

```
1 !pip3 install gymnasium[box2d]

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting gymnasium[box2d]
  Downloading gymnasium-0.28.1-py3-none-any.whl (925 kB)
    925.5/925.5 KB 9.5 MB/s eta 0:00:00
Requirement already satisfied:云pickle>=1.2.0 in /usr/local/lib/python3.9/dist-packages (from gymnasium[box2d]) (2.2.1)
Requirement already satisfied: typing-extensions>=4.3.0 in /usr/local/lib/python3.9/dist-packages (from gymnasium[box2d]) (4.5.0)
Collecting jax-jumpy>=1.0.0
  Downloading jax_jumpy-1.0.0-py3-none-any.whl (20 kB)
Collecting farama-notifications>=0.0.1
  Downloading Farama_Notifications-0.0.4-py3-none-any.whl (2.5 kB)
Requirement already satisfied: numpy>=1.21.0 in /usr/local/lib/python3.9/dist-packages (from gymnasium[box2d]) (1.22.4)
Requirement already satisfied: importlib-metadata>=4.8.0 in /usr/local/lib/python3.9/dist-packages (from gymnasium[box2d]) (6.1.0)
Collecting pygame==2.1.3
  Downloading pygame-2.1.3-cp39-cp39-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (13.7 MB)
    13.7/13.7 MB 28.8 MB/s eta 0:00:00
Collecting box2d-py==2.3.5
  Downloading box2d-py-2.3.5.tar.gz (374 kB)
    374.4/374.4 KB 12.8 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting swig==4.*
  Downloading swig-4.1.1-py2.py3-none-manylinux_2_5_x86_64.manylinux1_x86_64.whl (1.8 MB)
    1.8/1.8 MB 33.1 MB/s eta 0:00:00
Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.9/dist-packages (from importlib-metadata>=4.8.0->gymnasium[box2d]) (3.1.0)
Building wheels for collected packages: box2d-py
  error: subprocess-exited-with-error

  x python setup.py bdist_wheel did not run successfully.
  | exit code: 1
  | See above for output.

  note: This error originates from a subprocess, and is likely not a problem with pip.
  Building wheel for box2d-py (setup.py) ... error
  ERROR: Failed building wheel for box2d-py
  Running setup.py clean for box2d-py
Failed to build box2d-py
Installing collected packages: swig, farama-notifications, box2d-py, pygame, jax-jumpy, gymnasium
  Running setup.py install for box2d-py ... done
  DEPRECATION: box2d-py was installed using the legacy 'setup.py install' method, because a wheel could not be built for it. A possible
  Attempting uninstall: pygame
  Found existing installation: pygame 2.3.0
  Uninstalling pygame-2.3.0:
    Successfully uninstalled pygame-2.3.0
Successfully installed box2d-py-2.3.5 farama-notifications-0.0.4 gymnasium-0.28.1 jax-jumpy-1.0.0 pygame-2.1.3 swig-4.1.1
```

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ECEN 743 ASSIGNMENT 4

A3) DUELING DEEP Q LEARNING

This code is for Dueling Deep Q Learning as an answer for Q3

I have taken few snippets from the helper file and docs to write this code for Lunar Lander.

```
1 import os
2 import torch as T
3 import torch.nn as nn
4 import torch.nn.functional as F
5 import torch.optim as optim
6 import numpy as np
7 import gym, time
8 import matplotlib.pyplot as plt
9
10
11 # For visualization
12 from collections import deque, namedtuple
13 from gym.wrappers.monitoring import video_recorder
14 from IPython.display import HTML
15 from IPython import display
16 import base64, io
17 import glob
18 import cv2

1
2 class ExperienceReplay(object):
```

```

3     """
4     Based on the Replay Buffer implementation of TD3
5     Reference: https://github.com/sfujim/TD3/blob/master/utils.py
6     """
7     def __init__(self, max_size, input_shape, n_actions):
8         self.memory_size = max_size
9         self.memory_count = 0
10        self.state_memory = np.zeros((self.memory_size, *input_shape), dtype=np.float32)
11        self.next_state_memory = np.zeros((self.memory_size, *input_shape), dtype=np.float32)
12        self.action_memory = np.zeros(self.memory_size, dtype=np.int64)
13        self.reward_memory = np.zeros(self.memory_size, dtype=np.float32)
14        self.terminal_memory = np.zeros(self.memory_size, dtype=np.uint8)
15
16    def add(self, state, action, reward, next_state, done):
17        ptr = self.memory_count % self.memory_size
18        self.state_memory[ptr] = state
19        self.next_state_memory[ptr] = next_state
20        self.action_memory[ptr] = action
21        self.reward_memory[ptr] = reward
22        self.terminal_memory[ptr] = done
23        self.memory_count = self.memory_count + 1
24
25    def sample(self, batch_size):
26        max_mem = min(self.memory_count, self.memory_size)
27        batch = np.random.choice(max_mem, batch_size, replace=False)
28
29        states = self.state_memory[batch]
30        actions = self.action_memory[batch]
31        rewards = self.reward_memory[batch]
32        next_states = self.next_state_memory[batch]
33        terminal = self.terminal_memory[batch]
34
35        return states, actions, rewards, next_states, terminal
36
37
38    class QNetwork(nn.Module):
39        def __init__(self, ALPHA, n_actions, name, input_dims, chkpt_dir='tmp/dqn'):
40            super(QNetwork, self).__init__()
41
42            # Layers
43            self.layer_1 = nn.Linear(*input_dims, 64)
44            self.layer_2 = nn.Linear(64, 64)
45
46            # Defining Value and Advantage layers
47            self.V = nn.Linear(64, 1)
48            self.A = nn.Linear(64, n_actions)
49
50            self.optimizer = optim.Adam(self.parameters(), lr=ALPHA)
51            self.loss = nn.MSELoss()
52            self.device = T.device('cuda:0' if T.cuda.is_available() else 'cpu')
53            self.to(self.device)
54
55
56        def forward(self, state):
57            l1 = F.relu(self.layer_1(state))
58            l2 = F.relu(self.layer_2(l1))
59            V = self.V(l2)
60            A = self.A(l2)
61
62            return V, A
63
64    class DQNAgent(object):
65        def __init__(self, discount, epsilon, alpha, n_actions, input_dims,
66                     memory_size, batch_size, eps_min=0.01, eps_dec=5e-7,
67                     replace=1000, chkpt_dir='tmp/dqn'):
68            self.discount = discount
69            self.epsilon = epsilon
70            self.eps_min = eps_min
71            self.eps_dec = eps_dec
72            self.action_space = [i for i in range(n_actions)]
73            self.learn_step_counter = 0
74            self.batch_size = batch_size
75            self.replace_target_cnt = replace
76            self.memory = ExperienceReplay(memory_size, input_dims, n_actions)
77
78            self.q_eval = QNetwork(alpha, n_actions, input_dims=input_dims,
79                                  name='q_eval', chkpt_dir=chkpt_dir)
80            self.q_next = QNetwork(alpha, n_actions, input_dims=input_dims)

```

```
80     self.q_next = QNetForwardPath, self._actions, self._inputs_state_action,
81     name='q_next', ckpt_dir=ckpt_dir)
82
83     def add(self, state, action, reward, next_state, done):
84         self.memory.add(state, action, reward, next_state, done)
85
86     def select_action(self, observation):
87         if np.random.random() > self.epsilon:
88             observation = observation[np.newaxis,:]
89             state = T.tensor(observation).to(self.q_eval.device)
90             _, advantage = self.q_eval.forward(state)
91             action = T.argmax(advantage).item()
92         else:
93             action = np.random.choice(self.action_space)
94
95         return action
96
97     def replace_target_network(self):
98         if self.replace_target_cnt is not None and \
99             self.learn_step_counter % self.replace_target_cnt == 0:
100            self.q_next.load_state_dict(self.q_eval.state_dict())
101
102    def decrement_epsilon(self):
103        self.epsilon = self.epsilon - self.eps_dec \
104            if self.epsilon > self.eps_min else self.eps_min
105
106    def learn(self):
107        if self.memory.memory_count < self.batch_size:
108            return
109
110        self.q_eval.optimizer.zero_grad()
111        self.replace_target_network()
112        state, action, reward, new_state, done = \
113            self.memory.sample(self.batch_size)
114
115
116        # Running experiences through device
117        state = T.tensor(state).to(self.q_eval.device)
118        new_state = T.tensor(new_state).to(self.q_eval.device)
119        action = T.tensor(action).to(self.q_eval.device)
120        rewards = T.tensor(reward).to(self.q_eval.device)
121        dones = T.tensor(done).to(self.q_eval.device)
122
123        # Values and advantages for states
124        V_state, A_state = self.q_eval.forward(state)
125        V_next_state, A_next_state = self.q_next.forward(new_state)
126
127        q_pred = T.add(V_state, (A_state - A_state.mean(dim=1, keepdim=True)).gather(1,
128            action.unsqueeze(-1)).squeeze(-1))
129
130        # Evaluating Q_next
131        q_next = T.add(V_next_state, (A_next_state - A_next_state.mean(dim=1, keepdim=True)))
132        q_target = rewards + self.discount*T.max(q_next, dim=1)[0].detach()
133        q_target[dones] = 0.0
134
135        # Calculating loss and backpropogating
136        loss = self.q_eval.loss(q_target, q_pred).to(self.q_eval.device)
137        loss.backward()
138        self.q_eval.optimizer.step()
139        self.learn_step_counter = self.learn_step_counter + 1
140        self.decrement_epsilon()
141
142
```

```
1 # Plotting Function
2 def plotting(x, scores, epsilons, lines=None):
3     fig=plt.figure()
4     ax=fig.add_subplot(111, label="1")
5     ax2=fig.add_subplot(111, label="2", frame_on=False)
6     ax.plot(x, epsilons, color="C0")
7     ax.set_xlabel("Game", color="C0")
8     ax.set_ylabel("Epsilon", color="C0")
9     ax.tick_params(axis='x', colors="C0")
```

```

10     ax.tick_params(axis='y', colors="C0")
11
12     N = len(scores)
13     running_avg = np.empty(N)
14     for t in range(N):
15         running_avg[t] = np.mean(scores[max(0, t-20):(t+1)])
16
17     ax2.scatter(x, running_avg, color="C1")
18     #ax2.xaxis.tick_top()
19     ax2.axes.get_xaxis().set_visible(False)
20     ax2.yaxis.tick_right()
21     #ax2.set_xlabel('x label 2', color="C1")
22     ax2.set_ylabel('Score', color="C1")
23     #ax2.xaxis.set_label_position('top')
24     ax2.yaxis.set_label_position('right')
25     #ax2.tick_params(axis='x', colors="C1")
26     ax2.tick_params(axis='y', colors="C1")
27 #
28 # Main Function
29
30 if __name__ == '__main__':
31     env = gym.make('LunarLander-v2')
32     num_games = 2000
33     agent = DQNAgent(discount=0.99, epsilon=1.0, alpha=5e-4,
34                        input_dims=[8], n_actions=4, memory_size=10000, eps_min=0.01,
35                        batch_size=64, eps_dec=1e-3, replace=100)
36
37     scores = []
38     eps_history = []
39     n_steps = 0
40     moving_window = deque(maxlen=100)
41
42     for i in range(num_games):
43         done = False
44         observation = env.reset()
45         score = 0
46
47         while not done:
48             action = agent.select_action(observation)
49             next_observation, reward, done, info = env.step(action)
50             n_steps += 1
51             score += reward
52             agent.add(observation, action,
53                         reward, next_observation, int(done))
54             agent.learn()
55
56             observation = next_observation
57
58
59             scores.append(score)
60             moving_window.append(score)
61             if np.mean(moving_window) > 200.00:
62                 T.save(agent.q_eval.state_dict(), 'checkpoint.pth')
63
64             avg_score = np.mean(scores[max(0, i-100):(i+1)])
65             print('episode: ', i, 'score %.1f' % score,
66                   ' average score %.1f' % avg_score,
67                   'epsilon %.2f' % agent.epsilon)
68
69             eps_history.append(agent.epsilon)
70
71     x = [i+1 for i in range(num_games)]
72     plotting(x, scores, eps_history)

```

```
<ipython-input-80-c9b876240d3c>:131: UserWarning: masked_fill_ received a mask with dtype to
  q_target[dones] = 0.0
episode: 0 score -245.3 average score -245.3 epsilon 0.98
episode: 1 score -366.3 average score -305.8 epsilon 0.88
episode: 2 score -67.8 average score -226.4 epsilon 0.77
episode: 3 score -91.9 average score -192.8 epsilon 0.69
episode: 4 score -166.2 average score -187.5 epsilon 0.54
episode: 5 score -215.8 average score -192.2 epsilon 0.45
episode: 6 score -53.7 average score -172.4 epsilon 0.32
episode: 7 score -88.7 average score -162.0 epsilon 0.12
episode: 8 score -276.1 average score -174.6 epsilon 0.01
episode: 9 score -69.8 average score -164.2 epsilon 0.01
episode: 10 score -123.1 average score -160.4 epsilon 0.01
episode: 11 score -71.3 average score -153.0 epsilon 0.01
episode: 12 score -75.9 average score -147.1 epsilon 0.01
episode: 13 score -167.4 average score -148.5 epsilon 0.01
episode: 14 score -66.1 average score -143.0 epsilon 0.01
episode: 15 score 36.7 average score -131.8 epsilon 0.01
episode: 16 score -9.8 average score -124.6 epsilon 0.01
episode: 17 score -37.6 average score -119.8 epsilon 0.01
episode: 18 score 214.2 average score -102.2 epsilon 0.01
episode: 19 score -24.4 average score -98.3 epsilon 0.01
episode: 20 score 147.5 average score -86.6 epsilon 0.01
episode: 21 score 44.2 average score -80.7 epsilon 0.01
episode: 22 score -105.4 average score -81.7 epsilon 0.01
episode: 23 score -112.4 average score -83.0 epsilon 0.01
episode: 24 score 20.9 average score -78.9 epsilon 0.01
episode: 25 score -91.9 average score -79.4 epsilon 0.01
episode: 26 score 0.5 average score -76.4 epsilon 0.01
episode: 27 score -23.5 average score -74.5 epsilon 0.01
episode: 28 score -91.3 average score -75.1 epsilon 0.01
episode: 29 score -84.8 average score -75.4 epsilon 0.01
episode: 30 score -68.3 average score -75.2 epsilon 0.01
episode: 31 score -56.0 average score -74.6 epsilon 0.01
episode: 32 score -51.4 average score -73.9 epsilon 0.01
episode: 33 score -25.7 average score -72.5 epsilon 0.01
episode: 34 score 206.1 average score -64.5 epsilon 0.01
episode: 35 score -46.5 average score -64.0 epsilon 0.01
episode: 36 score -10.9 average score -62.6 epsilon 0.01
episode: 37 score 7.0 average score -60.7 epsilon 0.01
episode: 38 score 147.3 average score -55.4 epsilon 0.01
episode: 39 score 76.0 average score -52.1 epsilon 0.01
episode: 40 score -3.6 average score -50.9 epsilon 0.01
episode: 41 score -0.8 average score -49.8 epsilon 0.01
episode: 42 score 8.3 average score -48.4 epsilon 0.01
episode: 43 score 233.5 average score -42.0 epsilon 0.01
episode: 44 score 17.5 average score -40.7 epsilon 0.01
episode: 45 score 32.9 average score -39.1 epsilon 0.01
episode: 46 score 109.5 average score -35.9 epsilon 0.01
episode: 47 score -3.4 average score -35.2 epsilon 0.01
episode: 48 score 182.0 average score -30.8 epsilon 0.01
episode: 49 score 242.8 average score -25.3 epsilon 0.01
episode: 50 score -111.8 average score -27.0 epsilon 0.01
episode: 51 score 135.8 average score -23.9 epsilon 0.01
episode: 52 score 167.0 average score -20.3 epsilon 0.01
episode: 53 score 250.8 average score -15.3 epsilon 0.01
episode: 54 score 148.3 average score -12.3 epsilon 0.01
episode: 55 score 13.0 average score -11.8 epsilon 0.01
episode: 56 score 2.2 average score -11.6 epsilon 0.01
episode: 57 score -8.7 average score -11.5 epsilon 0.01
episode: 58 score -76.0 average score -12.6 epsilon 0.01
episode: 59 score 178.7 average score -9.5 epsilon 0.01
episode: 60 score 203.0 average score -6.0 epsilon 0.01
episode: 61 score -88.0 average score -7.3 epsilon 0.01
episode: 62 score 6.4 average score -7.1 epsilon 0.01
episode: 63 score -14.6 average score -7.2 epsilon 0.01
episode: 64 score 12.7 average score -6.9 epsilon 0.01
episode: 65 score -43.7 average score -7.4 epsilon 0.01
episode: 66 score 193.6 average score -4.4 epsilon 0.01
episode: 67 score 2.1 average score -4.3 epsilon 0.01
episode: 68 score 240.3 average score -0.8 epsilon 0.01
episode: 69 score 32.0 average score -0.3 epsilon 0.01
episode: 70 score 212.6 average score 2.7 epsilon 0.01
episode: 71 score 250.4 average score 6.1 epsilon 0.01
episode: 72 score 236.9 average score 9.3 epsilon 0.01
episode: 73 score 90.4 average score 10.4 epsilon 0.01
episode: 74 score 76.4 average score 11.2 epsilon 0.01
episode: 75 score 231.6 average score 14.1 epsilon 0.01
episode: 76 score 178.9 average score 16.3 epsilon 0.01
episode: 77 score 264.1 average score 19.5 epsilon 0.01
episode: 78 score 264.8 average score 22.6 epsilon 0.01
episode: 79 score 243.9 average score 25.3 epsilon 0.01
episode: 80 score -55.7 average score 24.3 epsilon 0.01
episode: 81 score -58.1 average score 23.3 epsilon 0.01
```

