479739
9717 Epoch: 9681 cost= 0.035563797
9718 Epoch: 9682 cost= 0.035726082
9719 Epoch: 9683 cost= 0.035707884
9720 Epoch: 9684 cost= 0.036481496
9721 Epoch: 9685 cost= 0.036689658
9722 Epoch: 9686 cost= 0.034773301
9723 Epoch: 9687 cost= 0.034919251
9724 Epoch: 9688 cost= 0.038160756
9725 Epoch: 9689 cost= 0.033259228
9726 Epoch: 9690 cost= 0.035296440
9727 Epoch: 9691 cost= 0.034419689
9728 Epoch: 9692 cost= 0.032828957
9729 Epoch: 9693 cost= 0.035901882
9730 Epoch: 9694 cost= 0.035822932
9731 Epoch: 9695 cost= 0.036935739
9732 Epoch: 9696 cost= 0.034078304
9733 Epoch: 9697 cost= 0.035180300
9734 Epoch: 9698 cost= 0.036895473
9735 Epoch: 9699 cost= 0.034561884
9736 Epoch: 9700 cost= 0.036761135
9737 Epoch: 9701 cost= 0.033541590
9738 Epoch: 9702 cost= 0.035472777
```

```
9739 Epoch: 9703 cost= 0.034158908
9740 Epoch: 9704 cost= 0.035981625
9741 Epoch: 9705 cost= 0.035431165
9742 Epoch: 9706 cost= 0.034849852
9743 Epoch: 9707 cost= 0.036816306
9744 Epoch: 9708 cost= 0.035179764
9745 Epoch: 9709 cost= 0.035426516
9746 Epoch: 9710 cost= 0.036764588
9747 Epoch: 9711 cost= 0.034496911
9748 Epoch: 9712 cost= 0.037381142
9749 Epoch: 9713 cost= 0.033695791
9750 Epoch: 9714 cost= 0.034748778
9751 Epoch: 9715 cost= 0.033962753
9752 Epoch: 9716 cost= 0.034172479
9753 Epoch: 9717 cost= 0.037921831
9754 Epoch: 9718 cost= 0.035586670
9755 Epoch: 9719 cost= 0.036169812
9756 Epoch: 9720 cost= 0.036616527
9757 Epoch: 9721 cost= 0.036763012
9758 Epoch: 9722 cost= 0.035250325
9759 Epoch: 9723 cost= 0.035244707
9760 Epoch: 9724 cost= 0.035469804
9761 Epoch: 9725 cost= 0.036187008
9762 Epoch: 9726 cost= 0.036557395
```

```
9763 Epoch: 9727 cost= 0.034264512
9764 Epoch: 9728 cost= 0.034134213
9765 Epoch: 9729 cost= 0.036238618
9766 Epoch: 9730 cost= 0.034431756
9767 Epoch: 9731 cost= 0.033836238
9768 Epoch: 9732 cost= 0.033882789
9769 Epoch: 9733 cost= 0.035514805
9770 Epoch: 9734 cost= 0.034896702
9771 Epoch: 9735 cost= 0.035919201
9772 Epoch: 9736 cost= 0.036448848
9773 Epoch: 9737 cost= 0.036753803
9774 Epoch: 9738 cost= 0.036680829
9775 Epoch: 9739 cost= 0.033946756
9776 Epoch: 9740 cost= 0.033032432
9777 Epoch: 9741 cost= 0.035455287
9778 Epoch: 9742 cost= 0.033701882
9779 Epoch: 9743 cost= 0.033146180
9780 Epoch: 9744 cost= 0.034847718
9781 Epoch: 9745 cost= 0.034785572
9782 Epoch: 9746 cost= 0.035536174
9783 Epoch: 9747 cost= 0.033185400
9784 Epoch: 9748 cost= 0.035355985
9785 Epoch: 9749 cost= 0.036500391
9786 Epoch: 9750 cost= 0.035620376
```

