**МИНОБРНАУКИ РОССИИ**
**САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ**
**ЭЛЕКТРОТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ**
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# ОТЧЕТ

**по лабораторной работе №3**
**по дисциплине «Построение и анализ алгоритмов»**
**Тема: Коммивояжер (TSP)**

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**Цель работы.**

Разработать программу, которая решает задачу построения минимального цикла.

**Задание.**

Дана карта городов в виде ассиметричного, неполного графа $G = (V, E)$, где $V(|V|=n)$ – это вершины графа, соответствующие городам; $E(|E|=m)$ – это ребра между вершинами графа, соответствующие путям сообщения между этими городами. Каждому ребру $m_{ij}$ (переезд из города $i$ в город $j$) можно сопоставить критерий выгодности маршрута (вес ребра) равный $w_i$ (натуральное число [1, 1000]), $m_{ij}=inf$, если $i$=j. Если маршрут включает в себя ребро $m_{ij}$, то $x_{ij}=1$, иначе $x_{ij}=0$. Требуется найти минимальный маршрут (минимальный гамильтонов цикл):

$$\min W = \sum_{i=1}^{n} \sum_{j=1}^{n} x_{ij}\, w_{ij}$$

**Выполнение работы.**

Рассмотрим структуру алгоритма. Используется метод ветвей и границ, а также матрица редукции. Процесс редукции матрицы состоит из двух частей – редукция по строкам и по столбцам. Редукция для произвольной строки/столбца такова: в строке/столбце выбирается минимальный элемент и вычитается из каждого элемента данной строки/столбца. Так, в матрице редукции в каждой строке и каждом столбике есть 0. Скажем, что стоимость матрицы (на текущем узле) – это, число, на которое её редуцировали.

На первом шаге вычисляем стоимость изначальной матрицы после редукции. На последующих шагах стоимость перехода от текущего узла к следующему имеет следующий вид: стоимость матрицы (на текущем узле) + стоимость матрицы (на следующем узле) + вес ребра на позиции *(номер текущего узла, номер следующего узла)*. После вычисления стоимости перехода от текущего узла к следующему, редуцированная матрица и эта стоимость помещается в очередь с приоритетом. При этом перед редукцией в последующих шагах строка с номером

узла-источника и столбец с номером узла-получателя (а также элемент на позиции *(номер узла-получателя, 0)* (т. к. нельзя возвратиться назад)) обращаются в бесконечность. Благодаря очереди с приоритетом будут рассматриваться дешёвые пути в первую очередь. При этом, когда путь будет найден – алгоритм будет прерван.

Рассмотрим структуры программы, с помощью которых происходит решение

1) Глобальная переменная *MAX_INT* хранит в себе максимальное целочисленное значение *int* (выполняет функцию бесконечности).

2) Класс *Node* хранит в себе путь на текущий момент, стоимость текущей Матрицы (после редукции), номер текущего узла, число посещённых до этого узлов, размер матрицы. Имеет метод *fill_from_file(),* благодаря которому можно считать матрицу из файла

3) Функция *init_root()* инициализирует первый узел.

4) Функция *new_node()* отвечает за создание нового узла, обращение заданной строки и столбца в бесконечность (для редукции на последующих шагах).

5) Функция *reduce_row_vise()* отвечает за редукцию матрицы по строкам.

6) Функция *reduce_col_vise()* отвечает за редукцию матрицы по столбцам.

7) Функция *calculate_cost()* отвечает за вычисления стоимости матрицы (соответственно, запускает её редукцию).

8) Функция *solve()* запускает решение. Происходит инициализация первого узла, очереди с приоритетом. Запускается цикл, вычисляющий стоимость узлов на следующих итерациях, которые, в свою очередь, помещаются в очередь с приоритетом (меньше стоимость – больше приоритет).

Помимо этого, написан модуль, предназначенный для тестирования программы. Внутри модуля есть генератор матриц смежности заданного размера (в тестировании использованы матрицы *20x20*), заполненные случайными числами. Происходит замер времени работы расчёта пути, вычисляется среднее значение в секундах на основе большого количества тестов.

Исходный код приведён в приложении А.

**Тестирование.**

Принято решение проверить время работы алгоритма на *1000* матрицах размера *20x20*, заполненных случайными числами до *100*. Результат записывается в файл. Первая строка файла – количество времени (в среднем), затраченное на работу алгоритма, далее – номер итерации и вывод результата, в требуемом формате. Листинг приведён в приложении А.

**Выводы.**

Разработана программа, решающая задачу построения минимального гамильтонова цикла в графе (коммивояжер). В решении используется метод ветвей и границ, матрица редукции. Алгоритм основывается на использовании встроенной в *Python* очереди с приоритетом. Решение реализовано в функциональном стиле. Отдельно написан модуль для тестирования программы. Алгоритм протестирован на *1000* матрицах размера *20x20* случайного содержания. В среднем алгоритм работает *5,24* секунды.