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episode: 82 score 94.9 average score 24.2 epsilon 0.01
episode: 83 score -6.9 average score 23.8 epsilon 0.01
episode: 84 score 291.8 average score 27.0 epsilon 0.01
episode: 85 score 86.2 average score 27.7 epsilon 0.01
episode: 86 score 108.2 average score 28.6 epsilon 0.01
episode: 87 score 226.9 average score 30.8 epsilon 0.01
episode: 88 score 244.9 average score 33.2 epsilon 0.01
episode: 89 score 83.2 average score 33.8 epsilon 0.01
episode: 90 score 271.4 average score 36.4 epsilon 0.01
episode: 91 score 132.1 average score 37.5 epsilon 0.01
episode: 92 score 261.2 average score 39.9 epsilon 0.01
episode: 93 score 226.4 average score 41.8 epsilon 0.01
episode: 94 score -30.1 average score 41.1 epsilon 0.01
episode: 95 score 253.4 average score 43.3 epsilon 0.01
episode: 96 score 242.3 average score 45.4 epsilon 0.01
episode: 97 score -25.4 average score 44.6 epsilon 0.01
episode: 98 score 48.4 average score 44.7 epsilon 0.01
episode: 99 score -142.7 average score 42.8 epsilon 0.01
episode: 100 score -335.0 average score 39.1 epsilon 0.01
episode: 101 score 212.0 average score 43.6 epsilon 0.01
episode: 102 score 196.6 average score 49.2 epsilon 0.01
episode: 103 score -74.7 average score 49.1 epsilon 0.01
episode: 104 score 157.2 average score 51.6 epsilon 0.01
episode: 105 score 39.3 average score 53.6 epsilon 0.01
episode: 106 score 157.3 average score 57.3 epsilon 0.01
episode: 107 score 138.6 average score 59.2 epsilon 0.01
episode: 108 score 10.5 average score 60.2 epsilon 0.01
episode: 109 score 232.7 average score 65.2 epsilon 0.01
episode: 110 score 222.1 average score 68.1 epsilon 0.01
episode: 111 score 11.1 average score 69.4 epsilon 0.01
episode: 112 score 246.3 average score 72.6 epsilon 0.01
episode: 113 score 171.7 average score 75.0 epsilon 0.01
episode: 114 score 230.7 average score 79.0 epsilon 0.01
episode: 115 score 219.1 average score 81.8 epsilon 0.01
episode: 116 score 200.5 average score 83.4 epsilon 0.01
episode: 117 score -26.7 average score 83.2 epsilon 0.01
episode: 118 score -18.2 average score 83.4 epsilon 0.01
episode: 119 score 167.7 average score 83.0 epsilon 0.01
episode: 120 score -49.4 average score 82.7 epsilon 0.01
episode: 121 score -349.3 average score 77.8 epsilon 0.01
episode: 122 score 187.7 average score 79.2 epsilon 0.01
episode: 123 score 26.2 average score 80.5 epsilon 0.01
episode: 124 score 251.8 average score 84.1 epsilon 0.01
episode: 125 score 133.8 average score 85.3 epsilon 0.01
episode: 126 score 19.0 average score 86.4 epsilon 0.01
episode: 127 score 4.3 average score 86.4 epsilon 0.01
episode: 128 score 20.1 average score 86.8 epsilon 0.01
episode: 129 score 147.9 average score 89.2 epsilon 0.01
episode: 130 score 189.7 average score 91.9 epsilon 0.01
episode: 131 score 176.6 average score 94.3 epsilon 0.01
episode: 132 score 183.2 average score 96.7 epsilon 0.01
episode: 133 score 140.5 average score 98.6 epsilon 0.01
episode: 134 score 227.8 average score 101.1 epsilon 0.01
episode: 135 score 223.5 average score 101.3 epsilon 0.01
episode: 136 score 245.6 average score 104.2 epsilon 0.01
episode: 137 score 272.2 average score 107.0 epsilon 0.01
episode: 138 score 201.0 average score 108.9 epsilon 0.01
episode: 139 score 213.7 average score 109.6 epsilon 0.01
episode: 140 score 249.7 average score 111.3 epsilon 0.01
episode: 141 score 268.0 average score 114.0 epsilon 0.01
episode: 142 score 258.4 average score 116.5 epsilon 0.01
episode: 143 score 258.6 average score 119.0 epsilon 0.01
episode: 144 score 254.2 average score 119.2 epsilon 0.01
episode: 145 score 268.6 average score 121.7 epsilon 0.01
episode: 146 score 264.4 average score 124.0 epsilon 0.01
episode: 147 score 234.8 average score 125.2 epsilon 0.01
episode: 148 score 259.5 average score 127.8 epsilon 0.01
episode: 149 score 242.6 average score 128.4 epsilon 0.01
episode: 150 score 282.4 average score 128.8 epsilon 0.01
episode: 151 score 250.5 average score 132.4 epsilon 0.01
episode: 152 score 270.5 average score 133.8 epsilon 0.01
episode: 153 score 272.4 average score 134.8 epsilon 0.01
episode: 154 score 264.9 average score 134.9 epsilon 0.01
episode: 155 score 240.6 average score 135.8 epsilon 0.01
episode: 156 score 262.8 average score 138.3 epsilon 0.01
episode: 157 score 225.4 average score 140.5 epsilon 0.01
episode: 158 score 143.7 average score 142.0 epsilon 0.01
episode: 159 score 232.6 average score 145.1 epsilon 0.01
episode: 160 score 246.9 average score 145.8 epsilon 0.01
episode: 161 score 235.6 average score 146.1 epsilon 0.01
episode: 162 score 270.3 average score 149.6 epsilon 0.01
episode: 163 score 242.2 average score 152.0 epsilon 0.01
episode: 164 score 256.0 average score 154.7 epsilon 0.01
episode: 165 score 267.0 average score 157.2 epsilon 0.01
episode: 166 score 249.0 average score 160.1 epsilon 0.01
```

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episode: 167 score 253.3 average score 160.7 epsilon 0.01
episode: 168 score 49.2 average score 161.1 epsilon 0.01
episode: 169 score 270.1 average score 161.4 epsilon 0.01
episode: 170 score 216.5 average score 163.2 epsilon 0.01
episode: 171 score 113.7 average score 162.3 epsilon 0.01
episode: 172 score 261.5 average score 162.4 epsilon 0.01
episode: 173 score 252.3 average score 162.5 epsilon 0.01
episode: 174 score 232.4 average score 163.9 epsilon 0.01
episode: 175 score 249.5 average score 165.7 epsilon 0.01
episode: 176 score 229.5 average score 165.6 epsilon 0.01
episode: 177 score 242.9 average score 166.3 epsilon 0.01
episode: 178 score 270.2 average score 166.3 epsilon 0.01
episode: 179 score 301.8 average score 166.7 epsilon 0.01
episode: 180 score 227.2 average score 166.5 epsilon 0.01
episode: 181 score 240.7 average score 169.5 epsilon 0.01
episode: 182 score 230.2 average score 172.3 epsilon 0.01
episode: 183 score 247.4 average score 173.8 epsilon 0.01
episode: 184 score 222.8 average score 176.1 epsilon 0.01
episode: 185 score 230.7 average score 175.5 epsilon 0.01
episode: 186 score 262.1 average score 177.2 epsilon 0.01
episode: 187 score 253.5 average score 178.7 epsilon 0.01
episode: 188 score 293.0 average score 179.3 epsilon 0.01
episode: 189 score 273.4 average score 179.6 epsilon 0.01
episode: 190 score 275.5 average score 181.5 epsilon 0.01
episode: 191 score 221.6 average score 181.0 epsilon 0.01
episode: 192 score 242.5 average score 182.1 epsilon 0.01
episode: 193 score 227.8 average score 181.8 epsilon 0.01
episode: 194 score -61.4 average score 178.9 epsilon 0.01
episode: 195 score 1.4 average score 179.2 epsilon 0.01
episode: 196 score 258.6 average score 179.3 epsilon 0.01
episode: 197 score 220.9 average score 179.1 epsilon 0.01
episode: 198 score 220.2 average score 181.5 epsilon 0.01
episode: 199 score 207.6 average score 183.1 epsilon 0.01
episode: 200 score 288.2 average score 187.4 epsilon 0.01
episode: 201 score 102.9 average score 191.7 epsilon 0.01
episode: 202 score -6.0 average score 189.5 epsilon 0.01
episode: 203 score 244.5 average score 190.0 epsilon 0.01
episode: 204 score 232.9 average score 193.1 epsilon 0.01
episode: 205 score 214.2 average score 193.6 epsilon 0.01
episode: 206 score 91.8 average score 194.1 epsilon 0.01
episode: 207 score 224.1 average score 194.8 epsilon 0.01
episode: 208 score 241.0 average score 195.8 epsilon 0.01
episode: 209 score 8.5 average score 195.8 epsilon 0.01
episode: 210 score 218.2 average score 195.7 epsilon 0.01
episode: 211 score 264.5 average score 196.1 epsilon 0.01
episode: 212 score 202.9 average score 198.0 epsilon 0.01
episode: 213 score 242.7 average score 197.9 epsilon 0.01
episode: 214 score 249.1 average score 198.7 epsilon 0.01
episode: 215 score -59.5 average score 195.8 epsilon 0.01
episode: 216 score 208.9 average score 195.7 epsilon 0.01
episode: 217 score 267.4 average score 196.4 epsilon 0.01
episode: 218 score 272.2 average score 199.3 epsilon 0.01
episode: 219 score 225.6 average score 201.8 epsilon 0.01
episode: 220 score 249.3 average score 202.6 epsilon 0.01
episode: 221 score 118.9 average score 204.2 epsilon 0.01
episode: 222 score 198.5 average score 209.7 epsilon 0.01
episode: 223 score 247.9 average score 210.3 epsilon 0.01
episode: 224 score 263.1 average score 212.6 epsilon 0.01
episode: 225 score 236.9 average score 212.5 epsilon 0.01
episode: 226 score 203.9 average score 213.1 epsilon 0.01
episode: 227 score 215.6 average score 215.1 epsilon 0.01
episode: 228 score 212.6 average score 217.2 epsilon 0.01
episode: 229 score 194.9 average score 218.9 epsilon 0.01
episode: 230 score 189.6 average score 219.3 epsilon 0.01
episode: 231 score 225.0 average score 219.7 epsilon 0.01
episode: 232 score 260.4 average score 220.5 epsilon 0.01
episode: 233 score 258.2 average score 221.2 epsilon 0.01
episode: 234 score 207.0 average score 221.9 epsilon 0.01
episode: 235 score 246.3 average score 222.1 epsilon 0.01
episode: 236 score 252.0 average score 222.3 epsilon 0.01
episode: 237 score 302.5 average score 222.9 epsilon 0.01
episode: 238 score 257.4 average score 222.8 epsilon 0.01
episode: 239 score 249.8 average score 223.2 epsilon 0.01
episode: 240 score 199.5 average score 223.1 epsilon 0.01
episode: 241 score 266.5 average score 223.3 epsilon 0.01
episode: 242 score 220.3 average score 222.8 epsilon 0.01
episode: 243 score 235.9 average score 222.6 epsilon 0.01
episode: 244 score 248.0 average score 222.5 epsilon 0.01
episode: 245 score 268.1 average score 222.6 epsilon 0.01
episode: 246 score 187.2 average score 221.8 epsilon 0.01
episode: 247 score 272.9 average score 221.9 epsilon 0.01
episode: 248 score 225.9 average score 221.8 epsilon 0.01
episode: 249 score 279.9 average score 222.0 epsilon 0.01
episode: 250 score 250.4 average score 222.1 epsilon 0.01
episode: 251 score 200.8 average score 221.4 epsilon 0.01
```

```
episode: 251 score 205.0 average score 221.4 epsilon 0.01
episode: 252 score 18.5 average score 219.1 epsilon 0.01
episode: 253 score 211.2 average score 218.5 epsilon 0.01
episode: 254 score 212.8 average score 217.9 epsilon 0.01
episode: 255 score 217.8 average score 217.4 epsilon 0.01
episode: 256 score 255.0 average score 217.6 epsilon 0.01
episode: 257 score 277.0 average score 217.7 epsilon 0.01
episode: 258 score -213.8 average score 213.4 epsilon 0.01
episode: 259 score -82.7 average score 211.1 epsilon 0.01
episode: 260 score 274.9 average score 211.5 epsilon 0.01
episode: 261 score -132.1 average score 207.8 epsilon 0.01
episode: 262 score -148.5 average score 204.0 epsilon 0.01
episode: 263 score 240.1 average score 203.7 epsilon 0.01
episode: 264 score 202.5 average score 203.3 epsilon 0.01
episode: 265 score 235.0 average score 203.1 epsilon 0.01
episode: 266 score 76.8 average score 201.2 epsilon 0.01
episode: 267 score 212.8 average score 200.8 epsilon 0.01
episode: 268 score 88.1 average score 199.2 epsilon 0.01
episode: 269 score 291.3 average score 201.6 epsilon 0.01
episode: 270 score 274.7 average score 201.6 epsilon 0.01
episode: 271 score -1487.9 average score 184.8 epsilon 0.01
episode: 272 score 272.8 average score 186.3 epsilon 0.01
episode: 273 score 42.3 average score 184.2 epsilon 0.01
episode: 274 score -18.1 average score 181.5 epsilon 0.01
episode: 275 score 133.2 average score 180.5 epsilon 0.01
episode: 276 score 199.3 average score 180.0 epsilon 0.01
episode: 277 score 253.4 average score 180.2 epsilon 0.01
episode: 278 score 3.6 average score 177.9 epsilon 0.01
episode: 279 score -8.9 average score 175.1 epsilon 0.01
episode: 280 score 202.7 average score 174.1 epsilon 0.01
episode: 281 score 176.9 average score 173.6 epsilon 0.01
episode: 282 score 238.4 average score 173.6 epsilon 0.01
episode: 283 score 247.8 average score 173.8 epsilon 0.01
episode: 284 score 229.3 average score 173.6 epsilon 0.01
episode: 285 score 252.8 average score 173.9 epsilon 0.01
episode: 286 score 213.6 average score 173.7 epsilon 0.01
episode: 287 score 14.4 average score 171.3 epsilon 0.01
episode: 288 score 196.4 average score 170.7 epsilon 0.01
episode: 289 score 245.4 average score 170.2 epsilon 0.01
episode: 290 score 224.8 average score 169.8 epsilon 0.01
episode: 291 score 211.3 average score 169.1 epsilon 0.01
episode: 292 score 176.3 average score 168.7 epsilon 0.01
episode: 293 score 188.1 average score 168.1 epsilon 0.01
episode: 294 score 256.8 average score 168.4 epsilon 0.01
episode: 295 score 237.8 average score 171.4 epsilon 0.01
episode: 296 score 258.5 average score 173.9 epsilon 0.01
episode: 297 score 195.3 average score 173.3 epsilon 0.01
episode: 298 score 44.2 average score 171.6 epsilon 0.01
episode: 299 score 207.9 average score 171.4 epsilon 0.01
episode: 300 score 275.3 average score 172.1 epsilon 0.01
episode: 301 score 258.1 average score 171.8 epsilon 0.01
episode: 302 score 199.5 average score 172.8 epsilon 0.01
episode: 303 score 156.1 average score 174.4 epsilon 0.01
episode: 304 score 18.4 average score 172.1 epsilon 0.01
episode: 305 score 225.7 average score 172.1 epsilon 0.01
episode: 306 score 28.5 average score 170.2 epsilon 0.01
episode: 307 score 217.7 average score 171.5 epsilon 0.01
episode: 308 score -13.6 average score 169.1 epsilon 0.01
episode: 309 score 238.1 average score 169.1 epsilon 0.01
episode: 310 score -43.8 average score 168.6 epsilon 0.01
episode: 311 score 4.3 average score 166.5 epsilon 0.01
episode: 312 score 245.6 average score 166.3 epsilon 0.01
episode: 313 score 35.8 average score 164.6 epsilon 0.01
episode: 314 score -22.1 average score 162.0 epsilon 0.01
episode: 315 score 246.6 average score 162.0 epsilon 0.01
episode: 316 score 227.7 average score 164.8 epsilon 0.01
episode: 317 score 251.7 average score 165.2 epsilon 0.01
episode: 318 score 3.7 average score 162.6 epsilon 0.01
episode: 319 score 235.8 average score 162.3 epsilon 0.01
episode: 320 score 253.1 average score 162.5 epsilon 0.01
episode: 321 score 5.9 average score 160.1 epsilon 0.01
episode: 322 score 194.6 average score 160.9 epsilon 0.01
episode: 323 score 205.2 average score 160.9 epsilon 0.01
episode: 324 score 215.4 average score 160.6 epsilon 0.01
episode: 325 score 227.4 average score 160.3 epsilon 0.01
episode: 326 score 227.9 average score 160.2 epsilon 0.01
episode: 327 score 282.2 average score 160.9 epsilon 0.01
episode: 328 score 117.2 average score 160.0 epsilon 0.01
episode: 329 score 208.9 average score 159.9 epsilon 0.01
episode: 330 score 264.6 average score 160.6 epsilon 0.01
episode: 331 score 207.0 average score 160.8 epsilon 0.01
episode: 332 score 248.5 average score 161.0 epsilon 0.01
episode: 333 score 211.6 average score 160.5 epsilon 0.01
episode: 334 score 223.9 average score 160.2 epsilon 0.01
episode: 335 score 225.2 average score 160.4 epsilon 0.01
... ... ... ... ...
```

```
episode: 336 score 236.0 average score 160.3 epsilon 0.01
episode: 337 score 214.8 average score 159.9 epsilon 0.01
episode: 338 score 264.9 average score 159.5 epsilon 0.01
episode: 339 score 227.9 average score 159.3 epsilon 0.01
episode: 340 score 241.9 average score 159.2 epsilon 0.01
episode: 341 score 229.1 average score 159.5 epsilon 0.01
episode: 342 score 140.0 average score 158.2 epsilon 0.01
episode: 343 score 111.8 average score 157.1 epsilon 0.01
episode: 344 score 267.5 average score 157.5 epsilon 0.01
episode: 345 score 138.8 average score 156.4 epsilon 0.01
episode: 346 score 31.8 average score 154.0 epsilon 0.01
episode: 347 score 283.7 average score 155.0 epsilon 0.01
episode: 348 score 152.1 average score 153.8 epsilon 0.01
episode: 349 score 23.3 average score 151.8 epsilon 0.01
episode: 350 score 20.2 average score 149.2 epsilon 0.01
episode: 351 score 28.1 average score 147.0 epsilon 0.01
episode: 352 score 215.2 average score 147.1 epsilon 0.01
episode: 353 score 272.8 average score 149.6 epsilon 0.01
episode: 354 score 237.8 average score 149.8 epsilon 0.01
episode: 355 score 281.3 average score 150.5 epsilon 0.01
episode: 356 score -61.1 average score 147.8 epsilon 0.01
episode: 357 score 279.8 average score 148.0 epsilon 0.01
episode: 358 score 246.2 average score 147.7 epsilon 0.01
episode: 359 score 25.5 average score 150.1 epsilon 0.01
episode: 360 score -5.5 average score 150.8 epsilon 0.01
episode: 361 score -12.3 average score 148.0 epsilon 0.01
episode: 362 score 245.2 average score 151.7 epsilon 0.01
episode: 363 score -3.2 average score 153.2 epsilon 0.01
episode: 364 score 281.0 average score 153.6 epsilon 0.01
episode: 365 score -22.9 average score 151.3 epsilon 0.01
episode: 366 score 58.9 average score 149.6 epsilon 0.01
episode: 367 score 5.6 average score 148.9 epsilon 0.01
episode: 368 score 48.3 average score 147.3 epsilon 0.01
episode: 369 score -18.7 average score 146.2 epsilon 0.01
episode: 370 score 266.4 average score 146.0 epsilon 0.01
episode: 371 score 278.0 average score 146.0 epsilon 0.01
episode: 372 score 8.5 average score 160.8 epsilon 0.01
episode: 373 score 229.9 average score 160.4 epsilon 0.01
episode: 374 score 4.8 average score 160.0 epsilon 0.01
episode: 375 score 22.6 average score 160.4 epsilon 0.01
episode: 376 score 221.9 average score 161.3 epsilon 0.01
episode: 377 score 21.3 average score 159.5 epsilon 0.01
episode: 378 score 5.9 average score 157.1 epsilon 0.01
episode: 379 score 70.8 average score 157.8 epsilon 0.01
episode: 380 score 44.0 average score 158.3 epsilon 0.01
episode: 381 score -0.7 average score 156.3 epsilon 0.01
episode: 382 score -4.9 average score 154.5 epsilon 0.01
episode: 383 score -4.7 average score 152.1 epsilon 0.01
episode: 384 score 243.1 average score 152.0 epsilon 0.01
episode: 385 score 65.7 average score 150.4 epsilon 0.01
episode: 386 score 25.3 average score 148.1 epsilon 0.01
episode: 387 score 31.9 average score 146.3 epsilon 0.01
episode: 388 score -2.3 average score 146.2 epsilon 0.01
episode: 389 score -181.9 average score 142.4 epsilon 0.01
episode: 390 score -181.0 average score 139.0 epsilon 0.01
episode: 391 score -64.9 average score 136.1 epsilon 0.01
episode: 392 score -48.4 average score 133.6 epsilon 0.01
episode: 393 score 5.1 average score 131.9 epsilon 0.01
episode: 394 score -55.6 average score 129.5 epsilon 0.01
episode: 395 score -214.8 average score 124.8 epsilon 0.01
episode: 396 score 180.8 average score 124.2 epsilon 0.01
episode: 397 score 239.7 average score 124.0 epsilon 0.01
episode: 398 score 190.4 average score 124.0 epsilon 0.01
episode: 399 score 263.8 average score 126.2 epsilon 0.01
episode: 400 score 251.1 average score 126.6 epsilon 0.01
episode: 401 score -12.2 average score 123.7 epsilon 0.01
episode: 402 score 239.2 average score 123.6 epsilon 0.01
episode: 403 score 260.9 average score 124.2 epsilon 0.01
episode: 404 score 15.6 average score 122.8 epsilon 0.01
episode: 405 score 118.0 average score 123.8 epsilon 0.01
episode: 406 score 12.7 average score 121.6 epsilon 0.01
episode: 407 score 26.0 average score 121.6 epsilon 0.01
episode: 408 score 19.5 average score 119.7 epsilon 0.01
episode: 409 score 225.6 average score 122.0 epsilon 0.01
episode: 410 score -46.0 average score 119.2 epsilon 0.01
episode: 411 score 11.3 average score 119.8 epsilon 0.01
episode: 412 score 204.4 average score 121.7 epsilon 0.01
episode: 413 score 289.9 average score 122.2 epsilon 0.01
episode: 414 score 256.5 average score 124.4 epsilon 0.01
episode: 415 score 20.0 average score 124.8 epsilon 0.01
episode: 416 score 271.2 average score 125.0 epsilon 0.01
episode: 417 score 249.7 average score 125.2 epsilon 0.01
episode: 418 score 269.8 average score 125.4 epsilon 0.01
episode: 419 score 246.8 average score 127.8 epsilon 0.01
episode: 420 score -230.4 average score 123.2 epsilon 0.01
```