```
9787 Epoch: 9751 cost= 0.034935899
9788 Epoch: 9752 cost= 0.034491517
9789 Epoch: 9753 cost= 0.034275007
9790 Epoch: 9754 cost= 0.035163835
9791 Epoch: 9755 cost= 0.035620600
9792 Epoch: 9756 cost= 0.033633996
9793 Epoch: 9757 cost= 0.034828331
9794 Epoch: 9758 cost= 0.033311788
9795 Epoch: 9759 cost= 0.035908520
9796 Epoch: 9760 cost= 0.035633504
9797 Epoch: 9761 cost= 0.034833096
9798 Epoch: 9762 cost= 0.034282736
9799 Epoch: 9763 cost= 0.035425473
9800 Epoch: 9764 cost= 0.035329532
9801 Epoch: 9765 cost= 0.033886820
9802 Epoch: 9766 cost= 0.037084430
9803 Epoch: 9767 cost= 0.033488739
9804 Epoch: 9768 cost= 0.033665702
9805 Epoch: 9769 cost= 0.036531173
9806 Epoch: 9770 cost= 0.036223270
9807 Epoch: 9771 cost= 0.036138285
9808 Epoch: 9772 cost= 0.035235211
9809 Epoch: 9773 cost= 0.035530448
9810 Epoch: 9774 cost= 0.034466460
```

```
9811 Epoch: 9775 cost= 0.033685625
9812 Epoch: 9776 cost= 0.033283550
9813 Epoch: 9777 cost= 0.035197053
9814 Epoch: 9778 cost= 0.035032365
9815 Epoch: 9779 cost= 0.034745809
9816 Epoch: 9780 cost= 0.033820260
9817 Epoch: 9781 cost= 0.034303550
9818 Epoch: 9782 cost= 0.035296943
9819 Epoch: 9783 cost= 0.035543423
9820 Epoch: 9784 cost= 0.034822177
9821 Epoch: 9785 cost= 0.034005005
9822 Epoch: 9786 cost= 0.033925403
9823 Epoch: 9787 cost= 0.033633284
9824 Epoch: 9788 cost= 0.033742335
9825 Epoch: 9789 cost= 0.034261972
9826 Epoch: 9790 cost= 0.032675542
9827 Epoch: 9791 cost= 0.034245979
9828 Epoch: 9792 cost= 0.034894429
9829 Epoch: 9793 cost= 0.035367809
9830 Epoch: 9794 cost= 0.033445846
9831 Epoch: 9795 cost= 0.033894222
9832 Epoch: 9796 cost= 0.034013983
9833 Epoch: 9797 cost= 0.036006149
9834 Epoch: 9798 cost= 0.034523617
```

```
9835 Epoch: 9799 cost= 0.036178365
9836 Epoch: 9800 cost= 0.035647586
9837 Epoch: 9801 cost= 0.034681316
9838 Epoch: 9802 cost= 0.035772704
9839 Epoch: 9803 cost= 0.034541525
9840 Epoch: 9804 cost= 0.033346061
9841 Epoch: 9805 cost= 0.033183530
9842 Epoch: 9806 cost= 0.035976660
9843 Epoch: 9807 cost= 0.034837119
9844 Epoch: 9808 cost= 0.033285968
9845 Epoch: 9809 cost= 0.034570299
9846 Epoch: 9810 cost= 0.036589194
9847 Epoch: 9811 cost= 0.034896035
9848 Epoch: 9812 cost= 0.034925140
9849 Epoch: 9813 cost= 0.034726750
9850 Epoch: 9814 cost= 0.034902826
9851 Epoch: 9815 cost= 0.035125736
9852 Epoch: 9816 cost= 0.035182983
9853 Epoch: 9817 cost= 0.034813482
9854 Epoch: 9818 cost= 0.035080016
9855 Epoch: 9819 cost= 0.033307396
9856 Epoch: 9820 cost= 0.035342507
9857 Epoch: 9821 cost= 0.033556879
9858 Epoch: 9822 cost= 0.033782784
```

```
9859 Epoch: 9823 cost= 0.033445824
9860 Epoch: 9824 cost= 0.033044312
9861 Epoch: 9825 cost= 0.035657458
9862 Epoch: 9826 cost= 0.036395911
9863 Epoch: 9827 cost= 0.036690917
9864 Epoch: 9828 cost= 0.036165234
9865 Epoch: 9829 cost= 0.032770820
9866 Epoch: 9830 cost= 0.034707129
9867 Epoch: 9831 cost= 0.033745997
9868 Epoch: 9832 cost= 0.035278983
9869 Epoch: 9833 cost= 0.034708649
9870 Epoch: 9834 cost= 0.033957437
9871 Epoch: 9835 cost= 0.034452349
9872 Epoch: 9836 cost= 0.034362074
9873 Epoch: 9837 cost= 0.034220606
9874 Epoch: 9838 cost= 0.035025526
9875 Epoch: 9839 cost= 0.031483654
9876 Epoch: 9840 cost= 0.035753939
9877 Epoch: 9841 cost= 0.034195282
9878 Epoch: 9842 cost= 0.036203880
9879 Epoch: 9843 cost= 0.034730405
9880 Epoch: 9844 cost= 0.034872901
9881 Epoch: 9845 cost= 0.033789981
9882 Epoch: 9846 cost= 0.034958083
```