# ПРИЛОЖЕНИЕ А
# ИСХОДНЫЙ КОД ПРОГРАММЫ

Название файла: algorithm.py

```
import copy
import queue
import sys
import os

MAX_INT = sys.maxsize
class Node:
    def __init__(self):
        self.path = ""
        self.map = None
        self.cost = None
        self.number = None
        self.amount_of_nodes_visited = None
        self.map_size = None
    def __str__(self):
        result = ""
        for i in range(self.map_size):
            result += str(self.map[i]) + "\n"
        return result
    def __lt__(self, other):
        if (self.cost < other.cost):
            return True
        return False

    def fill_from_file(self, filepath):
        with open(filepath) as textFile:
            self.map = [list(map(int, line.split())) for line in textFile]
        self.map_size = len(self.map[0])
        for i in range(self.map_size):
            for j in range(self.map_size):
                if self.map[i][j] == -1:
                    self.map[i][j] = MAX_INT

def init_root(filepath):
    node = Node()
    node.path = "["
    node.cost = 0
    node.number = 0
    node.amount_of_nodes_visited = 0
    node.fill_from_file(filepath)
    return node

def new_node(parentMatrix, path, amount_of_nodes_visited, src_number,
             dest_number):
    node = Node()
    node.path = path
    if amount_of_nodes_visited != 0:
        node.path += f"{str(src_number + 1)}, "
    node.map = copy.deepcopy(parentMatrix)
    node.map_size = len(node.map[0])
```

```
    k = 0
    while (amount_of_nodes_visited != 0 and k < node.map_size):
        node.map[src_number][k] = MAX_INT
        node.map[k][dest_number] = MAX_INT
        k += 1
    node.map[dest_number][0] = MAX_INT
    node.amount_of_nodes_visited = amount_of_nodes_visited
    node.number = dest_number
    return node

def reduce_row_vise(node):
    node_map_copy = node.map
    node_map_map_size = node.map_size
    min_reduction_row = [MAX_INT] * node_map_map_size
    for i in range(node_map_map_size):
        for j in range(node_map_map_size):
            if node_map_copy[i][j] < min_reduction_row[i]:
                min_reduction_row[i] = node_map_copy[i][j]
    for i in range(node_map_map_size):
        for j in range(node_map_map_size):
            if (node_map_copy[i][j] != MAX_INT and min_reduction_row[i] !=
MAX_INT):
                node_map_copy[i][j] -= min_reduction_row[i]
    return min_reduction_row

def reduce_col_vise(node):
    node_map_copy = node.map
    node_map_map_size = node.map_size
    min_reduction_col = [MAX_INT] * node_map_map_size
    for i in range(node.map_size):
        for j in range(node.map_size):
            if node_map_copy[i][j] < min_reduction_col[j]:
                min_reduction_col[j] = node_map_copy[i][j]
    for i in range(node_map_map_size):
        for j in range(node_map_map_size):
            if (node_map_copy[i][j] != MAX_INT and min_reduction_col[j] !=
MAX_INT):
                node_map_copy[i][j] -= min_reduction_col[j]
    return min_reduction_col

def calculate_cost(node):
    cost = 0
    row = reduce_row_vise(node)
    col = reduce_col_vise(node)
    for i in range(node.map_size):
        cost += row[i] if row[i] != MAX_INT else 0
        cost += col[i] if col[i] != MAX_INT else 0
    return cost

def solve(filepath):
    pq = queue.PriorityQueue()

    root = init_root(filepath)
    root.cost = calculate_cost(root)
    pq.put((root.cost, root))

    while (not(pq.empty())):
        minNode = pq.get()[1]
```

```
        current_number = minNode.number
        if minNode.amount_of_nodes_visited == minNode.map_size - 1:
            minNode.path += f"{str(current_number + 1)}, 1]"
            return minNode.path, minNode.cost

        for j in range(minNode.map_size):
                    child  =  new_node(minNode.map,  minNode.path,  min-
Node.amount_of_nodes_visited + 1, current_number, j)
             child.cost = minNode.cost + minNode.map[current_number][j] +
calculate_cost(child)
            pq.put((child.cost, child))
```

```
from queue import PriorityQueue

class Solve :

    def __init__(self)->None :
    self.path_found = False
    self.path = None
    self.graph = None
    self.start_node = None
    self.end_node = None

    #    Выводит ответ в требуемом на Stepik формате(строка, содержащая
путь)

    def printSolution(self)->None:
print(self.path)

#   Составляет граф по входным данным, записывает граф в виде словаря, где
#   ключ - узел - родитель, а значение - список дочерних узлов
def getDictGraphFromInput(self)->None:
graph = {}
self.start_node, self.end_node = input().split()
while True :
    try :
    for elem in input().split('\n') :
        cur_start_node, cur_end_node, cur_length = el - em.split()
        if graph.get(cur_start_node) is None :
graph[cur_start_node] = [(cur_end_node,
    float(cur_length))]
        else :
            graph[cur_start_node] += [(cur_end_node,
                float(cur_length))]
            except :
            break
            self.graph = graph

            #   Сортирует список дочерних узлов по весу рёбер
            def sortKeysInGraphDict(self) :
            for key in self.graph :
                self.graph.update(
```

```
                    { key: sorted(self.graph[key], key = lambda x : x[1])
})

                #   Вычисляет  эвристическое значения для данного узла
                def heuristic(self, node_to_check: str) :
                return abs(ord(self.end_node) - ord(node_to_check))

                #   Инициализирует решение жадным алгоритмом
                def startSolutionGreedy(self) :
                self.getDictGraphFromInput()
                self.sortKeysInGraphDict()
                self.iterateGreedy(self.start_node, f"{self.start_node}")

                #   Инициализирует решениеалгоритмом A *
                def startSolutionAStar(self)->None:
self.getDictGraphFromInput()
self.iterateAStar()

#   Строит путь жадным алгоритмом
def iterateGreedy(self, cur_node: str, cur_path : str)->None:
if self.path_found is True :
return
if cur_node == self.end_node :
    self.path = cur_path
    self.path_found = True
    return
    if self.graph.get(cur_node) is not None :
        for elem in self.graph[cur_node] :
            self.iterateGreedy(elem[0], cur_path + f"{elem[0]}")

            #   Строит путь алгоритмом A*
            def iterateAStar(self) :
            weighted_node_queue = PriorityQueue()
            parents = {}
            cost_sheet = {}
            weighted_node_queue.put((0, self.start_node))
            parents[self.start_node] = None
            cost_sheet[self.start_node] = 0
            while not weighted_node_queue.empty() :
                cur_node = weighted_node_queue.get()[1]
                if cur_node == self.end_node :
                    break
                    if self.graph.get(cur_node) != None :
                        for       next_node,       next_weight       in
self.graph.get(cur_node) :
                            new_cost = cost_sheet[cur_node] + next_weight
                            if next_node not in cost_sheet or new_cost <
cost_sheet[
                                next_node] :
                                cost_sheet[next_node] = new_cost
                                    new_priority = new_cost + self.heuris-
tic(next_node)
                                    weighted_node_queue.put((new_prior-
ity, next_node))
                                    parents[next_node] = cur_node
                                    cur_node = self.end_node
                                    self.path = f"{self.end_node}"
                                    while cur_node != self.start_node:
```

```
                                cur_node = parents[cur_node]
                                    self.path += cur_node
                                    self.path = self.path[:: - 1]

                                    if __name__ == "__main__" :
                                        solution = Solve()
                                        solution.startSolutionGreedy()
                                        solution.printSolution()
```

Название файла: test.py

```
import random
import os
import shutil
import algorithm
import time

def show_progress(current_iteration, overall_amount):

    print("\033c", end='')
    print(f"Processed: {current_iteration}\{overall_amount}")

def rand_with_exclude(start, stop, excluded_num = 0):
    randInt = excluded_num
    while randInt == excluded_num:
        randInt = random.randint(start, stop)
    return randInt

def generate_rand_arr(start, stop, size):
    randArr = []
    for _ in range(size):
        randArr.append(rand_with_exclude(start, stop))
    return randArr

def generate_rand_matrix(start, stop, size):
    matrix = [generate_rand_arr(start, stop, size) for _ in range(size)]
    for i in range(size):
        matrix[i][i] = -1
    return matrix

def matrix_to_string(matrix):
    return '\n'.join([' '.join([str(c) for c in lst]) for lst in matrix])

def write_matrix_to_file(matrix, filename, file_destination):
    f = open(file_destination + '\\' + filename, 'a+')
    f.write(matrix_to_string(matrix))
    f.close()


def generate_test_files(amount, matrSize = 20):
    cur_path = os.path.abspath(os.getcwd())
    dir_name = '\\file_chamber'
    folder_path = cur_path + dir_name
    if os.path.isdir(folder_path):
        shutil.rmtree(folder_path)
    os.makedirs(folder_path)
    for i in range(amount):
          write_matrix_to_file(generate_rand_matrix(-1,  100,  matrSize),
f'test_matr_{i}.txt', folder_path)
```

```
def start_testing(amount):
    generate_test_files(amount)
    cur_path = os.path.abspath(os.getcwd())
    folder_path = cur_path + '\\file_chamber'
    time_list = []
    testing_result = ""
    for i in range(amount):
        test_matr_path = folder_path + f'\\test_matr_{i}.txt'
        start_time = time.time()
        path, cost = algorithm.solve(test_matr_path)
        end_time = time.time() - start_time
        time_list.append(end_time)
            testing_result += f"Iteration: {i + 1}\n{path}, {cost},
{end_time}s\n"
        show_progress(i+1, amount)
    testing_result = f'Average time: {round(sum(time_list)/len(time_list),
2)}s\n' + testing_result
    with open("test_output.txt", "w+") as f:
        f.write(testing_result)
    return testing_result

start_testing(5)
```