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episode: 421 score 230.3 average score 123.0 epsilon 0.01
episode: 422 score 235.3 average score 125.3 epsilon 0.01
episode: 423 score 210.2 average score 125.4 epsilon 0.01
episode: 424 score 207.7 average score 125.4 epsilon 0.01
episode: 425 score 165.6 average score 124.9 epsilon 0.01
episode: 426 score -81.1 average score 121.9 epsilon 0.01
episode: 427 score 95.6 average score 120.6 epsilon 0.01
episode: 428 score 240.6 average score 120.2 epsilon 0.01
episode: 429 score 104.5 average score 120.0 epsilon 0.01
episode: 430 score 124.8 average score 119.2 epsilon 0.01
episode: 431 score 261.1 average score 119.2 epsilon 0.01
episode: 432 score 265.5 average score 119.8 epsilon 0.01
episode: 433 score 269.1 average score 120.0 epsilon 0.01
episode: 434 score 286.0 average score 120.7 epsilon 0.01
episode: 435 score -49.9 average score 118.0 epsilon 0.01
episode: 436 score 282.2 average score 118.5 epsilon 0.01
episode: 437 score -45.0 average score 115.8 epsilon 0.01
episode: 438 score 14.6 average score 113.8 epsilon 0.01
episode: 439 score 180.1 average score 112.9 epsilon 0.01
episode: 440 score 4.3 average score 110.7 epsilon 0.01
episode: 441 score -2.7 average score 108.3 epsilon 0.01
episode: 442 score -10.8 average score 105.9 epsilon 0.01
episode: 443 score -6.3 average score 104.5 epsilon 0.01
episode: 444 score -36.2 average score 103.0 epsilon 0.01
episode: 445 score 290.3 average score 103.2 epsilon 0.01
episode: 446 score 215.6 average score 104.0 epsilon 0.01
episode: 447 score 214.0 average score 105.8 epsilon 0.01
episode: 448 score 246.3 average score 105.4 epsilon 0.01
episode: 449 score 32.8 average score 104.3 epsilon 0.01
episode: 450 score 215.7 average score 106.2 epsilon 0.01
episode: 451 score 277.5 average score 108.7 epsilon 0.01
episode: 452 score 239.0 average score 110.8 epsilon 0.01
episode: 453 score 245.0 average score 111.1 epsilon 0.01
episode: 454 score 269.7 average score 111.1 epsilon 0.01
episode: 455 score 92.2 average score 109.6 epsilon 0.01
episode: 456 score 245.2 average score 109.3 epsilon 0.01
episode: 457 score 262.8 average score 112.5 epsilon 0.01
episode: 458 score 271.8 average score 112.4 epsilon 0.01
episode: 459 score -50.8 average score 109.5 epsilon 0.01
episode: 460 score 249.5 average score 111.7 epsilon 0.01
episode: 461 score 199.2 average score 113.7 epsilon 0.01
episode: 462 score -1.4 average score 113.8 epsilon 0.01
episode: 463 score 224.7 average score 113.6 epsilon 0.01
episode: 464 score 259.6 average score 116.2 epsilon 0.01
episode: 465 score 224.3 average score 115.6 epsilon 0.01
episode: 466 score 8.2 average score 116.0 epsilon 0.01
episode: 467 score 249.7 average score 117.8 epsilon 0.01
episode: 468 score 202.5 average score 119.8 epsilon 0.01
episode: 469 score 231.6 average score 121.6 epsilon 0.01
episode: 470 score 202.4 average score 123.8 epsilon 0.01
episode: 471 score -28.6 average score 120.9 epsilon 0.01
episode: 472 score 283.6 average score 120.9 epsilon 0.01
episode: 473 score -18.8 average score 120.7 epsilon 0.01
episode: 474 score -62.1 average score 117.8 epsilon 0.01
episode: 475 score -15.9 average score 117.6 epsilon 0.01
episode: 476 score 271.5 average score 120.0 epsilon 0.01
episode: 477 score 26.7 average score 118.1 epsilon 0.01
episode: 478 score -86.3 average score 117.0 epsilon 0.01
episode: 479 score 67.0 average score 117.6 epsilon 0.01
episode: 480 score 215.7 average score 119.1 epsilon 0.01
episode: 481 score -187.5 average score 116.8 epsilon 0.01
episode: 482 score 224.2 average score 119.0 epsilon 0.01
episode: 483 score 235.1 average score 121.4 epsilon 0.01
episode: 484 score 293.5 average score 124.3 epsilon 0.01
episode: 485 score -253.4 average score 119.4 epsilon 0.01
episode: 486 score 269.7 average score 121.4 epsilon 0.01
episode: 487 score 257.8 average score 123.7 epsilon 0.01
episode: 488 score -119.2 average score 122.2 epsilon 0.01
episode: 489 score 177.7 average score 124.0 epsilon 0.01
episode: 490 score 232.8 average score 128.1 epsilon 0.01
episode: 491 score -22.6 average score 128.9 epsilon 0.01
episode: 492 score 263.4 average score 132.2 epsilon 0.01
episode: 493 score 100.0 average score 133.6 epsilon 0.01
episode: 494 score 274.0 average score 136.3 epsilon 0.01
episode: 495 score 122.7 average score 138.1 epsilon 0.01
episode: 496 score 269.0 average score 142.8 epsilon 0.01
episode: 497 score 47.8 average score 141.5 epsilon 0.01
episode: 498 score 250.8 average score 141.6 epsilon 0.01
episode: 499 score 254.5 average score 142.3 epsilon 0.01
episode: 500 score 254.4 average score 142.2 epsilon 0.01
episode: 501 score 236.8 average score 142.0 epsilon 0.01
episode: 502 score 201.1 average score 144.1 epsilon 0.01
episode: 503 score 304.0 average score 144.8 epsilon 0.01
episode: 504 score 200.9 average score 144.2 epsilon 0.01
episode: 505 score 210.1 average score 146.1 epsilon 0.01
```

```
----- episode: 506 score 261.5 average score 147.5 epsilon 0.01
episode: 507 score 237.4 average score 149.8 epsilon 0.01
episode: 508 score 266.9 average score 152.1 epsilon 0.01
episode: 509 score 302.7 average score 155.0 epsilon 0.01
episode: 510 score 135.6 average score 154.1 epsilon 0.01
episode: 511 score 22.8 average score 154.7 epsilon 0.01
episode: 512 score 258.3 average score 157.2 epsilon 0.01
episode: 513 score 242.8 average score 157.6 epsilon 0.01
episode: 514 score 282.2 average score 157.5 epsilon 0.01
episode: 515 score 304.8 average score 158.0 epsilon 0.01
episode: 516 score 29.3 average score 158.1 epsilon 0.01
episode: 517 score 177.3 average score 157.1 epsilon 0.01
episode: 518 score 284.1 average score 157.5 epsilon 0.01
episode: 519 score 315.6 average score 157.9 epsilon 0.01
episode: 520 score 309.4 average score 158.5 epsilon 0.01
episode: 521 score 295.2 average score 163.7 epsilon 0.01
episode: 522 score 224.6 average score 163.7 epsilon 0.01
episode: 523 score 250.5 average score 163.8 epsilon 0.01
episode: 524 score -28.4 average score 161.5 epsilon 0.01
episode: 525 score 234.1 average score 161.7 epsilon 0.01
episode: 526 score 226.3 average score 162.3 epsilon 0.01
episode: 527 score 277.4 average score 165.9 epsilon 0.01
episode: 528 score 28.1 average score 165.2 epsilon 0.01
episode: 529 score 307.6 average score 165.9 epsilon 0.01
episode: 530 score 225.4 average score 167.1 epsilon 0.01
episode: 531 score 7.7 average score 165.9 epsilon 0.01
episode: 532 score 27.7 average score 163.6 epsilon 0.01
episode: 533 score 0.6 average score 161.0 epsilon 0.01
episode: 534 score 28.7 average score 158.6 epsilon 0.01
episode: 535 score 229.8 average score 158.1 epsilon 0.01
episode: 536 score 250.1 average score 161.0 epsilon 0.01
episode: 537 score 285.3 average score 161.1 epsilon 0.01
episode: 538 score 51.3 average score 162.0 epsilon 0.01
episode: 539 score 14.1 average score 162.0 epsilon 0.01
episode: 540 score 272.1 average score 162.9 epsilon 0.01
episode: 541 score 19.7 average score 163.1 epsilon 0.01
episode: 542 score 17.4 average score 163.3 epsilon 0.01
episode: 543 score 16.8 average score 163.5 epsilon 0.01
episode: 544 score 150.2 average score 165.1 epsilon 0.01
episode: 545 score -352.9 average score 162.0 epsilon 0.01
episode: 546 score 298.6 average score 162.0 epsilon 0.01
episode: 547 score 274.4 average score 162.6 epsilon 0.01
episode: 548 score 33.1 average score 160.8 epsilon 0.01
episode: 549 score 189.3 average score 160.3 epsilon 0.01
episode: 550 score 249.3 average score 162.4 epsilon 0.01
episode: 551 score 249.2 average score 162.7 epsilon 0.01
episode: 552 score 281.0 average score 162.8 epsilon 0.01
episode: 553 score 41.3 average score 160.8 epsilon 0.01
episode: 554 score 258.6 average score 161.0 epsilon 0.01
episode: 555 score 282.1 average score 161.1 epsilon 0.01
episode: 556 score 266.5 average score 162.8 epsilon 0.01
episode: 557 score 50.9 average score 160.9 epsilon 0.01
episode: 558 score 271.2 average score 161.0 epsilon 0.01
episode: 559 score 280.4 average score 161.0 epsilon 0.01
episode: 560 score 253.4 average score 164.1 epsilon 0.01
episode: 561 score 279.4 average score 164.4 epsilon 0.01
episode: 562 score 261.0 average score 165.0 epsilon 0.01
episode: 563 score 256.2 average score 167.5 epsilon 0.01
episode: 564 score -104.2 average score 164.3 epsilon 0.01
episode: 565 score 247.4 average score 164.1 epsilon 0.01
episode: 566 score 211.7 average score 164.0 epsilon 0.01
episode: 567 score 183.6 average score 165.8 epsilon 0.01
episode: 568 score 295.1 average score 166.2 epsilon 0.01
episode: 569 score 257.3 average score 166.7 epsilon 0.01
episode: 570 score 237.7 average score 166.8 epsilon 0.01
episode: 571 score -34.1 average score 164.5 epsilon 0.01
episode: 572 score 154.8 average score 166.3 epsilon 0.01
episode: 573 score -2.0 average score 163.4 epsilon 0.01
episode: 574 score 241.5 average score 166.0 epsilon 0.01
episode: 575 score 269.3 average score 169.3 epsilon 0.01
episode: 576 score 213.4 average score 171.6 epsilon 0.01
episode: 577 score 240.2 average score 171.3 epsilon 0.01
episode: 578 score 259.2 average score 173.6 epsilon 0.01
episode: 579 score 232.5 average score 176.7 epsilon 0.01
episode: 580 score 274.1 average score 178.8 epsilon 0.01
episode: 581 score 234.6 average score 179.0 epsilon 0.01
episode: 582 score 290.7 average score 183.7 epsilon 0.01
episode: 583 score 232.9 average score 183.8 epsilon 0.01
episode: 584 score 247.9 average score 183.9 epsilon 0.01
episode: 585 score 278.8 average score 183.8 epsilon 0.01
episode: 586 score 33.8 average score 186.6 epsilon 0.01
episode: 587 score 269.4 average score 186.6 epsilon 0.01
episode: 588 score 210.4 average score 186.1 epsilon 0.01
episode: 589 score 251.1 average score 189.8 epsilon 0.01
-----
```

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episode: 590 score 244.6 average score 190.5 epsilon 0.01
episode: 591 score 257.9 average score 190.7 epsilon 0.01
episode: 592 score 267.2 average score 193.6 epsilon 0.01
episode: 593 score 258.0 average score 193.5 epsilon 0.01
episode: 594 score -16.0 average score 192.4 epsilon 0.01
episode: 595 score 220.6 average score 191.9 epsilon 0.01
episode: 596 score 251.9 average score 193.1 epsilon 0.01
episode: 597 score 13.6 average score 190.6 epsilon 0.01
episode: 598 score -36.7 average score 189.8 epsilon 0.01
episode: 599 score -33.9 average score 186.9 epsilon 0.01
episode: 600 score -31.3 average score 184.1 epsilon 0.01
episode: 601 score 15.1 average score 181.7 epsilon 0.01
episode: 602 score 226.3 average score 181.6 epsilon 0.01
episode: 603 score -8.4 average score 179.6 epsilon 0.01
episode: 604 score -94.6 average score 175.6 epsilon 0.01
episode: 605 score 223.2 average score 175.8 epsilon 0.01
episode: 606 score 236.2 average score 176.1 epsilon 0.01
episode: 607 score -104.4 average score 172.5 epsilon 0.01
episode: 608 score 229.1 average score 172.4 epsilon 0.01
episode: 609 score 258.8 average score 172.3 epsilon 0.01
episode: 610 score 158.6 average score 170.9 epsilon 0.01
episode: 611 score 141.3 average score 170.9 epsilon 0.01
episode: 612 score 247.3 average score 173.2 epsilon 0.01
episode: 613 score 244.2 average score 173.0 epsilon 0.01
episode: 614 score 252.2 average score 173.1 epsilon 0.01
episode: 615 score 273.0 average score 173.0 epsilon 0.01
episode: 616 score 275.8 average score 172.7 epsilon 0.01
episode: 617 score 108.7 average score 173.5 epsilon 0.01
episode: 618 score 191.4 average score 173.7 epsilon 0.01
episode: 619 score 236.5 average score 173.2 epsilon 0.01
episode: 620 score 196.2 average score 172.0 epsilon 0.01
episode: 621 score 103.1 average score 170.0 epsilon 0.01
episode: 622 score 230.2 average score 169.3 epsilon 0.01
episode: 623 score 195.0 average score 169.0 epsilon 0.01
episode: 624 score 248.1 average score 169.0 epsilon 0.01
episode: 625 score 249.7 average score 171.8 epsilon 0.01
episode: 626 score 250.6 average score 171.9 epsilon 0.01
episode: 627 score 170.8 average score 171.4 epsilon 0.01
episode: 628 score 43.7 average score 169.1 epsilon 0.01
episode: 629 score 261.1 average score 171.4 epsilon 0.01
episode: 630 score 248.3 average score 170.8 epsilon 0.01
episode: 631 score 265.5 average score 171.2 epsilon 0.01
episode: 632 score 216.9 average score 173.3 epsilon 0.01
episode: 633 score 233.5 average score 175.3 epsilon 0.01
episode: 634 score 222.3 average score 177.5 epsilon 0.01
episode: 635 score 264.9 average score 179.8 epsilon 0.01
episode: 636 score 226.6 average score 179.8 epsilon 0.01
episode: 637 score 252.9 average score 179.8 epsilon 0.01
episode: 638 score 248.0 average score 179.5 epsilon 0.01
episode: 639 score 276.6 average score 181.7 epsilon 0.01
episode: 640 score 218.8 average score 183.7 epsilon 0.01
episode: 641 score 250.8 average score 183.5 epsilon 0.01
episode: 642 score 106.1 average score 184.4 epsilon 0.01
episode: 643 score 56.2 average score 184.7 epsilon 0.01
episode: 644 score 196.4 average score 186.5 epsilon 0.01
episode: 645 score 188.9 average score 186.9 epsilon 0.01
episode: 646 score 206.9 average score 192.4 epsilon 0.01
episode: 647 score 240.3 average score 191.9 epsilon 0.01
episode: 648 score 192.1 average score 191.1 epsilon 0.01
episode: 649 score 249.4 average score 193.2 epsilon 0.01
episode: 650 score 239.4 average score 193.7 epsilon 0.01
episode: 651 score 230.4 average score 193.5 epsilon 0.01
episode: 652 score 247.6 average score 193.5 epsilon 0.01
episode: 653 score 198.3 average score 192.7 epsilon 0.01
episode: 654 score 118.1 average score 193.4 epsilon 0.01
episode: 655 score 214.3 average score 193.0 epsilon 0.01
episode: 656 score 226.0 average score 192.4 epsilon 0.01
episode: 657 score 211.9 average score 191.9 epsilon 0.01
episode: 658 score 207.4 average score 193.4 epsilon 0.01
episode: 659 score 197.2 average score 192.7 epsilon 0.01
episode: 660 score 234.3 average score 192.3 epsilon 0.01
episode: 661 score 190.8 average score 191.6 epsilon 0.01
episode: 662 score 235.5 average score 191.2 epsilon 0.01
episode: 663 score 240.2 average score 191.0 epsilon 0.01
episode: 664 score 236.9 average score 190.8 epsilon 0.01
episode: 665 score 215.1 average score 194.0 epsilon 0.01
episode: 666 score 251.9 average score 194.0 epsilon 0.01
episode: 667 score 203.5 average score 193.9 epsilon 0.01
episode: 668 score 238.4 average score 194.5 epsilon 0.01
episode: 669 score 258.5 average score 194.1 epsilon 0.01
episode: 670 score 244.5 average score 194.0 epsilon 0.01
episode: 671 score 223.0 average score 193.8 epsilon 0.01
episode: 672 score 244.8 average score 196.6 epsilon 0.01
episode: 673 score 232.5 average score 197.4 epsilon 0.01
episode: 674 score 239.9 average score 199.8 epsilon 0.01
```