```
9883 Epoch: 9847 cost= 0.034052026
9884 Epoch: 9848 cost= 0.035001323
9885 Epoch: 9849 cost= 0.034873653
9886 Epoch: 9850 cost= 0.034108467
9887 Epoch: 9851 cost= 0.035048887
9888 Epoch: 9852 cost= 0.035101749
9889 Epoch: 9853 cost= 0.032928184
9890 Epoch: 9854 cost= 0.035677850
9891 Epoch: 9855 cost= 0.034833934
9892 Epoch: 9856 cost= 0.034234859
9893 Epoch: 9857 cost= 0.033207260
9894 Epoch: 9858 cost= 0.035575420
9895 Epoch: 9859 cost= 0.033378523
9896 Epoch: 9860 cost= 0.034907568
9897 Epoch: 9861 cost= 0.034262568
9898 Epoch: 9862 cost= 0.034511898
9899 Epoch: 9863 cost= 0.034321457
9900 Epoch: 9864 cost= 0.034473043
9901 Epoch: 9865 cost= 0.032838050
9902 Epoch: 9866 cost= 0.033482317
9903 Epoch: 9867 cost= 0.036419880
9904 Epoch: 9868 cost= 0.035051379
9905 Epoch: 9869 cost= 0.033123937
9906 Epoch: 9870 cost= 0.033988703
```



```
9907 Epoch: 9871 cost= 0.034880575
9908 Epoch: 9872 cost= 0.032428451
9909 Epoch: 9873 cost= 0.036386635
9910 Epoch: 9874 cost= 0.035614185
9911 Epoch: 9875 cost= 0.036007371
9912 Epoch: 9876 cost= 0.034532081
9913 Epoch: 9877 cost= 0.034613945
9914 Epoch: 9878 cost= 0.032852776
9915 Epoch: 9879 cost= 0.034042995
9916 Epoch: 9880 cost= 0.033771276
9917 Epoch: 9881 cost= 0.036955833
9918 Epoch: 9882 cost= 0.033376586
9919 Epoch: 9883 cost= 0.038176719
9920 Epoch: 9884 cost= 0.036224596
9921 Epoch: 9885 cost= 0.033615291
9922 Epoch: 9886 cost= 0.035387944
9923 Epoch: 9887 cost= 0.035495456
9924 Epoch: 9888 cost= 0.034145560
9925 Epoch: 9889 cost= 0.032977786
9926 Epoch: 9890 cost= 0.034530740
9927 Epoch: 9891 cost= 0.033504695
9928 Epoch: 9892 cost= 0.033555876
9929 Epoch: 9893 cost= 0.034935344
9930 Epoch: 9894 cost= 0.036230497
```

```
9931 Epoch: 9895 cost= 0.033341855
9932 Epoch: 9896 cost= 0.035492469
9933 Epoch: 9897 cost= 0.034140334
9934 Epoch: 9898 cost= 0.034522843
9935 Epoch: 9899 cost= 0.034683123
9936 Epoch: 9900 cost= 0.034922566
9937 Epoch: 9901 cost= 0.034133058
9938 Epoch: 9902 cost= 0.034830511
9939 Epoch: 9903 cost= 0.034720901
9940 Epoch: 9904 cost= 0.034664575
9941 Epoch: 9905 cost= 0.035756513
9942 Epoch: 9906 cost= 0.032927755
9943 Epoch: 9907 cost= 0.035801917
9944 Epoch: 9908 cost= 0.035949551
9945 Epoch: 9909 cost= 0.035554770
9946 Epoch: 9910 cost= 0.035821460
9947 Epoch: 9911 cost= 0.036169246
9948 Epoch: 9912 cost= 0.035519395
9949 Epoch: 9913 cost= 0.036901746
9950 Epoch: 9914 cost= 0.033097312
9951 Epoch: 9915 cost= 0.032939002
9952 Epoch: 9916 cost= 0.034705859
9953 Epoch: 9917 cost= 0.033575404
9954 Epoch: 9918 cost= 0.035875909
```