Листинг тестирования

```
Average time: 5.24s
Iteration: 1
[1, 16, 7, 5, 12, 15, 17, 9, 6, 19, 13, 3, 18, 10, 20, 14, 11, 2, 4,
8, 1], 182, 2.257307767868042s
Iteration: 2
[1, 11, 5, 15, 16, 19, 17, 20, 13, 4, 7, 14, 18, 9, 3, 6, 10, 8, 12,
2, 1], 198, 3.179410457611084s
Iteration: 3
[1, 13, 5, 17, 15, 11, 3, 19, 10, 7, 12, 16, 4, 18, 20, 2, 6, 14, 8,
9, 1], 201, 18.835036277770996s
Iteration: 4
[1, 8, 13, 4, 10, 15, 9, 19, 5, 3, 14, 16, 11, 18, 17, 20, 7, 2, 6,
12, 1], 185, 6.04627799987793s
Iteration: 5
[1, 6, 2, 16, 17, 7, 12, 3, 5, 20, 4, 15, 11, 8, 10, 18, 13, 14, 9,
19, 1], 153, 14.642467498779297s
Iteration: 6
[1, 8, 15, 20, 16, 7, 19, 2, 3, 14, 9, 6, 5, 17, 4, 12, 13, 10, 11,
18, 1], 180, 2.460782289505005s
Iteration: 7
```

[1, 7, 14, 4, 6, 13, 20, 18, 3, 10, 16, 15, 5, 2, 12, 11, 19, 9, 8, 17, 1], 192, 0.2325277328491211s

Iteration: 8

[1, 13, 18, 7, 17, 11, 12, 15, 8, 9, 16, 10, 5, 19, 6, 2, 20, 3, 14, 4, 1], 177, 11.683405876159668s

Iteration: 9

[1, 15, 18, 7, 12, 13, 11, 17, 20, 10, 5, 6, 3, 4, 8, 14, 2, 9, 16, 19, 1], 153, 5.24539852142334s

Iteration: 10

[1, 12, 17, 14, 13, 6, 16, 20, 19, 15, 10, 9, 2, 3, 4, 18, 11, 7, 8, 5, 1], 153, 1.4644267559051514s

Iteration: 11

[1, 8, 15, 9, 7, 13, 20, 3, 18, 16, 10, 6, 12, 14, 2, 17, 11, 5, 19, 4, 1], 197, 0.9141190052032471s

Iteration: 12

[1, 19, 17, 2, 5, 7, 8, 14, 3, 9, 16, 15, 4, 20, 13, 6, 10, 11, 18, 12, 1], 130, 3.599820137023926s

Iteration: 13

[1, 17, 8, 4, 6, 20, 13, 11, 3, 19, 16, 18, 12, 14, 10, 7, 9, 15, 5, 2, 1], 198, 1.5712089538574219s

Iteration: 14

[1, 16, 5, 17, 9, 20, 3, 6, 10, 7, 19, 15, 11, 12, 8, 14, 18, 13, 4, 2, 1], 186, 2.6997718811035156s

Iteration: 15

[1, 6, 5, 20, 10, 18, 3, 19, 8, 4, 9, 13, 16, 12, 11, 15, 2, 17, 7, 14, 1], 194, 7.13158106803894s

Iteration: 16

[1, 6, 17, 7, 5, 16, 18, 12, 19, 11, 10, 8, 4, 15, 20, 3, 14, 13, 9, 2, 1], 143, 1.5383501052856445s

Iteration: 17

[1, 15, 18, 5, 11, 4, 12, 6, 10, 17, 8, 2, 19, 9, 13, 7, 16, 3, 20, 14, 1], 190, 9.573455572128296s

Iteration: 18

[1, 18, 16, 11, 10, 7, 20, 17, 8, 2, 3, 9, 19, 14, 12, 13, 15, 6, 5, 4, 1], 159, 2.64743709564209s

Iteration: 19

[1, 8, 6, 7, 16, 10, 14, 11, 17, 3, 18, 9, 20, 2, 19, 13, 5, 12, 15, 4, 1], 213, 1.8098669052124023s

Iteration: 20

[1, 18, 16, 11, 14, 8, 3, 17, 20, 6, 10, 2, 13, 4, 5, 15, 12, 9, 19, 7, 1], 196, 3.3955793380737305s

Iteration: 21

[1, 11, 9, 5, 14, 6, 16, 2, 4, 18, 13, 8, 3, 17, 15, 7, 19, 20, 12, 10, 1], 207, 0.5651581287384033s

Iteration: 22

[1, 20, 6, 13, 8, 9, 18, 4, 11, 17, 2, 5, 16, 10, 7, 19, 3, 14, 15, 12, 1], 168, 4.2464118003845215s

Iteration: 23

[1, 6, 2, 17, 9, 18, 10, 19, 12, 4, 13, 3, 15, 7, 20, 11, 5, 16, 8, 14, 1], 212, 3.148728370666504s

Iteration: 24

[1, 5, 15, 12, 9, 11, 10, 7, 18, 8, 4, 17, 19, 14, 3, 6, 2, 13, 16, 20, 1], 165, 1.4211323261260986s

Iteration: 25

[1, 18, 2, 3, 20, 15, 14, 4, 16, 8, 19, 11, 5, 6, 13, 12, 17, 10, 7, 9, 1], 147, 8.70548701286316s

Iteration: 26

[1, 5, 2, 20, 10, 15, 19, 14, 4, 8, 6, 12, 3, 17, 11, 13, 9, 7, 16, 18, 1], 203, 3.817847490310669s

Iteration: 27

[1, 12, 15, 7, 16, 13, 6, 10, 4, 19, 5, 9, 14, 3, 17, 8, 2, 18, 11, 20, 1], 166, 6.519527435302734s

Iteration: 28

[1, 18, 15, 20, 14, 7, 8, 4, 10, 11, 19, 5, 13, 2, 16, 6, 17, 9, 3, 12, 1], 151, 6.519324064254761s

Iteration: 29

[1, 7, 19, 18, 12, 8, 11, 5, 13, 15, 9, 4, 6, 3, 2, 16, 10, 17, 14, 20, 1], 162, 8.552111864089966s