episode: 675 score 231.5 average score 199.7 epsilon 0.01
episode: 676 score 293.9 average score 199.9 epsilon 0.01
episode: 677 score 224.1 average score 200.0 epsilon 0.01
episode: 678 score 300.3 average score 200.6 epsilon 0.01
episode: 679 score 230.2 average score 200.3 epsilon 0.01
episode: 680 score 243.0 average score 200.4 epsilon 0.01
episode: 681 score 250.0 average score 200.2 epsilon 0.01
episode: 682 score 237.5 average score 200.2 epsilon 0.01
episode: 683 score 252.1 average score 199.8 epsilon 0.01
episode: 684 score 254.2 average score 200.0 epsilon 0.01
episode: 685 score 237.8 average score 199.9 epsilon 0.01
episode: 686 score -168.0 average score 195.5 epsilon 0.01
episode: 687 score 263.4 average score 197.8 epsilon 0.01
episode: 688 score 23.1 average score 195.4 epsilon 0.01
episode: 689 score -188.2 average score 191.4 epsilon 0.01
episode: 690 score -150.9 average score 187.4 epsilon 0.01
episode: 691 score 10.1 average score 185.1 epsilon 0.01
episode: 692 score 230.2 average score 184.8 epsilon 0.01
episode: 693 score 50.2 average score 182.7 epsilon 0.01
episode: 694 score 61.1 average score 180.7 epsilon 0.01
episode: 695 score 258.3 average score 183.5 epsilon 0.01
episode: 696 score -65.3 average score 180.6 epsilon 0.01
episode: 697 score 206.3 average score 180.2 epsilon 0.01
episode: 698 score 59.5 average score 180.6 epsilon 0.01
episode: 699 score -130.7 average score 179.7 epsilon 0.01
episode: 700 score 247.9 average score 182.5 epsilon 0.01
episode: 701 score 93.2 average score 183.7 epsilon 0.01
episode: 702 score 204.9 average score 185.6 epsilon 0.01
episode: 703 score 226.8 average score 185.6 epsilon 0.01
episode: 704 score 260.7 average score 188.3 epsilon 0.01
episode: 705 score 216.2 average score 191.3 epsilon 0.01
episode: 706 score -67.9 average score 188.5 epsilon 0.01
episode: 707 score 236.2 average score 188.5 epsilon 0.01
episode: 708 score 241.0 average score 191.9 epsilon 0.01
episode: 709 score 225.5 average score 191.8 epsilon 0.01
episode: 710 score 72.5 average score 190.0 epsilon 0.01
episode: 711 score 203.0 average score 190.4 epsilon 0.01
episode: 712 score 200.6 average score 191.0 epsilon 0.01
episode: 713 score 209.0 average score 190.6 epsilon 0.01
episode: 714 score -444.0 average score 183.8 epsilon 0.01
episode: 715 score 212.6 average score 183.4 epsilon 0.01
episode: 716 score 292.5 average score 183.6 epsilon 0.01
episode: 717 score 211.1 average score 183.0 epsilon 0.01
episode: 718 score 245.6 average score 184.4 epsilon 0.01
episode: 719 score -29.7 average score 182.2 epsilon 0.01
episode: 720 score 229.0 average score 182.1 epsilon 0.01
episode: 721 score 248.5 average score 182.6 epsilon 0.01
episode: 722 score 202.7 average score 183.6 epsilon 0.01
episode: 723 score -12.7 average score 181.2 epsilon 0.01
episode: 724 score 227.3 average score 181.5 epsilon 0.01
episode: 725 score 284.7 average score 181.9 epsilon 0.01
episode: 726 score -421.1 average score 175.2 epsilon 0.01
episode: 727 score -30.1 average score 172.4 epsilon 0.01
episode: 728 score 210.3 average score 172.8 epsilon 0.01
episode: 729 score 196.2 average score 174.3 epsilon 0.01
episode: 730 score 239.7 average score 174.1 epsilon 0.01
episode: 731 score 242.3 average score 174.1 epsilon 0.01
episode: 732 score 211.2 average score 173.5 epsilon 0.01
episode: 733 score 236.7 average score 173.7 epsilon 0.01
episode: 734 score -28.6 average score 171.1 epsilon 0.01
episode: 735 score 236.7 average score 171.3 epsilon 0.01
episode: 736 score 131.4 average score 170.0 epsilon 0.01
episode: 737 score 159.9 average score 169.3 epsilon 0.01
episode: 738 score 162.5 average score 168.4 epsilon 0.01
episode: 739 score -268.3 average score 163.3 epsilon 0.01
episode: 740 score 197.3 average score 162.5 epsilon 0.01
episode: 741 score -94.9 average score 159.4 epsilon 0.01
episode: 742 score 148.2 average score 158.4 epsilon 0.01
episode: 743 score 120.2 average score 158.5 epsilon 0.01
episode: 744 score -85.1 average score 157.1 epsilon 0.01
episode: 745 score -196.2 average score 153.2 epsilon 0.01
episode: 746 score -27.4 average score 151.1 epsilon 0.01
episode: 747 score -129.1 average score 147.8 epsilon 0.01
episode: 748 score 196.2 average score 147.3 epsilon 0.01
episode: 749 score -61.2 average score 144.8 epsilon 0.01
episode: 750 score -150.3 average score 140.9 epsilon 0.01
episode: 751 score -44.6 average score 138.1 epsilon 0.01
episode: 752 score -96.3 average score 134.8 epsilon 0.01
episode: 753 score 9.8 average score 132.5 epsilon 0.01
episode: 754 score -85.7 average score 129.7 epsilon 0.01
episode: 755 score -175.2 average score 126.8 epsilon 0.01
episode: 756 score -67.4 average score 124.0 epsilon 0.01
episode: 757 score -300.8 average score 118.7 epsilon 0.01
episode: 758 score -108.7 average score 115.6 epsilon 0.01
episode: 759 score -25.5 average score 113.3 epsilon 0.01

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episode: 760 score -224.0 average score 109.1 epsilon 0.01
episode: 761 score -71.6 average score 106.1 epsilon 0.01
episode: 762 score -52.5 average score 103.7 epsilon 0.01
episode: 763 score -95.2 average score 100.4 epsilon 0.01
episode: 764 score -299.0 average score 95.0 epsilon 0.01
episode: 765 score 197.3 average score 94.7 epsilon 0.01
episode: 766 score 151.7 average score 94.0 epsilon 0.01
episode: 767 score 145.8 average score 93.0 epsilon 0.01
episode: 768 score 173.0 average score 92.7 epsilon 0.01
episode: 769 score 222.8 average score 92.5 epsilon 0.01
episode: 770 score 137.7 average score 91.3 epsilon 0.01
episode: 771 score 179.7 average score 90.7 epsilon 0.01
episode: 772 score 132.7 average score 89.8 epsilon 0.01
episode: 773 score 168.4 average score 89.0 epsilon 0.01
episode: 774 score 16.8 average score 86.9 epsilon 0.01
episode: 775 score 47.2 average score 85.0 epsilon 0.01
episode: 776 score 251.0 average score 85.2 epsilon 0.01
episode: 777 score 178.4 average score 84.0 epsilon 0.01
episode: 778 score 165.7 average score 83.5 epsilon 0.01
episode: 779 score 191.5 average score 82.4 epsilon 0.01
episode: 780 score 174.0 average score 81.8 epsilon 0.01
episode: 781 score 223.6 average score 81.6 epsilon 0.01
episode: 782 score 214.6 average score 81.3 epsilon 0.01
episode: 783 score -119.6 average score 77.7 epsilon 0.01
episode: 784 score 110.8 average score 76.3 epsilon 0.01
episode: 785 score 172.9 average score 75.5 epsilon 0.01
episode: 786 score 237.8 average score 75.5 epsilon 0.01
episode: 787 score 234.7 average score 79.5 epsilon 0.01
episode: 788 score 197.2 average score 78.9 epsilon 0.01
episode: 789 score 119.1 average score 79.8 epsilon 0.01
episode: 790 score 115.3 average score 82.8 epsilon 0.01
episode: 791 score 231.1 average score 86.6 epsilon 0.01
episode: 792 score -47.1 average score 86.0 epsilon 0.01
episode: 793 score 240.7 average score 86.2 epsilon 0.01
episode: 794 score 208.9 average score 87.7 epsilon 0.01
episode: 795 score 160.1 average score 88.7 epsilon 0.01
episode: 796 score 163.5 average score 87.8 epsilon 0.01
episode: 797 score 115.0 average score 89.5 epsilon 0.01
episode: 798 score 191.2 average score 89.4 epsilon 0.01
episode: 799 score 216.0 average score 91.0 epsilon 0.01
episode: 800 score 70.8 average score 92.9 epsilon 0.01
episode: 801 score 250.8 average score 93.0 epsilon 0.01
episode: 802 score 181.4 average score 93.8 epsilon 0.01
episode: 803 score 209.9 average score 93.9 epsilon 0.01
episode: 804 score 86.6 average score 92.5 epsilon 0.01
episode: 805 score 222.0 average score 92.1 epsilon 0.01
episode: 806 score 206.1 average score 92.0 epsilon 0.01
episode: 807 score 216.9 average score 94.8 epsilon 0.01
episode: 808 score 237.7 average score 94.9 epsilon 0.01
episode: 809 score 231.0 average score 94.8 epsilon 0.01
episode: 810 score 234.1 average score 94.8 epsilon 0.01
episode: 811 score -274.7 average score 91.4 epsilon 0.01
episode: 812 score 241.3 average score 91.8 epsilon 0.01
episode: 813 score 250.1 average score 92.3 epsilon 0.01
episode: 814 score 7.9 average score 90.3 epsilon 0.01
episode: 815 score 240.1 average score 97.1 epsilon 0.01
episode: 816 score -142.8 average score 93.5 epsilon 0.01
episode: 817 score 38.7 average score 91.0 epsilon 0.01
episode: 818 score 91.4 average score 89.8 epsilon 0.01
episode: 819 score 223.4 average score 89.6 epsilon 0.01
episode: 820 score 115.4 average score 91.1 epsilon 0.01
episode: 821 score 246.4 average score 91.2 epsilon 0.01
episode: 822 score 226.8 average score 91.0 epsilon 0.01
episode: 823 score 255.9 average score 91.5 epsilon 0.01
episode: 824 score 239.7 average score 94.0 epsilon 0.01
episode: 825 score 5.8 average score 91.8 epsilon 0.01
episode: 826 score 212.8 average score 91.1 epsilon 0.01
episode: 827 score 41.6 average score 95.7 epsilon 0.01
episode: 828 score 44.5 average score 96.5 epsilon 0.01
episode: 829 score 116.9 average score 95.5 epsilon 0.01
episode: 830 score 237.2 average score 95.9 epsilon 0.01
episode: 831 score 243.0 average score 96.0 epsilon 0.01
episode: 832 score 216.0 average score 95.7 epsilon 0.01
episode: 833 score 246.1 average score 96.1 epsilon 0.01
episode: 834 score 246.0 average score 96.1 epsilon 0.01
episode: 835 score 248.7 average score 98.9 epsilon 0.01
episode: 836 score 11.3 average score 96.7 epsilon 0.01
episode: 837 score 241.8 average score 97.8 epsilon 0.01
episode: 838 score -96.9 average score 95.2 epsilon 0.01
episode: 839 score -242.9 average score 91.2 epsilon 0.01
episode: 840 score -100.1 average score 92.9 epsilon 0.01
episode: 841 score 260.7 average score 93.5 epsilon 0.01
episode: 842 score 242.3 average score 96.8 epsilon 0.01
episode: 843 score 249.5 average score 97.8 epsilon 0.01
```

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episode: 844 score 126.5 average score 97.9 epsilon 0.01
episode: 845 score 135.1 average score 100.1 epsilon 0.01
episode: 846 score 230.7 average score 104.3 epsilon 0.01
episode: 847 score 259.6 average score 107.1 epsilon 0.01
episode: 848 score 218.9 average score 110.6 epsilon 0.01
episode: 849 score 243.4 average score 111.1 epsilon 0.01
episode: 850 score 211.6 average score 113.8 epsilon 0.01
episode: 851 score 245.6 average score 117.7 epsilon 0.01
episode: 852 score 245.3 average score 120.5 epsilon 0.01
episode: 853 score 209.4 average score 123.6 epsilon 0.01
episode: 854 score 159.9 average score 125.1 epsilon 0.01
episode: 855 score 243.5 average score 128.3 epsilon 0.01
episode: 856 score 274.0 average score 132.8 epsilon 0.01
episode: 857 score 255.4 average score 136.0 epsilon 0.01
episode: 858 score 223.6 average score 141.2 epsilon 0.01
episode: 859 score 220.0 average score 144.4 epsilon 0.01
episode: 860 score 151.0 average score 146.2 epsilon 0.01
episode: 861 score 248.9 average score 150.8 epsilon 0.01
episode: 862 score 263.1 average score 154.2 epsilon 0.01
episode: 863 score 262.2 average score 157.3 epsilon 0.01
episode: 864 score 161.5 average score 159.8 epsilon 0.01
episode: 865 score 202.2 average score 164.8 epsilon 0.01
episode: 866 score -10.3 average score 162.7 epsilon 0.01
episode: 867 score 127.9 average score 162.5 epsilon 0.01
episode: 868 score 39.4 average score 161.4 epsilon 0.01
episode: 869 score 240.2 average score 162.1 epsilon 0.01
episode: 870 score 245.8 average score 162.3 epsilon 0.01
episode: 871 score 198.0 average score 162.9 epsilon 0.01
episode: 872 score 12.8 average score 161.3 epsilon 0.01
episode: 873 score 3.6 average score 160.0 epsilon 0.01
episode: 874 score 20.5 average score 158.5 epsilon 0.01
episode: 875 score 22.5 average score 158.6 epsilon 0.01
episode: 876 score 197.0 average score 160.1 epsilon 0.01
episode: 877 score 189.6 average score 159.5 epsilon 0.01
episode: 878 score 266.0 average score 160.3 epsilon 0.01
episode: 879 score 212.7 average score 160.8 epsilon 0.01
episode: 880 score 265.5 average score 161.5 epsilon 0.01
episode: 881 score 217.0 average score 161.9 epsilon 0.01
episode: 882 score 251.8 average score 162.2 epsilon 0.01
episode: 883 score 38.5 average score 160.5 epsilon 0.01
episode: 884 score 3.6 average score 161.7 epsilon 0.01
episode: 885 score 2.6 average score 160.6 epsilon 0.01
episode: 886 score 234.8 average score 161.2 epsilon 0.01
episode: 887 score 240.3 average score 161.3 epsilon 0.01
episode: 888 score -80.8 average score 158.1 epsilon 0.01
episode: 889 score 211.4 average score 158.3 epsilon 0.01
episode: 890 score -227.4 average score 154.8 epsilon 0.01
episode: 891 score -32.6 average score 153.4 epsilon 0.01
episode: 892 score -9.8 average score 151.0 epsilon 0.01
episode: 893 score -22.9 average score 151.2 epsilon 0.01
episode: 894 score -33.2 average score 148.5 epsilon 0.01
episode: 895 score 247.9 average score 148.9 epsilon 0.01
episode: 896 score 227.0 average score 149.6 epsilon 0.01
episode: 897 score 252.6 average score 150.5 epsilon 0.01
episode: 898 score -59.7 average score 148.7 epsilon 0.01
episode: 899 score 202.1 average score 148.8 epsilon 0.01
episode: 900 score 9.3 average score 146.8 epsilon 0.01
episode: 901 score 1.5 average score 146.1 epsilon 0.01
episode: 902 score 203.4 average score 145.6 epsilon 0.01
episode: 903 score -4.0 average score 143.8 epsilon 0.01
episode: 904 score 237.7 average score 144.1 epsilon 0.01
episode: 905 score 223.7 average score 145.4 epsilon 0.01
episode: 906 score 228.4 average score 145.5 epsilon 0.01
episode: 907 score 215.4 average score 145.6 epsilon 0.01
episode: 908 score 105.1 average score 144.5 epsilon 0.01
episode: 909 score -218.8 average score 140.0 epsilon 0.01
episode: 910 score 217.1 average score 139.8 epsilon 0.01
episode: 911 score 245.6 average score 139.9 epsilon 0.01
episode: 912 score 228.8 average score 144.9 epsilon 0.01
episode: 913 score 199.1 average score 144.5 epsilon 0.01
episode: 914 score 239.0 average score 144.4 epsilon 0.01
episode: 915 score 192.5 average score 146.2 epsilon 0.01
episode: 916 score 182.4 average score 145.7 epsilon 0.01
episode: 917 score 31.6 average score 147.4 epsilon 0.01
episode: 918 score -111.7 average score 145.9 epsilon 0.01
episode: 919 score 183.9 average score 146.8 epsilon 0.01
episode: 920 score 248.2 average score 147.0 epsilon 0.01
episode: 921 score 216.0 average score 148.0 epsilon 0.01
episode: 922 score 218.7 average score 147.8 epsilon 0.01
episode: 923 score 237.1 average score 147.9 epsilon 0.01
episode: 924 score 251.2 average score 147.8 epsilon 0.01
episode: 925 score 223.2 average score 147.7 epsilon 0.01
episode: 926 score -100.2 average score 146.6 epsilon 0.01
episode: 927 score 211.1 average score 146.6 epsilon 0.01
episode: 928 score 254.2 average score 148.7 epsilon 0.01
```