```
9955 Epoch: 9919 cost= 0.036822218
9956 Epoch: 9920 cost= 0.034379985
9957 Epoch: 9921 cost= 0.034377109
9958 Epoch: 9922 cost= 0.035781741
9959 Epoch: 9923 cost= 0.033843793
9960 Epoch: 9924 cost= 0.036147565
9961 Epoch: 9925 cost= 0.033429570
9962 Epoch: 9926 cost= 0.034384117
9963 Epoch: 9927 cost= 0.035082549
9964 Epoch: 9928 cost= 0.033872589
9965 Epoch: 9929 cost= 0.035509590
9966 Epoch: 9930 cost= 0.036142111
9967 Epoch: 9931 cost= 0.034126442
9968 Epoch: 9932 cost= 0.034025650
9969 Epoch: 9933 cost= 0.034462433
9970 Epoch: 9934 cost= 0.035297353
9971 Epoch: 9935 cost= 0.033344470
9972 Epoch: 9936 cost= 0.034811243
9973 Epoch: 9937 cost= 0.034106240
9974 Epoch: 9938 cost= 0.033661298
9975 Epoch: 9939 cost= 0.036177922
9976 Epoch: 9940 cost= 0.034278173
9977 Epoch: 9941 cost= 0.036320087
9978 Epoch: 9942 cost= 0.034875531
```

```
9979 Epoch: 9943 cost= 0.034511730
9980 Epoch: 9944 cost= 0.034885664
9981 Epoch: 9945 cost= 0.035451267
9982 Epoch: 9946 cost= 0.034773920
9983 Epoch: 9947 cost= 0.034016326
9984 Epoch: 9948 cost= 0.034993969
9985 Epoch: 9949 cost= 0.033099301
9986 Epoch: 9950 cost= 0.031101659
9987 Epoch: 9951 cost= 0.034796093
9988 Epoch: 9952 cost= 0.035390481
9989 Epoch: 9953 cost= 0.034501866
9990 Epoch: 9954 cost= 0.037348084
9991 Epoch: 9955 cost= 0.036908139
9992 Epoch: 9956 cost= 0.034372285
9993 Epoch: 9957 cost= 0.034336429
9994 Epoch: 9958 cost= 0.035519771
9995 Epoch: 9959 cost= 0.035623111
9996 Epoch: 9960 cost= 0.035143841
9997 Epoch: 9961 cost= 0.035564121
9998 Epoch: 9962 cost= 0.036338530
9999 Epoch: 9963 cost= 0.034277361
10000 Epoch: 9964 cost= 0.035095185
10001 Epoch: 9965 cost= 0.034496024
10002 Epoch: 9966 cost= 0.034900025
```

10003	Epoch: 9967	cost= 0.033970624
10004	Epoch: 9968	cost= 0.032243058
10005	Epoch: 9969	cost= 0.035939004
10006	Epoch: 9970	cost= 0.032775577
10007	Epoch: 9971	cost= 0.033797435
10008	Epoch: 9972	cost= 0.034936868
10009	Epoch: 9973	cost= 0.033194490
10010	Epoch: 9974	cost= 0.035035677
10011	Epoch: 9975	cost= 0.035830408
10012	Epoch: 9976	cost= 0.035637919
10013	Epoch: 9977	cost= 0.035045866
10014	Epoch: 9978	cost= 0.036588993
10015	Epoch: 9979	cost= 0.033764876
10016	Epoch: 9980	cost= 0.035447769
10017	Epoch: 9981	cost= 0.034647960
10018	Epoch: 9982	cost= 0.032771192
10019	Epoch: 9983	cost= 0.035209686
10020	Epoch: 9984	cost= 0.034209073
10021	Epoch: 9985	cost= 0.035321765
10022	Epoch: 9986	cost= 0.033944719
10023	Epoch: 9987	cost= 0.036495093
10024	Epoch: 9988	cost= 0.034048457
10025	Epoch: 9989	cost= 0.035762209
10026	Epoch: 9990	cost= 0.034643974

```
10027 Epoch: 9991 cost= 0.035409007
10028 Epoch: 9992 cost= 0.034380294
10029 Epoch: 9993 cost= 0.033967569
10030 Epoch: 9994 cost= 0.033141032
10031 Epoch: 9995 cost= 0.033771705
10032 Epoch: 9996 cost= 0.035791636
10033 Epoch: 9997 cost= 0.035731353
10034 Epoch: 9998 cost= 0.035213642
10035 Epoch: 9999 cost= 0.035100598
10036 Epoch: 10000 cost= 0.034141917
10037 Optimization Finished!
10038
10039 Process finished with exit code 0
10040
```