Iteration: 30

[1, 14, 18, 10, 15, 12, 2, 13, 11, 4, 16, 9, 6, 17, 19, 8, 7, 5, 3, 20, 1], 164, 7.474730491638184s

Iteration: 31

[1, 14, 6, 17, 8, 19, 11, 16, 15, 2, 18, 12, 9, 10, 5, 3, 4, 20, 13, 7, 1], 131, 5.943586349487305s

Iteration: 32

[1, 5, 10, 3, 11, 20, 14, 12, 18, 13, 2, 16, 6, 4, 9, 15, 8, 7, 17, 19, 1], 153, 1.5917949676513672s

Iteration: 33

[1, 6, 3, 17, 2, 19, 8, 5, 18, 14, 9, 20, 7, 15, 12, 10, 4, 16, 11, 13, 1], 199, 25.169859409332275s

Iteration: 34

[1, 4, 3, 6, 19, 16, 5, 12, 13, 18, 17, 20, 2, 15, 11, 7, 8, 14, 10, 9, 1], 169, 9.36943531036377s

Iteration: 35

[1, 3, 4, 17, 5, 15, 14, 9, 16, 19, 6, 20, 10, 7, 18, 12, 2, 13, 11, 8, 1], 126, 1.7630717754364014s

Iteration: 36

[1, 3, 9, 19, 5, 4, 10, 11, 6, 18, 20, 2, 12, 16, 17, 13, 14, 15, 7, 8, 1], 204, 4.0462775230407715s

Iteration: 37

[1, 8, 14, 5, 2, 18, 11, 17, 4, 10, 16, 6, 12, 19, 3, 9, 15, 7, 20, 13, 1], 199, 2.584801435470581s

Iteration: 38

[1, 17, 20, 19, 16, 9, 8, 5, 12, 18, 6, 4, 14, 13, 15, 10, 7, 3, 11, 2, 1], 183, 1.7701842784881592s

Iteration: 39

[1, 4, 17, 3, 5, 2, 19, 18, 7, 6, 9, 10, 15, 13, 8, 20, 14, 16, 11, 12, 1], 191, 18.565688371658325s

Iteration: 40

[1, 12, 19, 3, 6, 8, 2, 5, 14, 10, 20, 4, 16, 17, 13, 18, 9, 15, 11, 7, 1], 147, 0.19460034370422363s

Iteration: 41

[1, 8, 15, 19, 16, 10, 2, 11, 9, 7, 18, 13, 4, 20, 6, 5, 3, 17, 14, 12, 1], 167, 0.6784868240356445s

Iteration: 42

[1, 20, 17, 14, 10, 8, 12, 9, 2, 7, 15, 6, 18, 19, 5, 3, 4, 13, 16, 11, 1], 172, 2.3228485584259033s

Iteration: 43

[1, 5, 17, 16, 11, 8, 13, 20, 2, 18, 9, 14, 6, 19, 12, 15, 10, 3, 7, 4, 1], 175, 3.9720470905303955s

Iteration: 44

[1, 13, 10, 14, 4, 16, 18, 20, 3, 7, 5, 2, 19, 12, 9, 15, 11, 8, 17, 6, 1], 182, 4.811732530593872s

Iteration: 45

[1, 18, 14, 5, 7, 16, 10, 8, 17, 11, 13, 12, 6, 2, 20, 19, 4, 9, 15, 3, 1], 176, 4.151506662368774s

Iteration: 46

[1, 12, 20, 17, 13, 4, 5, 19, 8, 14, 9, 11, 3, 10, 7, 15, 2, 16, 6, 18, 1], 194, 11.90162467956543s

Iteration: 47

[1, 7, 3, 19, 2, 20, 6, 5, 9, 15, 10, 17, 14, 12, 8, 13, 16, 4, 18, 11, 1], 187, 0.6723225116729736s

Iteration: 48

[1, 14, 6, 11, 8, 2, 17, 3, 16, 20, 19, 5, 9, 13, 10, 12, 7, 4, 18, 15, 1], 161, 0.9094638824462891s

Iteration: 49

[1, 11, 6, 7, 19, 13, 10, 18, 3, 5, 4, 15, 12, 20, 8, 14, 2, 16, 17, 9, 1], 206, 1.8726582527160645s

Iteration: 50

[1, 16, 6, 17, 2, 11, 20, 19, 4, 9, 12, 10, 5, 18, 14, 13, 3, 15, 7, 8, 1], 158, 0.3138701915740967s

Iteration: 51

[1, 15, 19, 3, 16, 8, 17, 10, 9, 6, 11, 7, 12, 18, 13, 4, 5, 2, 14, 20, 1], 193, 0.8189973831176758s

Iteration: 52

[1, 11, 10, 16, 19, 20, 14, 13, 17, 2, 18, 7, 12, 15, 8, 3, 6, 9, 4, 5, 1], 169, 11.677170753479004s

Iteration: 53

[1, 10, 11, 7, 8, 4, 15, 20, 14, 6, 9, 2, 3, 13, 17, 12, 5, 18, 19, 16, 1], 170, 0.5612881183624268s

Iteration: 54

[1, 9, 8, 6, 18, 4, 13, 10, 11, 12, 15, 14, 19, 16, 5, 20, 3, 2, 7, 17, 1], 162, 0.32364344596862793s

Iteration: 55

[1, 16, 14, 8, 10, 13, 11, 15, 7, 12, 6, 9, 5, 4, 17, 18, 19, 20, 2, 3, 1], 183, 1.537062644958496s

Iteration: 56

[1, 16, 4, 2, 12, 5, 8, 11, 15, 18, 6, 3, 19, 9, 13, 14, 7, 17, 20, 10, 1], 190, 7.446973562240601s

Iteration: 57

[1, 12, 10, 9, 17, 3, 16, 5, 4, 14, 6, 8, 19, 7, 2, 15, 20, 11, 13, 18, 1], 172, 1.5065412521362305s

Iteration: 58

[1, 13, 15, 19, 12, 16, 17, 14, 8, 7, 18, 3, 6, 2, 11, 10, 20, 4, 9, 5, 1], 179, 5.716485977172852s

Iteration: 59

[1, 17, 6, 3, 2, 19, 15, 16, 20, 8, 10, 4, 11, 9, 12, 18, 13, 14, 7, 5, 1], 148, 4.411121368408203s

Iteration: 60

[1, 18, 10, 20, 3, 5, 16, 14, 15, 6, 11, 7, 12, 17, 19, 13, 2, 9, 4, 8, 1], 174, 1.6991376876831055s

Iteration: 61

[1, 10, 7, 11, 19, 12, 9, 3, 18, 17, 20, 13, 4, 16, 15, 14, 5, 6, 2, 8, 1], 161, 29.768994092941284s

Iteration: 62

[1, 6, 12, 13, 18, 2, 14, 19, 20, 4, 17, 7, 9, 8, 16, 15, 5, 11, 3, 10, 1], 122, 0.23912262916564941s