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episode: 929 score -205.9 average score 146.2 epsilon 0.01
episode: 930 score -192.6 average score 143.2 epsilon 0.01
episode: 931 score -210.7 average score 138.7 epsilon 0.01
episode: 932 score -80.7 average score 135.5 epsilon 0.01
episode: 933 score 46.5 average score 133.8 epsilon 0.01
episode: 934 score 147.2 average score 132.9 epsilon 0.01
episode: 935 score 281.8 average score 133.2 epsilon 0.01
episode: 936 score 280.3 average score 133.5 epsilon 0.01
episode: 937 score 180.5 average score 135.2 epsilon 0.01
episode: 938 score 159.1 average score 134.4 epsilon 0.01
episode: 939 score 287.5 average score 138.2 epsilon 0.01
episode: 940 score 0.2 average score 140.6 epsilon 0.01
episode: 941 score 170.1 average score 143.3 epsilon 0.01
episode: 942 score 250.4 average score 143.2 epsilon 0.01
episode: 943 score 246.3 average score 143.2 epsilon 0.01
episode: 944 score 44.1 average score 141.2 epsilon 0.01
episode: 945 score 226.8 average score 142.2 epsilon 0.01
episode: 946 score -117.4 average score 139.7 epsilon 0.01
episode: 947 score 248.0 average score 139.8 epsilon 0.01
episode: 948 score -49.5 average score 136.8 epsilon 0.01
episode: 949 score 198.7 average score 136.6 epsilon 0.01
episode: 950 score 0.8 average score 134.2 epsilon 0.01
episode: 951 score -7.3 average score 132.0 epsilon 0.01
episode: 952 score 290.4 average score 132.5 epsilon 0.01
episode: 953 score 168.5 average score 131.7 epsilon 0.01
episode: 954 score 169.7 average score 131.3 epsilon 0.01
episode: 955 score -117.6 average score 128.6 epsilon 0.01
episode: 956 score 118.3 average score 127.3 epsilon 0.01
episode: 957 score 179.3 average score 126.4 epsilon 0.01
episode: 958 score 158.2 average score 125.4 epsilon 0.01
episode: 959 score 136.2 average score 124.6 epsilon 0.01
episode: 960 score 3.3 average score 122.4 epsilon 0.01
episode: 961 score 280.5 average score 123.7 epsilon 0.01
episode: 962 score 201.8 average score 123.2 epsilon 0.01
episode: 963 score 185.9 average score 122.5 epsilon 0.01
episode: 964 score 264.1 average score 122.5 epsilon 0.01
episode: 965 score 215.4 average score 123.0 epsilon 0.01
episode: 966 score 192.2 average score 122.9 epsilon 0.01
episode: 967 score -63.6 average score 122.4 epsilon 0.01
episode: 968 score 161.1 average score 122.7 epsilon 0.01
episode: 969 score -163.7 average score 120.7 epsilon 0.01
episode: 970 score 212.2 average score 120.4 epsilon 0.01
episode: 971 score -38.8 average score 117.6 epsilon 0.01
episode: 972 score 204.5 average score 117.7 epsilon 0.01
episode: 973 score -49.9 average score 117.1 epsilon 0.01
episode: 974 score 143.0 average score 118.4 epsilon 0.01
episode: 975 score 188.2 average score 120.1 epsilon 0.01
episode: 976 score 211.5 average score 122.0 epsilon 0.01
episode: 977 score 226.1 average score 122.3 epsilon 0.01
episode: 978 score 204.7 average score 122.4 epsilon 0.01
episode: 979 score 226.8 average score 122.0 epsilon 0.01
episode: 980 score 97.4 average score 120.9 epsilon 0.01
episode: 981 score 28.9 average score 118.5 epsilon 0.01
episode: 982 score -83.6 average score 115.6 epsilon 0.01
episode: 983 score -93.8 average score 112.1 epsilon 0.01
episode: 984 score 145.7 average score 113.2 epsilon 0.01
episode: 985 score 245.1 average score 115.6 epsilon 0.01
episode: 986 score 211.0 average score 117.6 epsilon 0.01
episode: 987 score 237.4 average score 117.7 epsilon 0.01
episode: 988 score 216.8 average score 117.4 epsilon 0.01
episode: 989 score 244.1 average score 120.7 epsilon 0.01
episode: 990 score 263.7 average score 121.2 epsilon 0.01
episode: 991 score 216.5 average score 125.6 epsilon 0.01
episode: 992 score 141.8 average score 127.3 epsilon 0.01
episode: 993 score 135.3 average score 128.7 epsilon 0.01
episode: 994 score 245.2 average score 131.4 epsilon 0.01
episode: 995 score -29.7 average score 131.4 epsilon 0.01
episode: 996 score 227.6 average score 131.2 epsilon 0.01
episode: 997 score 98.1 average score 129.9 epsilon 0.01
episode: 998 score -15.6 average score 127.3 epsilon 0.01
episode: 999 score 234.4 average score 130.2 epsilon 0.01
episode: 1000 score 221.7 average score 130.4 epsilon 0.01
episode: 1001 score -170.9 average score 128.6 epsilon 0.01
episode: 1002 score -125.5 average score 127.4 epsilon 0.01
episode: 1003 score 272.8 average score 128.0 epsilon 0.01
episode: 1004 score 249.8 average score 130.6 epsilon 0.01
episode: 1005 score 239.3 average score 130.6 epsilon 0.01
episode: 1006 score 199.9 average score 130.3 epsilon 0.01
episode: 1007 score 278.5 average score 130.8 epsilon 0.01
episode: 1008 score 255.3 average score 131.2 epsilon 0.01
episode: 1009 score 237.7 average score 132.5 epsilon 0.01
episode: 1010 score 39.7 average score 135.1 epsilon 0.01
episode: 1011 score 229.9 average score 135.2 epsilon 0.01
episode: 1012 score 229.8 average score 135.1 epsilon 0.01
episode: 1013 score -125.0 average score 131.6 epsilon 0.01
```

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episode: 1014 score 236.2 average score 131.9 epsilon 0.01
episode: 1015 score 263.3 average score 132.2 epsilon 0.01
episode: 1016 score 241.2 average score 132.7 epsilon 0.01
episode: 1017 score 219.0 average score 133.0 epsilon 0.01
episode: 1018 score 267.5 average score 135.4 epsilon 0.01
episode: 1019 score 247.5 average score 138.9 epsilon 0.01
episode: 1020 score 241.3 average score 139.5 epsilon 0.01
episode: 1021 score 205.7 average score 139.1 epsilon 0.01
episode: 1022 score 9.2 average score 137.0 epsilon 0.01
episode: 1023 score -149.5 average score 133.4 epsilon 0.01
episode: 1024 score 25.5 average score 131.3 epsilon 0.01
episode: 1025 score 266.0 average score 131.4 epsilon 0.01
episode: 1026 score 225.8 average score 131.4 epsilon 0.01
episode: 1027 score 134.0 average score 133.8 epsilon 0.01
episode: 1028 score 273.5 average score 134.4 epsilon 0.01
episode: 1029 score 260.2 average score 134.4 epsilon 0.01
episode: 1030 score 247.9 average score 138.9 epsilon 0.01
episode: 1031 score 247.2 average score 143.3 epsilon 0.01
episode: 1032 score -109.2 average score 144.3 epsilon 0.01
episode: 1033 score 214.2 average score 147.2 epsilon 0.01
episode: 1034 score 256.0 average score 149.3 epsilon 0.01
episode: 1035 score 225.5 average score 150.1 epsilon 0.01
episode: 1036 score -12.0 average score 147.1 epsilon 0.01
episode: 1037 score 232.7 average score 146.7 epsilon 0.01
episode: 1038 score 56.6 average score 145.5 epsilon 0.01
episode: 1039 score 270.7 average score 146.6 epsilon 0.01
episode: 1040 score 94.5 average score 144.6 epsilon 0.01
episode: 1041 score 108.4 average score 145.7 epsilon 0.01
episode: 1042 score 243.3 average score 146.4 epsilon 0.01
episode: 1043 score 186.0 average score 145.8 epsilon 0.01
episode: 1044 score 228.0 average score 145.6 epsilon 0.01
episode: 1045 score 260.8 average score 147.8 epsilon 0.01
episode: 1046 score 253.5 average score 148.0 epsilon 0.01
episode: 1047 score -99.9 average score 148.2 epsilon 0.01
episode: 1048 score -36.4 average score 145.4 epsilon 0.01
episode: 1049 score 263.9 average score 148.5 epsilon 0.01
episode: 1050 score 200.4 average score 148.5 epsilon 0.01
episode: 1051 score 176.3 average score 150.2 epsilon 0.01
episode: 1052 score 247.0 average score 152.8 epsilon 0.01
episode: 1053 score 116.4 average score 151.0 epsilon 0.01
episode: 1054 score 122.5 average score 150.6 epsilon 0.01
episode: 1055 score 265.4 average score 151.5 epsilon 0.01
episode: 1056 score -80.4 average score 151.9 epsilon 0.01
episode: 1057 score -69.1 average score 150.1 epsilon 0.01
episode: 1058 score 257.0 average score 150.8 epsilon 0.01
episode: 1059 score 233.1 average score 151.6 epsilon 0.01
episode: 1060 score 265.6 average score 152.8 epsilon 0.01
episode: 1061 score -17.5 average score 152.6 epsilon 0.01
episode: 1062 score 228.4 average score 152.1 epsilon 0.01
episode: 1063 score -14.8 average score 150.0 epsilon 0.01
episode: 1064 score 249.0 average score 150.6 epsilon 0.01
episode: 1065 score 253.8 average score 150.5 epsilon 0.01
episode: 1066 score 251.3 average score 150.9 epsilon 0.01
episode: 1067 score 130.7 average score 150.2 epsilon 0.01
episode: 1068 score 212.3 average score 153.0 epsilon 0.01
episode: 1069 score 235.8 average score 153.7 epsilon 0.01
episode: 1070 score 237.0 average score 157.7 epsilon 0.01
episode: 1071 score 257.7 average score 158.1 epsilon 0.01
episode: 1072 score 217.1 average score 160.7 epsilon 0.01
episode: 1073 score -49.9 average score 158.1 epsilon 0.01
episode: 1074 score -54.7 average score 158.1 epsilon 0.01
episode: 1075 score -177.2 average score 154.9 epsilon 0.01
episode: 1076 score 210.4 average score 155.2 epsilon 0.01
episode: 1077 score -63.8 average score 152.4 epsilon 0.01
episode: 1078 score 176.9 average score 151.9 epsilon 0.01
episode: 1079 score 238.4 average score 152.3 epsilon 0.01
episode: 1080 score 261.5 average score 152.6 epsilon 0.01
episode: 1081 score 210.0 average score 153.7 epsilon 0.01
episode: 1082 score 249.9 average score 155.9 epsilon 0.01
episode: 1083 score 259.3 average score 159.3 epsilon 0.01
episode: 1084 score -33.8 average score 159.9 epsilon 0.01
episode: 1085 score 252.4 average score 161.0 epsilon 0.01
episode: 1086 score -188.1 average score 156.7 epsilon 0.01
episode: 1087 score -113.0 average score 153.5 epsilon 0.01
episode: 1088 score -277.2 average score 148.4 epsilon 0.01
episode: 1089 score 259.7 average score 148.8 epsilon 0.01
episode: 1090 score -139.3 average score 145.0 epsilon 0.01
episode: 1091 score -61.1 average score 141.8 epsilon 0.01
episode: 1092 score 195.1 average score 141.6 epsilon 0.01
episode: 1093 score -56.5 average score 139.6 epsilon 0.01
episode: 1094 score 245.9 average score 140.7 epsilon 0.01
episode: 1095 score 182.5 average score 140.1 epsilon 0.01
episode: 1096 score 208.3 average score 142.4 epsilon 0.01
episode: 1097 score 279.8 average score 143.0 epsilon 0.01
episode: 1098 score 247.6 average score 141.1 epsilon 0.01
```

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episode: 1090 score 247.0 average score 144.4 epsilon 0.01
episode: 1099 score 205.7 average score 146.6 epsilon 0.01
episode: 1100 score -38.6 average score 143.9 epsilon 0.01
episode: 1101 score 226.5 average score 144.0 epsilon 0.01
episode: 1102 score -35.9 average score 145.3 epsilon 0.01
episode: 1103 score 212.7 average score 148.7 epsilon 0.01
episode: 1104 score -60.8 average score 145.4 epsilon 0.01
episode: 1105 score -11.5 average score 142.8 epsilon 0.01
episode: 1106 score -83.2 average score 139.6 epsilon 0.01
episode: 1107 score -261.9 average score 135.0 epsilon 0.01
episode: 1108 score 13.7 average score 132.4 epsilon 0.01
episode: 1109 score -200.3 average score 127.9 epsilon 0.01
episode: 1110 score -16.7 average score 125.3 epsilon 0.01
episode: 1111 score 6.6 average score 125.0 epsilon 0.01
episode: 1112 score -246.3 average score 120.3 epsilon 0.01
episode: 1113 score -141.8 average score 116.6 epsilon 0.01
episode: 1114 score -230.8 average score 115.6 epsilon 0.01
episode: 1115 score -100.5 average score 112.2 epsilon 0.01
episode: 1116 score -8.4 average score 109.6 epsilon 0.01
episode: 1117 score 69.5 average score 107.9 epsilon 0.01
episode: 1118 score 25.5 average score 105.9 epsilon 0.01
episode: 1119 score -62.9 average score 102.7 epsilon 0.01
episode: 1120 score -3.9 average score 100.2 epsilon 0.01
episode: 1121 score 31.2 average score 98.1 epsilon 0.01
episode: 1122 score -15.3 average score 95.9 epsilon 0.01
episode: 1123 score -19.0 average score 95.6 epsilon 0.01
episode: 1124 score 72.6 average score 97.8 epsilon 0.01
episode: 1125 score -197.7 average score 95.6 epsilon 0.01
episode: 1126 score 97.7 average score 94.0 epsilon 0.01
episode: 1127 score 138.6 average score 93.1 epsilon 0.01
episode: 1128 score 217.5 average score 93.9 epsilon 0.01
episode: 1129 score -57.8 average score 90.6 epsilon 0.01
episode: 1130 score 175.5 average score 89.8 epsilon 0.01
episode: 1131 score 255.2 average score 89.9 epsilon 0.01
episode: 1132 score 149.5 average score 88.9 epsilon 0.01
episode: 1133 score -65.9 average score 89.3 epsilon 0.01
episode: 1134 score 38.5 average score 87.6 epsilon 0.01
episode: 1135 score -87.6 average score 84.2 epsilon 0.01
episode: 1136 score -111.3 average score 80.9 epsilon 0.01
episode: 1137 score -40.5 average score 80.6 epsilon 0.01
episode: 1138 score -93.0 average score 77.4 epsilon 0.01
episode: 1139 score -66.5 average score 76.1 epsilon 0.01
episode: 1140 score -110.8 average score 72.4 epsilon 0.01
episode: 1141 score -119.3 average score 70.2 epsilon 0.01
episode: 1142 score -104.5 average score 68.1 epsilon 0.01
episode: 1143 score 105.2 average score 66.8 epsilon 0.01
episode: 1144 score 2.7 average score 64.9 epsilon 0.01
episode: 1145 score 206.2 average score 64.7 epsilon 0.01
episode: 1146 score 244.8 average score 64.6 epsilon 0.01
episode: 1147 score 14.4 average score 62.2 epsilon 0.01
episode: 1148 score 206.7 average score 65.2 epsilon 0.01
episode: 1149 score 140.6 average score 67.0 epsilon 0.01
episode: 1150 score 241.3 average score 66.8 epsilon 0.01
episode: 1151 score 224.1 average score 67.0 epsilon 0.01
episode: 1152 score 120.1 average score 66.4 epsilon 0.01
episode: 1153 score 66.0 average score 64.7 epsilon 0.01
episode: 1154 score 213.5 average score 65.6 epsilon 0.01
episode: 1155 score 177.6 average score 66.2 epsilon 0.01
episode: 1156 score -96.9 average score 62.6 epsilon 0.01
episode: 1157 score -111.9 average score 62.3 epsilon 0.01
episode: 1158 score 222.1 average score 65.1 epsilon 0.01
episode: 1159 score -94.6 average score 61.7 epsilon 0.01
episode: 1160 score 250.1 average score 61.8 epsilon 0.01
episode: 1161 score 86.2 average score 60.1 epsilon 0.01
episode: 1162 score 217.6 average score 62.4 epsilon 0.01
episode: 1163 score 221.3 average score 62.3 epsilon 0.01
episode: 1164 score -39.9 average score 62.1 epsilon 0.01
episode: 1165 score 207.1 average score 61.6 epsilon 0.01
episode: 1166 score 112.6 average score 60.3 epsilon 0.01
episode: 1167 score 218.1 average score 59.9 epsilon 0.01
episode: 1168 score 187.4 average score 60.5 epsilon 0.01
episode: 1169 score 214.8 average score 60.5 epsilon 0.01
episode: 1170 score -59.2 average score 57.6 epsilon 0.01
episode: 1171 score 182.6 average score 57.1 epsilon 0.01
episode: 1172 score 2.4 average score 54.5 epsilon 0.01
episode: 1173 score 154.6 average score 53.9 epsilon 0.01
episode: 1174 score 195.2 average score 56.3 epsilon 0.01
episode: 1175 score -117.0 average score 55.7 epsilon 0.01
episode: 1176 score 219.6 average score 59.6 epsilon 0.01
episode: 1177 score 85.8 average score 58.4 epsilon 0.01
episode: 1178 score -50.6 average score 58.5 epsilon 0.01
episode: 1179 score -91.9 average score 55.9 epsilon 0.01
episode: 1180 score 221.4 average score 55.7 epsilon 0.01
episode: 1181 score 219.4 average score 55.3 epsilon 0.01
episode: 1182 score -65.6 average score 52.6 epsilon 0.01
```

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episode: 1183 score 90.4      average score 51.0 epsilon 0.01
episode: 1184 score 225.8      average score 50.7 epsilon 0.01
episode: 1185 score 213.9      average score 53.1 epsilon 0.01
episode: 1186 score -296.7     average score 47.7 epsilon 0.01
episode: 1187 score 111.9      average score 50.6 epsilon 0.01
episode: 1188 score 137.2      average score 53.1 epsilon 0.01
episode: 1189 score 139.4      average score 57.2 epsilon 0.01
episode: 1190 score 267.1      average score 57.3 epsilon 0.01
episode: 1191 score 250.6      average score 61.2 epsilon 0.01
episode: 1192 score 264.2      average score 64.4 epsilon 0.01
episode: 1193 score 265.3      average score 65.1 epsilon 0.01
episode: 1194 score 249.2      average score 68.1 epsilon 0.01
episode: 1195 score 255.2      average score 68.2 epsilon 0.01
episode: 1196 score 213.8      average score 68.5 epsilon 0.01
episode: 1197 score 256.7      average score 69.0 epsilon 0.01
episode: 1198 score 231.4      average score 68.5 epsilon 0.01
episode: 1199 score 218.2      average score 68.2 epsilon 0.01
episode: 1200 score 226.3      average score 68.4 epsilon 0.01
episode: 1201 score 259.2      average score 71.4 epsilon 0.01
episode: 1202 score 184.6      average score 71.0 epsilon 0.01
episode: 1203 score 229.5      average score 73.6 epsilon 0.01
episode: 1204 score 237.2      average score 73.8 epsilon 0.01
episode: 1205 score -159.4     average score 72.9 epsilon 0.01
episode: 1206 score 200.8      average score 75.0 epsilon 0.01
episode: 1207 score 265.7      average score 78.4 epsilon 0.01
episode: 1208 score 256.2      average score 83.5 epsilon 0.01
episode: 1209 score -162.4     average score 81.8 epsilon 0.01
episode: 1210 score -170.9     average score 82.1 epsilon 0.01
episode: 1211 score 191.2      average score 84.2 epsilon 0.01
episode: 1212 score 252.8      average score 86.6 epsilon 0.01
episode: 1213 score 230.3      average score 91.3 epsilon 0.01
episode: 1214 score 226.9      average score 95.0 epsilon 0.01
episode: 1215 score -231.6     average score 95.0 epsilon 0.01
episode: 1216 score 69.9       average score 96.6 epsilon 0.01
episode: 1217 score 218.9      average score 98.9 epsilon 0.01
episode: 1218 score 241.5      average score 100.6 epsilon 0.01
episode: 1219 score 174.8      average score 102.1 epsilon 0.01
episode: 1220 score 209.6      average score 104.8 epsilon 0.01
episode: 1221 score 235.2      average score 107.1 epsilon 0.01
episode: 1222 score -520.9     average score 101.7 epsilon 0.01
episode: 1223 score -31.6      average score 101.5 epsilon 0.01
episode: 1224 score -501.0     average score 96.7 epsilon 0.01
episode: 1225 score -415.6     average score 91.9 epsilon 0.01
episode: 1226 score -143.0     average score 92.4 epsilon 0.01
episode: 1227 score -107.3     average score 90.4 epsilon 0.01
episode: 1228 score 156.6      average score 90.6 epsilon 0.01
episode: 1229 score 137.1      average score 89.8 epsilon 0.01
episode: 1230 score -153.1     average score 88.9 epsilon 0.01
episode: 1231 score -71.9      average score 86.4 epsilon 0.01
episode: 1232 score -13.8      average score 83.7 epsilon 0.01
episode: 1233 score 270.9      average score 84.9 epsilon 0.01
episode: 1234 score -188.8     average score 83.7 epsilon 0.01
episode: 1235 score 260.9      average score 85.9 epsilon 0.01
episode: 1236 score 267.8      average score 89.4 epsilon 0.01
episode: 1237 score 15.1       average score 90.7 epsilon 0.01
episode: 1238 score -44.9      average score 90.7 epsilon 0.01
episode: 1239 score 217.7      average score 93.7 epsilon 0.01
episode: 1240 score 239.8      average score 96.8 epsilon 0.01
episode: 1241 score 263.3      average score 100.5 epsilon 0.01
episode: 1242 score 254.5      average score 104.2 epsilon 0.01
episode: 1243 score 3.1        average score 105.2 epsilon 0.01
episode: 1244 score 244.2      average score 106.6 epsilon 0.01
episode: 1245 score -20.0      average score 106.4 epsilon 0.01
episode: 1246 score 224.7      average score 106.6 epsilon 0.01
episode: 1247 score -14.3      average score 104.0 epsilon 0.01
episode: 1248 score -167.8     average score 102.2 epsilon 0.01
episode: 1249 score -26.1      average score 99.9 epsilon 0.01
episode: 1250 score 258.3      average score 101.1 epsilon 0.01
episode: 1251 score -4.3       average score 98.6 epsilon 0.01
episode: 1252 score 255.1      average score 98.9 epsilon 0.01
episode: 1253 score 289.1      average score 100.6 epsilon 0.01
episode: 1254 score -0.6       average score 100.0 epsilon 0.01
episode: 1255 score -197.3     average score 95.9 epsilon 0.01
episode: 1256 score 269.1      average score 96.8 epsilon 0.01
episode: 1257 score 148.3      average score 99.2 epsilon 0.01
episode: 1258 score -61.5      average score 99.7 epsilon 0.01
episode: 1259 score 185.4      average score 99.4 epsilon 0.01
episode: 1260 score -83.9      average score 99.5 epsilon 0.01
episode: 1261 score 149.5      average score 98.5 epsilon 0.01
episode: 1262 score -135.9     average score 96.3 epsilon 0.01
episode: 1263 score 164.3      average score 95.7 epsilon 0.01
episode: 1264 score 108.6      average score 94.6 epsilon 0.01
episode: 1265 score -314.3     average score 91.9 epsilon 0.01
episode: 1266 score -67.9      average score 89.2 epsilon 0.01
episode: 1267 score -26.5      average score 87.8 epsilon 0.01
```