Iteration: 63

[1, 7, 5, 3, 17, 2, 14, 19, 9, 13, 20, 4, 11, 18, 8, 15, 10, 16, 6, 12, 1], 161, 3.5003116130828857s

Iteration: 64

[1, 15, 5, 4, 16, 10, 13, 9, 6, 3, 2, 17, 8, 14, 19, 20, 12, 7, 18, 11, 1], 188, 1.6964466571807861s

Iteration: 65

[1, 14, 2, 3, 13, 5, 20, 19, 4, 6, 7, 12, 9, 17, 8, 10, 15, 18, 16, 11, 1], 156, 5.322293519973755s

Iteration: 66

[1, 13, 12, 16, 15, 11, 3, 4, 17, 9, 8, 2, 18, 5, 7, 14, 19, 6, 10, 20, 1], 200, 12.235697031021118s

Iteration: 67

[1, 15, 8, 14, 13, 6, 12, 4, 2, 11, 18, 17, 19, 5, 10, 9, 3, 7, 20, 16, 1], 178, 1.1029126644134521s

Iteration: 68

[1, 8, 20, 9, 15, 3, 2, 12, 4, 14, 11, 16, 7, 6, 19, 18, 13, 5, 10, 17, 1], 195, 22.66564631462097s

Iteration: 69

[1, 11, 17, 19, 4, 8, 14, 16, 6, 2, 7, 13, 15, 20, 3, 10, 9, 12, 5, 18, 1], 155, 8.8213951587677s

Iteration: 70

[1, 20, 4, 13, 12, 2, 17, 15, 8, 19, 14, 10, 7, 3, 11, 9, 6, 5, 16, 18, 1], 165, 0.7226066589355469s

Iteration: 71

[1, 11, 5, 14, 13, 10, 20, 15, 3, 18, 17, 8, 4, 16, 6, 2, 7, 19, 9, 12, 1], 174, 18.18670153617859s

Iteration: 72

[1, 18, 8, 13, 12, 19, 9, 14, 7, 2, 6, 16, 17, 15, 4, 20, 11, 3, 5, 10, 1], 189, 17.862840175628662s

Iteration: 73

[1, 10, 4, 11, 14, 12, 19, 9, 15, 8, 5, 18, 3, 16, 13, 20, 7, 2, 17, 6, 1], 213, 6.125471591949463s

Iteration: 74

[1, 8, 4, 18, 3, 5, 9, 12, 13, 2, 19, 10, 17, 11, 20, 16, 15, 6, 7, 14, 1], 146, 1.8117973804473877s

Iteration: 75

[1, 12, 13, 6, 4, 18, 5, 20, 15, 2, 8, 10, 16, 3, 14, 9, 7, 17, 11, 19, 1], 180, 5.527240753173828s

Iteration: 76

[1, 18, 17, 13, 14, 20, 3, 19, 9, 16, 6, 11, 5, 8, 7, 10, 2, 15, 12, 4, 1], 136, 0.5621552467346191s

Iteration: 77

[1, 19, 15, 20, 4, 9, 2, 7, 14, 6, 11, 16, 18, 3, 17, 12, 10, 8, 13, 5, 1], 191, 4.512734651565552s

Iteration: 78

[1, 5, 8, 10, 15, 3, 13, 7, 9, 19, 20, 17, 6, 18, 12, 16, 4, 14, 2, 11, 1], 177, 11.188674688339233s

Iteration: 79

[1, 3, 16, 17, 7, 9, 2, 14, 19, 8, 15, 13, 12, 11, 4, 5, 20, 18, 6, 10, 1], 155, 0.7440469264984131s

Iteration: 80

[1, 15, 20, 2, 16, 19, 17, 13, 9, 4, 5, 8, 7, 18, 3, 12, 6, 10, 14, 11, 1], 180, 17.592997312545776s

Iteration: 81

[1, 11, 20, 4, 12, 10, 18, 7, 3, 6, 13, 9, 14, 17, 16, 2, 5, 15, 8, 19, 1], 136, 0.23478293418884277s

Iteration: 82

[1, 16, 8, 7, 15, 3, 17, 18, 19, 5, 10, 4, 11, 9, 12, 14, 2, 13, 20, 6, 1], 184, 1.168546438217163s

Iteration: 83

[1, 20, 17, 19, 9, 10, 7, 18, 5, 16, 14, 2, 15, 4, 6, 8, 12, 11, 13, 3, 1], 192, 4.358553647994995s

Iteration: 84

[1, 13, 17, 3, 14, 15, 20, 16, 4, 11, 6, 12, 5, 18, 2, 8, 19, 7, 9, 10, 1], 197, 8.971451044082642s

Iteration: 85

[1, 19, 13, 18, 16, 17, 5, 20, 12, 4, 3, 2, 9, 6, 8, 15, 7, 10, 14, 11, 1], 181, 0.931790828704834s

Iteration: 86

[1, 5, 18, 9, 8, 10, 6, 3, 2, 12, 11, 4, 20, 19, 17, 7, 15, 14, 16, 13, 1], 139, 1.89085054397583s

Iteration: 87

[1, 18, 17, 8, 6, 2, 10, 4, 14, 15, 12, 3, 19, 7, 13, 20, 9, 5, 16, 11, 1], 209, 7.008394956588745s

Iteration: 88

[1, 6, 20, 18, 8, 10, 7, 12, 5, 15, 2, 4, 14, 9, 16, 11, 13, 3, 19, 17, 1], 188, 3.005776882171631s

Iteration: 89

[1, 16, 15, 3, 9, 18, 7, 20, 17, 13, 14, 2, 11, 5, 12, 4, 8, 19, 10, 6, 1], 165, 0.7971789836883545s

Iteration: 90

[1, 13, 20, 18, 8, 5, 11, 17, 2, 3, 6, 4, 10, 12, 9, 7, 14, 15, 16, 19, 1], 149, 6.385860443115234s

Iteration: 91

[1, 10, 15, 7, 14, 4, 12, 6, 5, 9, 3, 8, 2, 16, 20, 13, 19, 18, 11, 17, 1], 193, 4.5450286865234375s

Iteration: 92

[1, 4, 20, 13, 2, 18, 15, 5, 10, 6, 3, 8, 11, 17, 7, 9, 19, 16, 14, 12, 1], 161, 6.285106658935547s

Iteration: 93

[1, 4, 7, 15, 8, 10, 14, 13, 18, 16, 20, 9, 19, 12, 11, 5, 6, 3, 2, 17, 1], 172, 29.471356868743896s

Iteration: 94

[1, 16, 7, 20, 15, 3, 8, 12, 10, 17, 18, 2, 9, 19, 6, 11, 13, 5, 4, 14, 1], 140, 3.689366102218628s

Iteration: 95

[1, 6, 17, 16, 2, 15, 14, 12, 8, 5, 3, 7, 11, 9, 20, 10, 18, 13, 19, 4, 1], 217, 3.346599578857422s

Iteration: 96

[1, 13, 5, 17, 3, 14, 4, 15, 16, 6, 9, 8, 10, 11, 20, 7, 18, 2, 12, 19, 1], 184, 5.798462152481079s

Iteration: 97

[1, 19, 9, 12, 16, 13, 3, 6, 4, 14, 5, 17, 8, 7, 20, 10, 15, 11, 2, 18, 1], 171, 4.12851619720459s

Iteration: 98

[1, 18, 3, 17, 15, 6, 20, 7, 2, 11, 16, 14, 10, 12, 9, 8, 5, 13, 19, 4, 1], 136, 1.3358848094940186s

Iteration: 99

[1, 5, 10, 2, 16, 7, 3, 19, 15, 11, 14, 13, 9, 6, 17, 8, 4, 18, 12, 20, 1], 186, 3.0042266845703125s

Iteration: 100

[1, 3, 5, 20, 2, 14, 13, 19, 6, 18, 11, 7, 4, 12, 17, 8, 9, 16, 10, 15, 1], 179, 0.7283101081848145s

Iteration: 101

[1, 13, 15, 20, 17, 3, 5, 2, 7, 10, 4, 8, 19, 14, 9, 16, 12, 18, 6, 11, 1], 161, 0.9213345050811768s

Iteration: 102

[1, 13, 20, 16, 17, 3, 18, 4, 14, 7, 5, 6, 19, 9, 15, 10, 11, 12, 2, 8, 1], 191, 3.817953109741211s

Iteration: 103

[1, 11, 10, 8, 2, 20, 16, 9, 3, 14, 17, 18, 13, 6, 19, 12, 4, 7, 5, 15, 1], 222, 1.6809813976287842s

Iteration: 104

[1, 8, 15, 2, 14, 4, 11, 20, 17, 10, 7, 9, 16, 5, 19, 12, 18, 13, 6, 3, 1], 208, 2.7583580017089844s

Iteration: 105

[1, 18, 16, 15, 8, 20, 12, 3, 13, 7, 6, 4, 9, 5, 11, 10, 2, 17, 14, 19, 1], 166, 13.808736085891724s

Iteration: 106

[1, 4, 17, 20, 9, 3, 19, 11, 16, 12, 5, 13, 2, 18, 14, 7, 8, 6, 15, 10, 1], 142, 0.8840453624725342s

Iteration: 107

[1, 13, 15, 14, 6, 9, 10, 16, 4, 5, 11, 19, 2, 8, 7, 17, 18, 3, 12, 20, 1], 199, 0.3376297950744629s

Iteration: 108

[1, 9, 20, 19, 16, 5, 4, 17, 8, 6, 14, 11, 3, 2, 7, 10, 13, 12, 18, 15, 1], 162, 0.7706022262573242s

Iteration: 109

[1, 2, 19, 14, 10, 15, 4, 6, 17, 8, 5, 7, 3, 16, 11, 20, 18, 9, 13, 12, 1], 155, 3.802950382232666s

Iteration: 110

[1, 18, 12, 4, 6, 13, 19, 3, 17, 16, 15, 20, 11, 7, 8, 9, 10, 5, 14, 2, 1], 202, 3.402327299118042s

Iteration: 111

[1, 6, 19, 15, 20, 17, 9, 8, 18, 3, 7, 14, 4, 10, 5, 2, 11, 12, 13, 16, 1], 205, 3.9479598999023438s

Iteration: 112

[1, 8, 3, 17, 11, 18, 16, 9, 13, 19, 5, 12, 10, 7, 20, 4, 6, 15, 14, 2, 1], 176, 3.6522064208984375s

Iteration: 113

[1, 8, 6, 5, 11, 7, 3, 9, 13, 2, 18, 20, 4, 17, 10, 15, 19, 14, 16, 12, 1], 202, 3.5062553882598877s

Iteration: 114

[1, 7, 4, 5, 8, 18, 10, 14, 20, 17, 16, 19, 9, 2, 15, 13, 11, 12, 3, 6, 1], 169, 0.89327073097229s

Iteration: 115

[1, 7, 13, 11, 4, 8, 5, 10, 18, 16, 6, 15, 2, 12, 3, 14, 19, 20, 9, 17, 1], 150, 5.665711879730225s

Iteration: 116

[1, 6, 18, 15, 8, 11, 5, 2, 17, 16, 19, 20, 14, 3, 9, 4, 7, 13, 10, 12, 1], 169, 0.6865139007568359s

Iteration: 117

[1, 4, 17, 8, 5, 12, 6, 10, 18, 11, 15, 20, 9, 13, 14, 3, 16, 7, 2, 19, 1], 172, 4.594330072402954s

Iteration: 118

[1, 8, 13, 20, 14, 19, 3, 6, 9, 2, 5, 16, 4, 18, 7, 10, 11, 15, 17, 12, 1], 152, 0.49472761154174805s

Iteration: 119

[1, 17, 14, 2, 20, 7, 3, 13, 9, 10, 11, 4, 12, 6, 18, 8, 15, 5, 19, 16, 1], 165, 0.7854516506195068s

Iteration: 120

[1, 18, 20, 13, 15, 17, 19, 10, 11, 7, 4, 3, 9, 5, 16, 12, 6, 2, 8, 14, 1], 184, 3.021843910217285s

Iteration: 121

[1, 3, 7, 4, 13, 16, 11, 17, 12, 10, 19, 6, 20, 9, 18, 15, 2, 14, 5, 8, 1], 157, 3.793999433517456s

Iteration: 122

[1, 3, 7, 8, 6, 9, 12, 17, 11, 15, 13, 4, 10, 2, 20, 19, 16, 18, 5, 14, 1], 214, 10.553524017333984s

Iteration: 123

[1, 3, 6, 13, 16, 20, 17, 14, 19, 11, 9, 5, 7, 4, 12, 18, 8, 10, 15, 2, 1], 200, 3.204402208328247s

Iteration: 124

[1, 14, 10, 16, 5, 3, 13, 20, 9, 15, 18, 2, 11, 8, 4, 6, 19, 17, 7, 12, 1], 152, 1.5537197589874268s

Iteration: 125

[1, 6, 19, 15, 9, 10, 4, 11, 13, 7, 16, 14, 3, 2, 12, 17, 5, 20, 8, 18, 1], 195, 2.6454129219055176s

Iteration: 126

[1, 18, 6, 17, 20, 14, 19, 10, 15, 9, 5, 7, 12, 13, 16, 2, 8, 3, 4, 11, 1], 181, 2.1987264156341553s

Iteration: 127

[1, 9, 19, 8, 3, 14, 2, 10, 18, 16, 15, 5, 4, 6, 17, 12, 13, 11, 20, 7, 1], 207, 0.8421494960784912s

Iteration: 128

[1, 17, 19, 4, 20, 2, 8, 3, 15, 18, 16, 13, 9, 14, 11, 10, 5, 7, 6, 12, 1], 153, 0.42707300186157227s