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episode: 1268 score -132.7 average score 84.3 epsilon 0.01
episode: 1269 score -116.8 average score 81.3 epsilon 0.01
episode: 1270 score -42.8 average score 78.8 epsilon 0.01
episode: 1271 score -90.1 average score 78.5 epsilon 0.01
episode: 1272 score -230.9 average score 74.4 epsilon 0.01
episode: 1273 score -167.3 average score 72.7 epsilon 0.01
episode: 1274 score -109.1 average score 70.1 epsilon 0.01
episode: 1275 score 274.1 average score 70.9 epsilon 0.01
episode: 1276 score -100.2 average score 71.0 epsilon 0.01
episode: 1277 score 43.6 average score 69.3 epsilon 0.01
episode: 1278 score -161.0 average score 66.8 epsilon 0.01
episode: 1279 score -133.5 average score 66.0 epsilon 0.01
episode: 1280 score -13.3 average score 66.8 epsilon 0.01
episode: 1281 score -85.9 average score 63.8 epsilon 0.01
episode: 1282 score -172.1 average score 59.9 epsilon 0.01
episode: 1283 score -177.0 average score 58.8 epsilon 0.01
episode: 1284 score -98.0 average score 56.9 epsilon 0.01
episode: 1285 score 58.3 average score 55.3 epsilon 0.01
episode: 1286 score 173.6 average score 54.9 epsilon 0.01
episode: 1287 score 196.7 average score 59.7 epsilon 0.01
episode: 1288 score 156.5 average score 60.2 epsilon 0.01
episode: 1289 score 133.7 average score 60.1 epsilon 0.01
episode: 1290 score -553.5 average score 53.3 epsilon 0.01
episode: 1291 score -139.3 average score 49.3 epsilon 0.01
episode: 1292 score -246.1 average score 44.3 epsilon 0.01
episode: 1293 score -160.3 average score 40.1 epsilon 0.01
episode: 1294 score 264.4 average score 40.1 epsilon 0.01
episode: 1295 score -120.9 average score 36.5 epsilon 0.01
episode: 1296 score 8.1 average score 34.0 epsilon 0.01
episode: 1297 score -44.1 average score 31.5 epsilon 0.01
episode: 1298 score -70.2 average score 28.2 epsilon 0.01
episode: 1299 score 241.7 average score 28.3 epsilon 0.01
episode: 1300 score 198.2 average score 28.1 epsilon 0.01
episode: 1301 score 243.2 average score 28.3 epsilon 0.01
episode: 1302 score 166.0 average score 27.4 epsilon 0.01
episode: 1303 score 153.6 average score 27.1 epsilon 0.01
episode: 1304 score -26.1 average score 24.5 epsilon 0.01
episode: 1305 score 141.7 average score 23.6 epsilon 0.01
episode: 1306 score -203.4 average score 23.2 epsilon 0.01
episode: 1307 score 218.5 average score 23.3 epsilon 0.01
episode: 1308 score 7.0 average score 20.8 epsilon 0.01
episode: 1309 score 4.9 average score 18.3 epsilon 0.01
episode: 1310 score -20.4 average score 19.7 epsilon 0.01
episode: 1311 score 227.4 average score 23.6 epsilon 0.01
episode: 1312 score 287.4 average score 24.6 epsilon 0.01
episode: 1313 score 238.2 average score 24.4 epsilon 0.01
episode: 1314 score 226.0 average score 24.4 epsilon 0.01
episode: 1315 score 265.7 average score 24.8 epsilon 0.01
episode: 1316 score 75.8 average score 27.8 epsilon 0.01
episode: 1317 score 234.9 average score 29.5 epsilon 0.01
episode: 1318 score 242.0 average score 29.7 epsilon 0.01
episode: 1319 score 210.3 average score 29.4 epsilon 0.01
episode: 1320 score 234.7 average score 30.0 epsilon 0.01
episode: 1321 score -7.0 average score 27.8 epsilon 0.01
episode: 1322 score 166.8 average score 27.2 epsilon 0.01
episode: 1323 score 70.2 average score 33.0 epsilon 0.01
episode: 1324 score 159.1 average score 34.9 epsilon 0.01
episode: 1325 score 39.4 average score 40.2 epsilon 0.01
episode: 1326 score 209.0 average score 46.4 epsilon 0.01
episode: 1327 score 276.0 average score 50.6 epsilon 0.01
episode: 1328 score 235.5 average score 54.0 epsilon 0.01
episode: 1329 score 224.9 average score 54.6 epsilon 0.01
episode: 1330 score 223.8 average score 55.5 epsilon 0.01
episode: 1331 score 9.1 average score 57.1 epsilon 0.01
episode: 1332 score 123.8 average score 59.1 epsilon 0.01
episode: 1333 score 235.9 average score 61.5 epsilon 0.01
episode: 1334 score 19.9 average score 59.0 epsilon 0.01
episode: 1335 score -112.0 average score 59.8 epsilon 0.01
episode: 1336 score -230.5 average score 54.9 epsilon 0.01
episode: 1337 score -112.8 average score 51.2 epsilon 0.01
episode: 1338 score -35.7 average score 50.7 epsilon 0.01
episode: 1339 score 168.9 average score 52.8 epsilon 0.01
episode: 1340 score 239.4 average score 53.0 epsilon 0.01
episode: 1341 score 296.1 average score 53.5 epsilon 0.01
episode: 1342 score -29.1 average score 50.7 epsilon 0.01
episode: 1343 score 195.6 average score 50.1 epsilon 0.01
episode: 1344 score -49.2 average score 49.6 epsilon 0.01
episode: 1345 score 200.4 average score 49.1 epsilon 0.01
episode: 1346 score 272.0 average score 52.0 epsilon 0.01
episode: 1347 score -105.6 average score 48.7 epsilon 0.01
episode: 1348 score 242.0 average score 51.3 epsilon 0.01
episode: 1349 score -57.0 average score 52.4 epsilon 0.01
episode: 1350 score -106.4 average score 51.6 epsilon 0.01
episode: 1351 score 249.4 average score 51.5 epsilon 0.01
episode: 1352 score 91.9 average score 50.7 epsilon 0.01
```

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episode: 1352 score -64.0      average score 58.7 epsilon 0.01
episode: 1353 score 220.8      average score 50.4 epsilon 0.01
episode: 1354 score 274.3      average score 50.2 epsilon 0.01
episode: 1355 score 210.6      average score 52.3 epsilon 0.01
episode: 1356 score 244.1      average score 56.7 epsilon 0.01
episode: 1357 score 215.7      average score 56.1 epsilon 0.01
episode: 1358 score 126.8      average score 55.9 epsilon 0.01
episode: 1359 score 213.0      average score 58.6 epsilon 0.01
episode: 1360 score 113.2      average score 57.9 epsilon 0.01
episode: 1361 score 243.7      average score 61.2 epsilon 0.01
episode: 1362 score -39.2      average score 59.3 epsilon 0.01
episode: 1363 score 13.2       average score 60.8 epsilon 0.01
episode: 1364 score 184.2      average score 61.0 epsilon 0.01
episode: 1365 score 287.7      average score 62.8 epsilon 0.01
episode: 1366 score -10.8      average score 65.8 epsilon 0.01
episode: 1367 score 54.3       average score 67.0 epsilon 0.01
episode: 1368 score -6.9       average score 67.2 epsilon 0.01
episode: 1369 score 227.6      average score 70.7 epsilon 0.01
episode: 1370 score 241.9      average score 74.3 epsilon 0.01
episode: 1371 score 256.4      average score 77.2 epsilon 0.01
episode: 1372 score 235.0      average score 80.5 epsilon 0.01
episode: 1373 score 236.1      average score 85.1 epsilon 0.01
episode: 1374 score 214.6       average score 88.9 epsilon 0.01
episode: 1375 score 200.7      average score 91.9 epsilon 0.01
episode: 1376 score 238.7      average score 91.6 epsilon 0.01
episode: 1377 score 45.3       average score 93.0 epsilon 0.01
episode: 1378 score 302.5      average score 95.6 epsilon 0.01
episode: 1379 score 231.6      average score 99.5 epsilon 0.01
episode: 1380 score 210.2      average score 102.9 epsilon 0.01
episode: 1381 score 249.0      average score 105.5 epsilon 0.01
episode: 1382 score 242.6      average score 108.7 epsilon 0.01
episode: 1383 score 220.9      average score 112.6 epsilon 0.01
episode: 1384 score -197.4     average score 112.4 epsilon 0.01
episode: 1385 score 180.5      average score 115.2 epsilon 0.01
episode: 1386 score 271.0      average score 117.3 epsilon 0.01
episode: 1387 score -57.1      average score 115.0 epsilon 0.01
episode: 1388 score 229.2      average score 115.3 epsilon 0.01
episode: 1389 score 199.6      average score 115.7 epsilon 0.01
episode: 1390 score -36.0      average score 114.1 epsilon 0.01
episode: 1391 score 236.0      average score 121.9 epsilon 0.01
episode: 1392 score 205.6      average score 125.3 epsilon 0.01
episode: 1393 score 255.7      average score 130.3 epsilon 0.01
episode: 1394 score 171.8       average score 133.5 epsilon 0.01
episode: 1395 score 82.6       average score 131.7 epsilon 0.01
episode: 1396 score 235.4      average score 135.3 epsilon 0.01
episode: 1397 score -167.4     average score 133.5 epsilon 0.01
episode: 1398 score 159.6       average score 135.6 epsilon 0.01
episode: 1399 score 182.2       average score 138.1 epsilon 0.01
episode: 1400 score 258.2       average score 138.2 epsilon 0.01
episode: 1401 score -579.9     average score 130.5 epsilon 0.01
episode: 1402 score 239.1       average score 130.5 epsilon 0.01
episode: 1403 score 179.8       average score 130.6 epsilon 0.01
episode: 1404 score 162.1       average score 130.7 epsilon 0.01
episode: 1405 score 169.7       average score 132.6 epsilon 0.01
episode: 1406 score 248.3       average score 133.7 epsilon 0.01
episode: 1407 score 89.9        average score 136.6 epsilon 0.01
episode: 1408 score -10.8      average score 134.3 epsilon 0.01
episode: 1409 score 48.4        average score 134.7 epsilon 0.01
episode: 1410 score 13.9        average score 134.8 epsilon 0.01
episode: 1411 score 157.1       average score 136.6 epsilon 0.01
episode: 1412 score 195.9       average score 136.3 epsilon 0.01
episode: 1413 score 237.7       average score 135.8 epsilon 0.01
episode: 1414 score 212.9       average score 135.5 epsilon 0.01
episode: 1415 score -118.5     average score 132.1 epsilon 0.01
episode: 1416 score 197.6       average score 131.4 epsilon 0.01
episode: 1417 score -327.6     average score 127.4 epsilon 0.01
episode: 1418 score -330.6     average score 121.8 epsilon 0.01
episode: 1419 score -117.1     average score 118.3 epsilon 0.01
episode: 1420 score -167.8     average score 114.5 epsilon 0.01
episode: 1421 score -111.9     average score 111.1 epsilon 0.01
episode: 1422 score -103.0     average score 110.2 epsilon 0.01
episode: 1423 score -153.3     average score 107.0 epsilon 0.01
episode: 1424 score -188.5     average score 104.4 epsilon 0.01
episode: 1425 score -152.1     average score 101.4 epsilon 0.01
episode: 1426 score 166.9       average score 102.6 epsilon 0.01
episode: 1427 score 108.5       average score 101.6 epsilon 0.01
episode: 1428 score 180.9       average score 100.7 epsilon 0.01
episode: 1429 score 203.0       average score 100.4 epsilon 0.01
episode: 1430 score 39.0        average score 98.5 epsilon 0.01
episode: 1431 score 0.6         average score 96.3 epsilon 0.01
episode: 1432 score 222.5       average score 98.4 epsilon 0.01
episode: 1433 score 49.2        average score 97.7 epsilon 0.01
episode: 1434 score 1.3         average score 95.4 epsilon 0.01
episode: 1435 score 201.8       average score 97.2 epsilon 0.01
episode: 1436 score 223.0       average score 100.5 epsilon 0.01
```