Iteration: 129

[1, 15, 7, 10, 19, 14, 9, 3, 4, 16, 13, 18, 12, 8, 11, 6, 2, 17, 20, 5, 1], 186, 7.842011213302612s

Iteration: 130

[1, 9, 11, 10, 14, 18, 2, 15, 7, 20, 3, 8, 12, 19, 6, 5, 4, 17, 13, 16, 1], 177, 1.0109412670135498s

Iteration: 131

[1, 8, 20, 6, 4, 16, 15, 5, 13, 12, 19, 14, 9, 18, 11, 10, 3, 7, 17, 2, 1], 187, 6.1644580364227295s

Iteration: 132

[1, 17, 14, 15, 2, 13, 18, 8, 7, 12, 5, 10, 16, 19, 4, 20, 9, 11, 6, 3, 1], 161, 24.0993549823761s

Iteration: 133

[1, 3, 10, 4, 16, 13, 9, 11, 15, 18, 20, 14, 2, 6, 12, 19, 5, 17, 8, 7, 1], 162, 1.3926827907562256s

Iteration: 134

[1, 2, 3, 8, 11, 17, 18, 20, 15, 13, 9, 19, 6, 16, 12, 7, 10, 14, 4, 5, 1], 141, 1.9670588970184326s

Iteration: 135

[1, 2, 18, 10, 13, 17, 20, 8, 19, 9, 12, 4, 6, 15, 16, 3, 7, 11, 5, 14, 1], 222, 4.558449983596802s

Iteration: 136

[1, 6, 5, 4, 2, 3, 15, 10, 19, 11, 17, 12, 9, 14, 13, 8, 16, 20, 7, 18, 1], 204, 0.9166946411132812s

Iteration: 137

[1, 2, 12, 20, 5, 7, 15, 18, 9, 19, 14, 13, 16, 10, 17, 3, 4, 6, 11, 8, 1], 167, 43.76471018791199s

Iteration: 138

[1, 2, 14, 9, 18, 17, 7, 19, 3, 13, 11, 10, 8, 5, 20, 6, 4, 15, 12, 16, 1], 124, 0.24451589584350586s

Iteration: 139

[1, 18, 9, 20, 19, 12, 11, 13, 16, 14, 3, 4, 6, 5, 10, 15, 8, 17, 7, 2, 1], 185, 0.25456809997558594s

Iteration: 140

[1, 18, 13, 16, 12, 10, 5, 6, 11, 15, 14, 2, 7, 19, 3, 8, 9, 17, 20, 4, 1], 179, 11.052737712860107s

Iteration: 141

[1, 18, 16, 13, 4, 11, 15, 8, 19, 14, 6, 2, 7, 9, 3, 5, 12, 20, 17, 10, 1], 172, 0.87056565284729s

Iteration: 142

[1, 20, 3, 14, 15, 11, 8, 6, 18, 5, 9, 12, 7, 17, 4, 19, 2, 13, 10, 16, 1], 203, 2.0679707527160645s

Iteration: 143

[1, 6, 13, 12, 20, 9, 10, 5, 11, 18, 14, 2, 3, 19, 15, 17, 16, 4, 7, 8, 1], 156, 3.317659854888916s

Iteration: 144

[1, 8, 13, 3, 9, 19, 20, 14, 5, 16, 4, 6, 12, 11, 17, 15, 7, 10, 2, 18, 1], 204, 1.6316783428192139s

Iteration: 145

[1, 4, 12, 16, 17, 14, 15, 6, 2, 10, 11, 5, 7, 3, 18, 19, 9, 8, 20, 13, 1], 209, 3.120450496673584s

Iteration: 146

[1, 3, 2, 9, 5, 14, 12, 7, 8, 20, 18, 13, 4, 15, 10, 16, 6, 11, 17, 19, 1], 151, 4.012113332748413s

Iteration: 147

[1, 11, 4, 17, 7, 13, 12, 19, 3, 16, 8, 14, 18, 10, 6, 20, 15, 2, 5, 9, 1], 224, 4.29695200920105s

Iteration: 148

[1, 7, 2, 15, 3, 8, 18, 10, 20, 12, 13, 16, 5, 9, 19, 14, 4, 6, 11, 17, 1], 190, 1.5028092861175537s

Iteration: 149

[1, 18, 2, 4, 16, 13, 3, 10, 7, 12, 8, 14, 19, 15, 5, 20, 11, 6, 17, 9, 1], 198, 0.9365413188934326s

Iteration: 150

[1, 14, 6, 16, 11, 18, 9, 5, 19, 8, 4, 10, 3, 20, 13, 12, 2, 17, 7, 15, 1], 218, 0.8386213779449463s

Iteration: 151

[1, 2, 12, 15, 13, 7, 14, 10, 8, 16, 18, 6, 11, 4, 17, 19, 9, 20, 3, 5, 1], 160, 4.081743955612183s

Iteration: 152

[1, 17, 9, 18, 6, 3, 5, 13, 15, 20, 11, 8, 14, 7, 10, 4, 2, 12, 16, 19, 1], 166, 0.7923898696899414s

Iteration: 153

[1, 19, 13, 11, 4, 14, 10, 12, 3, 15, 16, 6, 18, 5, 20, 8, 7, 2, 17, 9, 1], 163, 3.6521663665771484s

Iteration: 154

[1, 4, 20, 19, 14, 15, 6, 16, 11, 2, 9, 5, 12, 10, 8, 7, 13, 17, 18, 3, 1], 211, 8.105580806732178s

Iteration: 155

[1, 5, 20, 16, 6, 8, 18, 11, 17, 14, 10, 2, 3, 13, 19, 7, 12, 4, 15, 9, 1], 198, 12.850009441375732s

Iteration: 156

[1, 17, 16, 15, 3, 4, 2, 7, 18, 8, 5, 11, 19, 9, 12, 20, 6, 13, 10, 14, 1], 185, 3.6951091289520264s

Iteration: 157

[1, 18, 9, 12, 13, 4, 17, 19, 8, 5, 10, 3, 6, 7, 16, 11, 2, 15, 14, 20, 1], 174, 5.564430236816406s

Iteration: 158

[1, 14, 15, 2, 11, 18, 17, 7, 12, 8, 20, 10, 5, 16, 19, 3, 13, 4, 9, 6, 1], 195, 1.6592555046081543s

Iteration: 159

[1, 17, 5, 6, 15, 19, 13, 10, 9, 4, 18, 3, 16, 14, 7, 2, 20, 11, 8, 12, 1], 173, 5.936741590499878s

Iteration: 160

[1, 4, 10, 19, 3, 14, 7, 8, 11, 18, 2, 13, 16, 15, 6, 12, 5, 17, 9, 20, 1], 163, 1.8970766067504883s

Iteration: 161

[1, 13, 10, 9, 6, 8, 4, 19, 17, 2, 18, 3, 15, 5, 7, 14, 12, 11, 20, 16, 1], 173, 1.0883088111877441s