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episode: 1437 score -59.6 average score 102.2 epsilon 0.01
episode: 1438 score 160.9 average score 104.9 epsilon 0.01
episode: 1439 score 164.1 average score 106.9 epsilon 0.01
episode: 1440 score 189.6 average score 107.1 epsilon 0.01
episode: 1441 score 48.2 average score 105.2 epsilon 0.01
episode: 1442 score 10.0 average score 102.3 epsilon 0.01
episode: 1443 score 244.0 average score 105.0 epsilon 0.01
episode: 1444 score 101.8 average score 104.1 epsilon 0.01
episode: 1445 score 72.2 average score 105.3 epsilon 0.01
episode: 1446 score 253.3 average score 105.8 epsilon 0.01
episode: 1447 score -54.1 average score 102.6 epsilon 0.01
episode: 1448 score 213.2 average score 105.8 epsilon 0.01
episode: 1449 score 204.4 average score 105.4 epsilon 0.01
episode: 1450 score 214.6 average score 108.1 epsilon 0.01
episode: 1451 score 226.9 average score 111.4 epsilon 0.01
episode: 1452 score 46.1 average score 109.4 epsilon 0.01
episode: 1453 score 29.7 average score 110.5 epsilon 0.01
episode: 1454 score 190.4 average score 110.2 epsilon 0.01
episode: 1455 score 239.3 average score 109.9 epsilon 0.01
episode: 1456 score 208.2 average score 109.8 epsilon 0.01
episode: 1457 score 131.3 average score 108.7 epsilon 0.01
episode: 1458 score 158.4 average score 108.1 epsilon 0.01
episode: 1459 score 127.0 average score 108.1 epsilon 0.01
episode: 1460 score 168.2 average score 107.7 epsilon 0.01
episode: 1461 score 191.3 average score 108.5 epsilon 0.01
episode: 1462 score -635.8 average score 99.8 epsilon 0.01
episode: 1463 score 244.6 average score 102.6 epsilon 0.01
episode: 1464 score 240.4 average score 104.8 epsilon 0.01
episode: 1465 score 272.1 average score 105.7 epsilon 0.01
episode: 1466 score 223.1 average score 105.1 epsilon 0.01
episode: 1467 score 264.7 average score 107.8 epsilon 0.01
episode: 1468 score 168.5 average score 108.9 epsilon 0.01
episode: 1469 score 232.3 average score 111.3 epsilon 0.01
episode: 1470 score 14.5 average score 109.2 epsilon 0.01
episode: 1471 score 56.3 average score 107.3 epsilon 0.01
episode: 1472 score 266.2 average score 107.4 epsilon 0.01
episode: 1473 score 234.9 average score 107.4 epsilon 0.01
episode: 1474 score 261.6 average score 107.7 epsilon 0.01
episode: 1475 score 229.2 average score 107.8 epsilon 0.01
episode: 1476 score -15.8 average score 105.7 epsilon 0.01
episode: 1477 score -12.3 average score 103.2 epsilon 0.01
episode: 1478 score 223.9 average score 105.0 epsilon 0.01
episode: 1479 score 214.0 average score 104.1 epsilon 0.01
episode: 1480 score -69.8 average score 101.1 epsilon 0.01
episode: 1481 score -21.3 average score 98.8 epsilon 0.01
episode: 1482 score -38.3 average score 96.0 epsilon 0.01
episode: 1483 score -30.5 average score 93.3 epsilon 0.01
episode: 1484 score 266.2 average score 93.7 epsilon 0.01
episode: 1485 score 106.9 average score 96.7 epsilon 0.01
episode: 1486 score 242.1 average score 97.3 epsilon 0.01
episode: 1487 score 234.6 average score 97.0 epsilon 0.01
episode: 1488 score -15.3 average score 97.4 epsilon 0.01
episode: 1489 score 263.7 average score 97.7 epsilon 0.01
episode: 1490 score 271.2 average score 98.4 epsilon 0.01
episode: 1491 score 249.9 average score 101.3 epsilon 0.01
episode: 1492 score 244.4 average score 101.4 epsilon 0.01
episode: 1493 score 7.8 average score 99.4 epsilon 0.01
episode: 1494 score 187.3 average score 98.7 epsilon 0.01
episode: 1495 score 177.0 average score 98.8 epsilon 0.01
episode: 1496 score 245.3 average score 100.4 epsilon 0.01
episode: 1497 score 116.7 average score 99.2 epsilon 0.01
episode: 1498 score 47.6 average score 101.3 epsilon 0.01
episode: 1499 score -122.3 average score 98.5 epsilon 0.01
episode: 1500 score -73.7 average score 96.0 epsilon 0.01
episode: 1501 score -76.2 average score 92.7 epsilon 0.01
episode: 1502 score 180.4 average score 100.2 epsilon 0.01
episode: 1503 score -23.7 average score 97.6 epsilon 0.01
episode: 1504 score -161.1 average score 94.3 epsilon 0.01
episode: 1505 score 152.5 average score 94.2 epsilon 0.01
episode: 1506 score 64.0 average score 93.1 epsilon 0.01
episode: 1507 score 207.4 average score 92.7 epsilon 0.01
episode: 1508 score -219.8 average score 89.6 epsilon 0.01
episode: 1509 score -8.5 average score 89.7 epsilon 0.01
episode: 1510 score 33.9 average score 89.5 epsilon 0.01
episode: 1511 score 4.2 average score 89.4 epsilon 0.01
episode: 1512 score 3.9 average score 87.9 epsilon 0.01
episode: 1513 score 201.3 average score 88.0 epsilon 0.01
episode: 1514 score 12.9 average score 85.7 epsilon 0.01
episode: 1515 score 24.5 average score 83.9 epsilon 0.01
episode: 1516 score 184.7 average score 86.9 epsilon 0.01
episode: 1517 score 177.9 average score 86.7 epsilon 0.01
episode: 1518 score -167.5 average score 88.3 epsilon 0.01
episode: 1519 score -90.6 average score 90.6 epsilon 0.01
episode: 1520 score 38.9 average score 92.2 epsilon 0.01
episode: 1521 score -9.0 average score 93.8 epsilon 0.01
```

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episode: 1522 score 32.4 average score 95.2 epsilon 0.01
episode: 1523 score 211.5 average score 98.3 epsilon 0.01
episode: 1524 score 207.2 average score 101.9 epsilon 0.01
episode: 1525 score 133.9 average score 105.1 epsilon 0.01
episode: 1526 score -101.5 average score 105.6 epsilon 0.01
episode: 1527 score 152.0 average score 105.4 epsilon 0.01
episode: 1528 score 112.9 average score 105.5 epsilon 0.01
episode: 1529 score 251.3 average score 106.2 epsilon 0.01
episode: 1530 score -34.3 average score 103.8 epsilon 0.01
episode: 1531 score 41.3 average score 103.8 epsilon 0.01
episode: 1532 score 98.8 average score 104.8 epsilon 0.01
episode: 1533 score 10.7 average score 102.7 epsilon 0.01
episode: 1534 score 67.7 average score 102.9 epsilon 0.01
episode: 1535 score 78.3 average score 103.6 epsilon 0.01
episode: 1536 score 54.3 average score 102.2 epsilon 0.01
episode: 1537 score 54.2 average score 100.5 epsilon 0.01
episode: 1538 score 283.7 average score 103.9 epsilon 0.01
episode: 1539 score -60.7 average score 101.7 epsilon 0.01
episode: 1540 score 259.3 average score 102.7 epsilon 0.01
episode: 1541 score 164.9 average score 102.4 epsilon 0.01
episode: 1542 score 12.0 average score 102.1 epsilon 0.01
episode: 1543 score 229.4 average score 104.2 epsilon 0.01
episode: 1544 score 82.8 average score 102.6 epsilon 0.01
episode: 1545 score -88.1 average score 100.8 epsilon 0.01
episode: 1546 score 104.4 average score 101.1 epsilon 0.01
episode: 1547 score 190.3 average score 100.4 epsilon 0.01
episode: 1548 score 53.4 average score 101.5 epsilon 0.01
episode: 1549 score 107.3 average score 100.5 epsilon 0.01
episode: 1550 score 62.6 average score 99.1 epsilon 0.01
episode: 1551 score 91.9 average score 97.8 epsilon 0.01
episode: 1552 score 77.4 average score 96.4 epsilon 0.01
episode: 1553 score 218.5 average score 98.1 epsilon 0.01
episode: 1554 score 203.1 average score 99.8 epsilon 0.01
episode: 1555 score 236.1 average score 100.2 epsilon 0.01
episode: 1556 score 9.2 average score 98.0 epsilon 0.01
episode: 1557 score 208.6 average score 98.0 epsilon 0.01
episode: 1558 score 209.8 average score 98.7 epsilon 0.01
episode: 1559 score 257.3 average score 99.7 epsilon 0.01
episode: 1560 score 211.0 average score 100.6 epsilon 0.01
episode: 1561 score 237.2 average score 101.2 epsilon 0.01
episode: 1562 score 144.6 average score 100.8 epsilon 0.01
episode: 1563 score 251.8 average score 109.6 epsilon 0.01
episode: 1564 score 184.9 average score 109.0 epsilon 0.01
episode: 1565 score 251.5 average score 109.1 epsilon 0.01
episode: 1566 score 129.6 average score 107.7 epsilon 0.01
episode: 1567 score 225.2 average score 107.7 epsilon 0.01
episode: 1568 score 10.0 average score 105.2 epsilon 0.01
episode: 1569 score 215.2 average score 105.6 epsilon 0.01
episode: 1570 score -125.7 average score 102.1 epsilon 0.01
episode: 1571 score -102.4 average score 100.9 epsilon 0.01
episode: 1572 score 76.9 average score 101.1 epsilon 0.01
episode: 1573 score 0.4 average score 98.5 epsilon 0.01
episode: 1574 score 249.0 average score 98.6 epsilon 0.01
episode: 1575 score 90.5 average score 97.0 epsilon 0.01
episode: 1576 score 153.4 average score 96.2 epsilon 0.01
episode: 1577 score 296.5 average score 99.3 epsilon 0.01
episode: 1578 score 89.5 average score 100.3 epsilon 0.01
episode: 1579 score -245.3 average score 95.7 epsilon 0.01
episode: 1580 score 153.7 average score 95.1 epsilon 0.01
episode: 1581 score 119.2 average score 96.9 epsilon 0.01
episode: 1582 score 228.8 average score 99.4 epsilon 0.01
episode: 1583 score 177.3 average score 101.5 epsilon 0.01
episode: 1584 score 227.4 average score 104.1 epsilon 0.01
episode: 1585 score 39.6 average score 101.9 epsilon 0.01
episode: 1586 score 216.0 average score 102.9 epsilon 0.01
episode: 1587 score 126.4 average score 101.8 epsilon 0.01
episode: 1588 score -1.6 average score 99.4 epsilon 0.01
episode: 1589 score 150.0 average score 101.1 epsilon 0.01
episode: 1590 score 109.5 average score 99.6 epsilon 0.01
episode: 1591 score 246.6 average score 99.3 epsilon 0.01
episode: 1592 score 128.6 average score 98.1 epsilon 0.01
episode: 1593 score -2.0 average score 95.7 epsilon 0.01
episode: 1594 score -6.0 average score 95.5 epsilon 0.01
episode: 1595 score 200.0 average score 95.7 epsilon 0.01
episode: 1596 score 203.1 average score 95.9 epsilon 0.01
episode: 1597 score 227.4 average score 95.7 epsilon 0.01
episode: 1598 score 189.4 average score 96.5 epsilon 0.01
episode: 1599 score 229.1 average score 98.3 epsilon 0.01
episode: 1600 score -28.6 average score 99.2 epsilon 0.01
episode: 1601 score 241.3 average score 102.3 epsilon 0.01
episode: 1602 score 240.3 average score 105.4 epsilon 0.01
episode: 1603 score 91.3 average score 104.6 epsilon 0.01
episode: 1604 score -32.3 average score 104.5 epsilon 0.01
episode: 1605 score -7.6 average score 106.0 epsilon 0.01
episode: 1606 score 138.1 average score 105.9 epsilon 0.01
```

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episode: 1660 score 150.1 average score 105.7 epsilon 0.01
episode: 1607 score 255.8 average score 107.7 epsilon 0.01
episode: 1608 score 40.0 average score 106.1 epsilon 0.01
episode: 1609 score 230.5 average score 110.6 epsilon 0.01
episode: 1610 score 238.3 average score 113.0 epsilon 0.01
episode: 1611 score 144.2 average score 114.1 epsilon 0.01
episode: 1612 score 96.8 average score 115.0 epsilon 0.01
episode: 1613 score 278.0 average score 117.7 epsilon 0.01
episode: 1614 score 110.9 average score 116.8 epsilon 0.01
episode: 1615 score -122.3 average score 115.5 epsilon 0.01
episode: 1616 score 252.1 average score 117.7 epsilon 0.01
episode: 1617 score -329.7 average score 112.6 epsilon 0.01
episode: 1618 score -8.4 average score 110.8 epsilon 0.01
episode: 1619 score 244.4 average score 114.9 epsilon 0.01
episode: 1620 score -291.1 average score 112.9 epsilon 0.01
episode: 1621 score 248.7 average score 115.0 epsilon 0.01
episode: 1622 score 110.9 average score 116.2 epsilon 0.01
episode: 1623 score -147.5 average score 114.4 epsilon 0.01
episode: 1624 score 242.0 average score 114.7 epsilon 0.01
episode: 1625 score 237.4 average score 115.0 epsilon 0.01
episode: 1626 score 246.9 average score 116.1 epsilon 0.01
episode: 1627 score 248.1 average score 119.6 epsilon 0.01
episode: 1628 score -27.8 average score 117.8 epsilon 0.01
episode: 1629 score 202.9 average score 118.7 epsilon 0.01
episode: 1630 score 116.2 average score 117.3 epsilon 0.01
episode: 1631 score -196.1 average score 115.7 epsilon 0.01
episode: 1632 score 216.9 average score 117.5 epsilon 0.01
episode: 1633 score 115.2 average score 117.6 epsilon 0.01
episode: 1634 score 280.0 average score 120.3 epsilon 0.01
episode: 1635 score 198.6 average score 121.6 epsilon 0.01
episode: 1636 score 194.0 average score 122.7 epsilon 0.01
episode: 1637 score -288.0 average score 119.3 epsilon 0.01
episode: 1638 score 230.2 average score 121.1 epsilon 0.01
episode: 1639 score 118.6 average score 119.5 epsilon 0.01
episode: 1640 score 252.7 average score 122.6 epsilon 0.01
episode: 1641 score 117.2 average score 121.2 epsilon 0.01
episode: 1642 score 249.2 average score 122.0 epsilon 0.01
episode: 1643 score 219.4 average score 124.0 epsilon 0.01
episode: 1644 score 233.0 average score 124.1 epsilon 0.01
episode: 1645 score 217.8 average score 125.4 epsilon 0.01
episode: 1646 score 257.4 average score 128.8 epsilon 0.01
episode: 1647 score 195.3 average score 129.7 epsilon 0.01
episode: 1648 score 220.4 average score 130.0 epsilon 0.01
episode: 1649 score 237.2 average score 131.9 epsilon 0.01
episode: 1650 score 97.6 average score 131.8 epsilon 0.01
episode: 1651 score 230.8 average score 133.4 epsilon 0.01
episode: 1652 score 226.0 average score 134.8 epsilon 0.01
episode: 1653 score 233.8 average score 136.3 epsilon 0.01
episode: 1654 score 188.0 average score 136.0 epsilon 0.01
episode: 1655 score 100.6 average score 135.0 epsilon 0.01
episode: 1656 score 129.4 average score 133.9 epsilon 0.01
episode: 1657 score 248.0 average score 136.3 epsilon 0.01
episode: 1658 score 172.6 average score 135.9 epsilon 0.01
episode: 1659 score 39.4 average score 134.2 epsilon 0.01
episode: 1660 score 203.3 average score 133.7 epsilon 0.01
episode: 1661 score 147.4 average score 133.1 epsilon 0.01
episode: 1662 score 179.8 average score 132.5 epsilon 0.01
episode: 1663 score 246.8 average score 133.5 epsilon 0.01
episode: 1664 score 193.1 average score 132.9 epsilon 0.01
episode: 1665 score 188.2 average score 133.0 epsilon 0.01
episode: 1666 score 55.5 average score 131.0 epsilon 0.01
episode: 1667 score 218.7 average score 131.9 epsilon 0.01
episode: 1668 score 42.6 average score 130.1 epsilon 0.01
episode: 1669 score -8.0 average score 129.9 epsilon 0.01
episode: 1670 score 216.2 average score 129.9 epsilon 0.01
episode: 1671 score 28.9 average score 131.5 epsilon 0.01
episode: 1672 score 10.9 average score 132.6 epsilon 0.01
episode: 1673 score 22.3 average score 132.1 epsilon 0.01
episode: 1674 score 154.9 average score 133.6 epsilon 0.01
episode: 1675 score 26.1 average score 131.4 epsilon 0.01
episode: 1676 score 66.3 average score 131.1 epsilon 0.01
episode: 1677 score 35.3 average score 130.0 epsilon 0.01
episode: 1678 score 185.8 average score 128.9 epsilon 0.01
episode: 1679 score 250.9 average score 130.5 epsilon 0.01
episode: 1680 score 135.4 average score 134.2 epsilon 0.01
episode: 1681 score 247.3 average score 135.2 epsilon 0.01
episode: 1682 score 235.4 average score 136.3 epsilon 0.01
episode: 1683 score -81.6 average score 133.2 epsilon 0.01
episode: 1684 score 238.2 average score 133.8 epsilon 0.01
episode: 1685 score 287.4 average score 134.4 epsilon 0.01
episode: 1686 score 286.2 average score 136.9 epsilon 0.01
episode: 1687 score 130.9 average score 136.0 epsilon 0.01
episode: 1688 score 158.3 average score 136.4 epsilon 0.01
episode: 1689 score 266.3 average score 139.0 epsilon 0.01
episode: 1690 score 18.1 average score 137.7 epsilon 0.01
```

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episode: 1691 score 58.8      average score 137.2 epsilon 0.01
episode: 1692 score 194.7      average score 136.7 epsilon 0.01
episode: 1693 score 267.1      average score 138.1 epsilon 0.01
episode: 1694 score 245.3      average score 140.5 epsilon 0.01
episode: 1695 score 259.3      average score 143.1 epsilon 0.01
episode: 1696 score 213.2      average score 143.3 epsilon 0.01
episode: 1697 score 29.8       average score 141.5 epsilon 0.01
episode: 1698 score -197.6     average score 137.3 epsilon 0.01
episode: 1699 score 259.4      average score 138.0 epsilon 0.01
episode: 1700 score 192.8       average score 137.7 epsilon 0.01
episode: 1701 score 239.0       average score 140.3 epsilon 0.01
episode: 1702 score 271.5       average score 140.6 epsilon 0.01
episode: 1703 score -74.5      average score 137.5 epsilon 0.01
episode: 1704 score -6.1       average score 136.5 epsilon 0.01
episode: 1705 score 247.1       average score 139.3 epsilon 0.01
episode: 1706 score 257.0       average score 141.9 epsilon 0.01
episode: 1707 score 221.4       average score 142.8 epsilon 0.01
episode: 1708 score 226.3       average score 142.5 epsilon 0.01
episode: 1709 score 115.6       average score 143.2 epsilon 0.01
episode: 1710 score 259.4       average score 143.5 epsilon 0.01
episode: 1711 score -19.3      average score 140.9 epsilon 0.01
episode: 1712 score 109.7       average score 140.6 epsilon 0.01
episode: 1713 score 304.7       average score 142.7 epsilon 0.01
episode: 1714 score 33.5        average score 140.2 epsilon 0.01
episode: 1715 score 55.1        average score 139.7 epsilon 0.01
episode: 1716 score 91.6        average score 141.8 epsilon 0.01
episode: 1717 score 298.7       average score 142.3 epsilon 0.01
episode: 1718 score 32.0        average score 145.8 epsilon 0.01
episode: 1719 score 278.5       average score 148.7 epsilon 0.01
episode: 1720 score 268.9       average score 148.9 epsilon 0.01
episode: 1721 score 262.7       average score 154.4 epsilon 0.01
episode: 1722 score -288.7      average score 149.1 epsilon 0.01
episode: 1723 score 10.7        average score 148.1 epsilon 0.01
episode: 1724 score 274.4       average score 152.3 epsilon 0.01
episode: 1725 score -64.5       average score 149.2 epsilon 0.01
episode: 1726 score 7.5         average score 147.0 epsilon 0.01
episode: 1727 score 211.5       average score 146.6 epsilon 0.01
episode: 1728 score 229.8       average score 146.4 epsilon 0.01
episode: 1729 score 300.0       average score 149.7 epsilon 0.01
episode: 1730 score 244.5       average score 150.1 epsilon 0.01
episode: 1731 score 233.4       average score 151.3 epsilon 0.01
episode: 1732 score 202.9       average score 155.2 epsilon 0.01
episode: 1733 score 237.8       average score 155.4 epsilon 0.01
episode: 1734 score 252.3       average score 156.8 epsilon 0.01
episode: 1735 score 257.6       average score 156.5 epsilon 0.01
episode: 1736 score 243.9       average score 157.0 epsilon 0.01
episode: 1737 score 166.4       average score 156.7 epsilon 0.01
episode: 1738 score 51.5        average score 160.1 epsilon 0.01
episode: 1739 score 232.4       average score 160.1 epsilon 0.01
episode: 1740 score 267.0       average score 161.6 epsilon 0.01
episode: 1741 score 240.9       average score 161.5 epsilon 0.01
episode: 1742 score 255.8       average score 162.8 epsilon 0.01
episode: 1743 score 281.3       average score 163.1 epsilon 0.01
episode: 1744 score 258.6       average score 163.5 epsilon 0.01
episode: 1745 score 215.6       average score 163.4 epsilon 0.01
episode: 1746 score 272.5       average score 163.9 epsilon 0.01
episode: 1747 score 262.0       average score 164.0 epsilon 0.01
episode: 1748 score 280.4       average score 164.8 epsilon 0.01
episode: 1749 score 286.0       average score 165.4 epsilon 0.01
episode: 1750 score 249.5       average score 165.6 epsilon 0.01
episode: 1751 score 27.6        average score 164.9 epsilon 0.01
episode: 1752 score 238.3       average score 164.9 epsilon 0.01
episode: 1753 score 261.2       average score 165.3 epsilon 0.01
episode: 1754 score 311.6       average score 166.1 epsilon 0.01
episode: 1755 score 256.0       average score 166.7 epsilon 0.01
episode: 1756 score 317.2       average score 168.9 epsilon 0.01
episode: 1757 score 280.9       average score 170.4 epsilon 0.01
episode: 1758 score 234.6       average score 170.2 epsilon 0.01
episode: 1759 score 249.6       average score 171.0 epsilon 0.01
episode: 1760 score 247.3       average score 173.1 epsilon 0.01
episode: 1761 score 260.3       average score 173.6 epsilon 0.01
episode: 1762 score 175.7       average score 173.9 epsilon 0.01
episode: 1763 score 246.5       average score 174.6 epsilon 0.01
episode: 1764 score 243.6       average score 174.5 epsilon 0.01
episode: 1765 score 210.2       average score 174.7 epsilon 0.01
episode: 1766 score 236.8       average score 175.2 epsilon 0.01
episode: 1767 score 261.3       average score 177.2 epsilon 0.01
episode: 1768 score 259.9       average score 177.6 epsilon 0.01
episode: 1769 score 246.0       average score 179.7 epsilon 0.01
episode: 1770 score 254.7       average score 182.3 epsilon 0.01
episode: 1771 score 147.9       average score 181.6 epsilon 0.01
episode: 1772 score 254.5       average score 183.8 epsilon 0.01
episode: 1773 score 251.4       average score 186.2 epsilon 0.01
episode: 1774 score 272.8       average score 188.7 epsilon 0.01
episode: 1775 score 255.1       average score 189.7 epsilon 0.01
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episode: 1776 score 273.0 average score 192.1 epsilon 0.01
episode: 1777 score 249.5 average score 193.9 epsilon 0.01
episode: 1778 score 232.7 average score 195.9 epsilon 0.01
episode: 1779 score 224.0 average score 196.3 epsilon 0.01
episode: 1780 score -9.1 average score 193.7 epsilon 0.01
episode: 1781 score 287.1 average score 195.2 epsilon 0.01
episode: 1782 score 242.2 average score 195.1 epsilon 0.01
episode: 1783 score 283.5 average score 195.6 epsilon 0.01
episode: 1784 score 270.7 average score 199.1 epsilon 0.01
episode: 1785 score 172.9 average score 198.4 epsilon 0.01
episode: 1786 score 240.7 average score 198.0 epsilon 0.01
episode: 1787 score 242.2 average score 197.6 epsilon 0.01
episode: 1788 score 250.0 average score 198.7 epsilon 0.01
episode: 1789 score 132.7 average score 198.5 epsilon 0.01
episode: 1790 score 38.0 average score 196.2 epsilon 0.01
episode: 1791 score 38.3 average score 196.4 epsilon 0.01
episode: 1792 score 269.2 average score 198.5 epsilon 0.01
episode: 1793 score 4.7 average score 196.6 epsilon 0.01
episode: 1794 score 260.7 average score 196.6 epsilon 0.01
episode: 1795 score 14.1 average score 194.3 epsilon 0.01
episode: 1796 score -13.5 average score 191.6 epsilon 0.01
episode: 1797 score 274.9 average score 192.2 epsilon 0.01
episode: 1798 score -153.1 average score 190.4 epsilon 0.01
episode: 1799 score 56.3 average score 192.9 epsilon 0.01
episode: 1800 score 4.5 average score 190.4 epsilon 0.01
episode: 1801 score 148.6 average score 189.9 epsilon 0.01
episode: 1802 score 228.4 average score 189.8 epsilon 0.01
episode: 1803 score 102.1 average score 188.1 epsilon 0.01
episode: 1804 score 307.0 average score 191.9 epsilon 0.01
episode: 1805 score 242.8 average score 194.4 epsilon 0.01
episode: 1806 score 20.9 average score 192.1 epsilon 0.01
episode: 1807 score 248.8 average score 192.1 epsilon 0.01
episode: 1808 score 259.5 average score 192.4 epsilon 0.01
episode: 1809 score 48.8 average score 190.7 epsilon 0.01
episode: 1810 score 215.3 average score 191.7 epsilon 0.01
episode: 1811 score 255.6 average score 191.6 epsilon 0.01
episode: 1812 score 269.7 average score 194.5 epsilon 0.01
episode: 1813 score 258.8 average score 196.0 epsilon 0.01
episode: 1814 score 278.0 average score 195.7 epsilon 0.01
episode: 1815 score 226.5 average score 197.6 epsilon 0.01
episode: 1816 score 238.8 average score 199.4 epsilon 0.01
episode: 1817 score 256.0 average score 201.1 epsilon 0.01
episode: 1818 score 271.2 average score 200.8 epsilon 0.01
episode: 1819 score 252.1 average score 203.0 epsilon 0.01
episode: 1820 score 211.5 average score 202.3 epsilon 0.01
episode: 1821 score 261.4 average score 202.2 epsilon 0.01
episode: 1822 score 248.6 average score 202.1 epsilon 0.01
episode: 1823 score 249.2 average score 207.4 epsilon 0.01
episode: 1824 score 118.3 average score 208.5 epsilon 0.01
episode: 1825 score 230.6 average score 208.0 epsilon 0.01
episode: 1826 score 309.3 average score 211.7 epsilon 0.01
episode: 1827 score -0.6 average score 211.7 epsilon 0.01
episode: 1828 score 31.2 average score 209.9 epsilon 0.01
episode: 1829 score 21.3 average score 207.8 epsilon 0.01
episode: 1830 score 263.5 average score 207.5 epsilon 0.01
episode: 1831 score 243.1 average score 207.4 epsilon 0.01
episode: 1832 score -1.8 average score 205.1 epsilon 0.01
episode: 1833 score 253.0 average score 205.6 epsilon 0.01
episode: 1834 score 272.5 average score 206.0 epsilon 0.01
episode: 1835 score 47.0 average score 203.9 epsilon 0.01
episode: 1836 score 127.4 average score 202.6 epsilon 0.01
episode: 1837 score 176.1 average score 202.0 epsilon 0.01
episode: 1838 score 255.8 average score 202.8 epsilon 0.01
episode: 1839 score 247.2 average score 204.8 epsilon 0.01
episode: 1840 score 246.7 average score 204.9 epsilon 0.01
episode: 1841 score 27.3 average score 202.6 epsilon 0.01
episode: 1842 score 276.1 average score 202.9 epsilon 0.01
episode: 1843 score 275.8 average score 203.1 epsilon 0.01
episode: 1844 score 271.6 average score 203.0 epsilon 0.01
episode: 1845 score 139.5 average score 201.8 epsilon 0.01
episode: 1846 score 63.3 average score 200.3 epsilon 0.01
episode: 1847 score 35.5 average score 198.0 epsilon 0.01
episode: 1848 score 244.1 average score 197.8 epsilon 0.01
episode: 1849 score 30.4 average score 195.3 epsilon 0.01
episode: 1850 score 251.9 average score 195.0 epsilon 0.01
episode: 1851 score -26.1 average score 192.3 epsilon 0.01
episode: 1852 score 273.7 average score 194.7 epsilon 0.01
episode: 1853 score 280.0 average score 195.1 epsilon 0.01
episode: 1854 score 271.5 average score 195.2 epsilon 0.01
episode: 1855 score 231.8 average score 194.4 epsilon 0.01
episode: 1856 score 221.5 average score 194.1 epsilon 0.01
episode: 1857 score 284.0 average score 193.7 epsilon 0.01
episode: 1858 score 270.4 average score 193.6 epsilon 0.01
episode: 1859 score 225.5 average score 193.5 epsilon 0.01
episode: 1860 score 210.7 average score 193.2 epsilon 0.01
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episode: 1860 score 210.7 average score 199.2 epsilon 0.01
episode: 1861 score -137.6 average score 189.4 epsilon 0.01
episode: 1862 score 245.8 average score 189.2 epsilon 0.01
episode: 1863 score 39.3 average score 187.9 epsilon 0.01
episode: 1864 score 210.5 average score 187.5 epsilon 0.01
episode: 1865 score 80.2 average score 185.9 epsilon 0.01
episode: 1866 score 232.9 average score 186.1 epsilon 0.01
episode: 1867 score -205.4 average score 181.7 epsilon 0.01
episode: 1868 score 234.2 average score 181.5 epsilon 0.01
episode: 1869 score 266.9 average score 181.5 epsilon 0.01
episode: 1870 score 266.2 average score 181.7 epsilon 0.01
episode: 1871 score -74.2 average score 178.5 epsilon 0.01
episode: 1872 score 237.8 average score 179.4 epsilon 0.01
episode: 1873 score 270.5 average score 179.5 epsilon 0.01
episode: 1874 score 212.1 average score 179.1 epsilon 0.01
episode: 1875 score 266.8 average score 179.1 epsilon 0.01
episode: 1876 score 241.2 average score 178.9 epsilon 0.01
episode: 1877 score 273.9 average score 178.9 epsilon 0.01
episode: 1878 score 251.6 average score 179.0 epsilon 0.01
episode: 1879 score -55.8 average score 176.1 epsilon 0.01
episode: 1880 score 162.2 average score 175.5 epsilon 0.01
episode: 1881 score -142.7 average score 174.2 epsilon 0.01
episode: 1882 score 234.9 average score 173.7 epsilon 0.01
episode: 1883 score 243.5 average score 173.7 epsilon 0.01
episode: 1884 score 226.0 average score 173.1 epsilon 0.01
episode: 1885 score 248.9 average score 172.9 epsilon 0.01
episode: 1886 score 257.8 average score 173.7 epsilon 0.01
episode: 1887 score 226.9 average score 173.6 epsilon 0.01
episode: 1888 score -368.6 average score 167.5 epsilon 0.01
episode: 1889 score 276.9 average score 167.8 epsilon 0.01
episode: 1890 score 246.6 average score 168.9 epsilon 0.01
episode: 1891 score 205.9 average score 170.6 epsilon 0.01
episode: 1892 score 233.1 average score 172.5 epsilon 0.01
episode: 1893 score 204.4 average score 171.9 epsilon 0.01
episode: 1894 score 210.4 average score 173.9 epsilon 0.01
episode: 1895 score 235.2 average score 173.7 epsilon 0.01
episode: 1896 score 252.0 average score 176.0 epsilon 0.01
episode: 1897 score 141.5 average score 177.6 epsilon 0.01
episode: 1898 score 218.9 average score 177.0 epsilon 0.01
episode: 1899 score 101.1 average score 179.5 epsilon 0.01
episode: 1900 score 239.6 average score 181.3 epsilon 0.01
episode: 1901 score 215.5 average score 183.4 epsilon 0.01
episode: 1902 score 285.2 average score 184.8 epsilon 0.01
episode: 1903 score 214.0 average score 184.6 epsilon 0.01
episode: 1904 score 254.1 average score 186.1 epsilon 0.01
episode: 1905 score 238.1 average score 185.5 epsilon 0.01
episode: 1906 score 255.8 average score 185.6 epsilon 0.01
episode: 1907 score 257.6 average score 187.9 epsilon 0.01
episode: 1908 score 148.4 average score 186.9 epsilon 0.01
episode: 1909 score 229.3 average score 186.6 epsilon 0.01
episode: 1910 score 245.0 average score 188.6 epsilon 0.01
episode: 1911 score 237.3 average score 188.8 epsilon 0.01
episode: 1912 score 266.4 average score 188.9 epsilon 0.01
episode: 1913 score 269.9 average score 188.9 epsilon 0.01
episode: 1914 score 226.3 average score 188.6 epsilon 0.01
episode: 1915 score 259.2 average score 188.4 epsilon 0.01
episode: 1916 score -213.1 average score 184.1 epsilon 0.01
episode: 1917 score 247.8 average score 184.1 epsilon 0.01
episode: 1918 score 238.7 average score 184.0 epsilon 0.01
episode: 1919 score 157.5 average score 182.8 epsilon 0.01
episode: 1920 score 209.9 average score 182.4 epsilon 0.01
episode: 1921 score 222.2 average score 182.5 epsilon 0.01
episode: 1922 score 200.1 average score 181.9 epsilon 0.01
episode: 1923 score 255.6 average score 182.0 epsilon 0.01
episode: 1924 score 225.6 average score 181.8 epsilon 0.01
episode: 1925 score 134.3 average score 181.9 epsilon 0.01
episode: 1926 score 258.5 average score 182.2 epsilon 0.01
episode: 1927 score 244.1 average score 181.5 epsilon 0.01
episode: 1928 score 260.1 average score 184.1 epsilon 0.01
episode: 1929 score 277.8 average score 186.6 epsilon 0.01
episode: 1930 score 256.4 average score 188.9 epsilon 0.01
episode: 1931 score 137.8 average score 187.7 epsilon 0.01
episode: 1932 score 266.0 average score 187.9 epsilon 0.01
episode: 1933 score 262.2 average score 190.5 epsilon 0.01
episode: 1934 score 135.0 average score 189.3 epsilon 0.01
episode: 1935 score 230.7 average score 188.9 epsilon 0.01
episode: 1936 score 206.0 average score 190.5 epsilon 0.01
episode: 1937 score 230.5 average score 191.5 epsilon 0.01
episode: 1938 score 268.6 average score 192.4 epsilon 0.01
episode: 1939 score 256.5 average score 192.4 epsilon 0.01
episode: 1940 score -23.7 average score 189.7 epsilon 0.01
episode: 1941 score 256.1 average score 189.8 epsilon 0.01
episode: 1942 score 260.5 average score 192.1 epsilon 0.01
episode: 1943 score 266.0 average score 192.0 epsilon 0.01
episode: 1944 score 261.7 average score 191.9 epsilon 0.01
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episode: 1945 score 278.0      average score 192.0 epsilon 0.01
episode: 1946 score 273.4      average score 193.3 epsilon 0.01
episode: 1947 score 258.7      average score 195.2 epsilon 0.01
episode: 1948 score 249.9      average score 197.4 epsilon 0.01
episode: 1949 score -24.1       average score 194.7 epsilon 0.01
episode: 1950 score 256.3      average score 196.9 epsilon 0.01
episode: 1951 score 263.1      average score 197.0 epsilon 0.01
episode: 1952 score 243.6      average score 199.7 epsilon 0.01
episode: 1953 score 239.4      average score 199.4 epsilon 0.01
episode: 1954 score 238.8      average score 199.0 epsilon 0.01
episode: 1955 score 291.7      average score 199.2 epsilon 0.01
episode: 1956 score 261.0      average score 199.5 epsilon 0.01
episode: 1957 score 263.3      average score 199.9 epsilon 0.01
episode: 1958 score 240.2      average score 199.4 epsilon 0.01
episode: 1959 score 249.9      average score 199.2 epsilon 0.01
episode: 1960 score 267.8      average score 199.7 epsilon 0.01
episode: 1961 score 265.7      average score 200.2 epsilon 0.01
episode: 1962 score 286.0      average score 204.4 epsilon 0.01
episode: 1963 score 253.3      average score 204.5 epsilon 0.01
episode: 1964 score 250.7      average score 206.6 epsilon 0.01
episode: 1965 score 279.8      average score 207.2 epsilon 0.01
episode: 1966 score 266.9      average score 209.1 epsilon 0.01
episode: 1967 score 14.9       average score 206.9 epsilon 0.01
episode: 1968 score 294.2       average score 211.9 epsilon 0.01
episode: 1969 score 257.5       average score 212.1 epsilon 0.01
episode: 1970 score 253.6       average score 212.0 epsilon 0.01
episode: 1971 score 262.7       average score 211.9 epsilon 0.01
episode: 1972 score 267.1       average score 215.3 epsilon 0.01
episode: 1973 score 273.4       average score 215.7 epsilon 0.01
episode: 1974 score 286.4       average score 215.8 epsilon 0.01
episode: 1975 score 256.4       average score 216.3 epsilon 0.01
episode: 1976 score 261.4       average score 216.2 epsilon 0.01
episode: 1977 score 272.6       average score 216.5 epsilon 0.01
episode: 1978 score 260.5       average score 216.4 epsilon 0.01
episode: 1979 score 271.7       average score 216.6 epsilon 0.01
episode: 1980 score 252.5       average score 219.6 epsilon 0.01
episode: 1981 score 255.7       average score 220.6 epsilon 0.01
episode: 1982 score 292.7       average score 224.9 epsilon 0.01
episode: 1983 score 282.6       average score 225.4 epsilon 0.01
episode: 1984 score 264.4       average score 225.6 epsilon 0.01
episode: 1985 score 267.5       average score 226.0 epsilon 0.01
episode: 1986 score 266.5       average score 226.1 epsilon 0.01
episode: 1987 score 299.0       average score 226.6 epsilon 0.01
episode: 1988 score 223.3       average score 226.5 epsilon 0.01
episode: 1989 score 275.5       average score 232.9 epsilon 0.01
episode: 1990 score 241.1       average score 232.5 epsilon 0.01
episode: 1991 score 270.0       average score 232.8 epsilon 0.01
episode: 1992 score 265.1       average score 233.4 epsilon 0.01
episode: 1993 score 254.1       average score 233.6 epsilon 0.01
episode: 1994 score 273.0       average score 234.2 epsilon 0.01
episode: 1995 score 277.1       average score 234.9 epsilon 0.01
episode: 1996 score 271.2       average score 235.3 epsilon 0.01
episode: 1997 score 203.8       average score 234.8 epsilon 0.01
episode: 1998 score -141.3      average score 232.0 epsilon 0.01
episode: 1999 score 200.9       average score 231.8 epsilon 0.01

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