Iteration: 162

[1, 15, 9, 3, 5, 12, 16, 20, 17, 8, 7, 11, 14, 13, 4, 10, 18, 19, 2, 6, 1], 197, 7.3926005363464355s

Iteration: 163

[1, 8, 10, 16, 4, 20, 7, 14, 6, 13, 11, 2, 19, 5, 9, 17, 18, 3, 15, 12, 1], 175, 5.466060400009155s

Iteration: 164

[1, 7, 8, 18, 19, 9, 17, 14, 10, 16, 5, 2, 12, 4, 11, 13, 15, 6, 3, 20, 1], 191, 0.7852990627288818s

Iteration: 165

[1, 19, 16, 3, 10, 20, 18, 15, 13, 14, 9, 8, 7, 11, 5, 17, 6, 2, 4, 12, 1], 133, 2.098511219024658s

Iteration: 166

[1, 8, 19, 15, 6, 3, 11, 17, 4, 12, 9, 7, 10, 14, 13, 16, 5, 20, 18, 2, 1], 157, 2.2699687480926514s

Iteration: 167

[1, 17, 10, 14, 5, 19, 4, 15, 13, 11, 12, 7, 18, 16, 3, 8, 9, 20, 2, 6, 1], 198, 0.9867510795593262s

Iteration: 168

[1, 19, 14, 11, 10, 4, 20, 3, 6, 18, 17, 8, 12, 16, 5, 15, 2, 13, 7, 9, 1], 170, 6.18436861038208s

Iteration: 169

[1, 20, 5, 7, 14, 10, 3, 11, 15, 16, 18, 6, 4, 19, 13, 17, 12, 8, 2, 9, 1], 180, 9.70670747756958s

Iteration: 170

[1, 11, 13, 15, 6, 14, 17, 2, 18, 20, 16, 3, 7, 8, 4, 10, 9, 12, 19, 5, 1], 177, 1.821185827255249s

Iteration: 171

[1, 7, 12, 17, 18, 8, 11, 4, 10, 5, 3, 6, 20, 13, 15, 16, 14, 19, 9, 2, 1], 183, 25.72068500518799s

Iteration: 172

[1, 2, 20, 8, 3, 19, 4, 5, 16, 11, 18, 13, 14, 10, 12, 15, 6, 17, 7, 9, 1], 146, 3.648231267929077s

Iteration: 173

[1, 8, 16, 19, 17, 13, 12, 11, 15, 2, 7, 6, 3, 20, 9, 18, 4, 14, 5, 10, 1], 206, 1.6184780597686768s

Iteration: 174

[1, 16, 3, 20, 17, 10, 11, 2, 14, 19, 18, 15, 12, 8, 4, 9, 7, 6, 5, 13, 1], 207, 3.1212847232818604s

Iteration: 175

[1, 6, 19, 12, 10, 11, 14, 9, 2, 18, 3, 13, 15, 8, 20, 5, 7, 17, 4, 16, 1], 170, 15.474148273468018s

Iteration: 176

[1, 13, 2, 16, 5, 12, 18, 9, 15, 4, 8, 17, 6, 11, 14, 3, 19, 10, 20, 7, 1], 170, 6.554701566696167s

Iteration: 177

[1, 14, 2, 9, 15, 17, 6, 16, 5, 10, 18, 7, 20, 3, 4, 11, 13, 19, 12, 8, 1], 186, 0.8976395130157471s

Iteration: 178

[1, 11, 7, 14, 4, 20, 13, 15, 18, 10, 2, 19, 12, 8, 9, 3, 17, 5, 6, 16, 1], 159, 4.0178914070129395s

Iteration: 179

[1, 6, 16, 3, 9, 8, 10, 14, 15, 7, 5, 18, 19, 2, 20, 4, 13, 11, 12, 17, 1], 159, 1.3182003498077393s

Iteration: 180

[1, 9, 13, 17, 8, 12, 2, 16, 5, 3, 18, 14, 10, 20, 4, 19, 6, 7, 15, 11, 1], 153, 2.1663906574249268s

Iteration: 181

[1, 4, 8, 10, 5, 6, 14, 19, 20, 16, 3, 12, 13, 18, 17, 7, 11, 15, 2, 9, 1], 157, 2.7945163249969482s

Iteration: 182

[1, 10, 19, 4, 16, 2, 9, 13, 18, 17, 14, 8, 15, 3, 11, 20, 12, 7, 5, 6, 1], 181, 1.5229487419128418s

Iteration: 183

[1, 18, 14, 8, 16, 13, 2, 3, 5, 10, 15, 12, 6, 20, 11, 19, 17, 4, 9, 7, 1], 147, 0.35706257820129395s

Iteration: 184

[1, 5, 8, 11, 3, 4, 6, 20, 10, 16, 14, 2, 9, 13, 12, 18, 19, 15, 7, 17, 1], 221, 10.45801067352295s

Iteration: 185

[1, 10, 15, 12, 4, 5, 9, 2, 13, 17, 8, 16, 18, 3, 20, 14, 7, 11, 6, 19, 1], 187, 1.386824369430542s

Iteration: 186

[1, 16, 4, 12, 8, 2, 20, 3, 6, 13, 18, 5, 7, 11, 10, 14, 17, 15, 19, 9, 1], 174, 8.218717098236084s

Iteration: 187

[1, 2, 3, 16, 4, 14, 8, 13, 11, 10, 6, 19, 18, 17, 5, 7, 12, 20, 9, 15, 1], 167, 0.4927949905395508s

Iteration: 188

[1, 7, 18, 16, 14, 9, 13, 12, 10, 8, 6, 19, 17, 20, 15, 3, 11, 5, 4, 2, 1], 201, 5.429133415222168s

Iteration: 189

[1, 2, 15, 10, 20, 7, 11, 6, 18, 19, 3, 16, 14, 13, 4, 8, 5, 17, 9, 12, 1], 150, 21.163776397705078s

Iteration: 190

[1, 20, 18, 12, 17, 2, 14, 3, 16, 7, 11, 6, 15, 4, 10, 8, 5, 19, 13, 9, 1], 136, 0.7151532173156738s

Iteration: 191

[1, 3, 7, 9, 14, 6, 13, 11, 4, 15, 16, 8, 10, 17, 18, 19, 2, 20, 12, 5, 1], 206, 1.8149635791778564s

Iteration: 192

[1, 17, 11, 20, 10, 15, 19, 13, 18, 9, 12, 2, 8, 4, 16, 7, 6, 14, 5, 3, 1], 134, 0.5352406501770025s

Iteration: 193

[1, 6, 3, 13, 16, 15, 9, 14, 18, 12, 20, 10, 5, 17, 7, 8, 19, 2, 11, 4, 1], 171, 2.168459177017212s

Iteration: 194

[1, 13, 4, 11, 9, 16, 10, 5, 2, 7, 14, 20, 17, 3, 19, 8, 12, 15, 18, 6, 1], 180, 2.8556032180786133s

Iteration: 195

[1, 18, 20, 9, 12, 5, 19, 16, 13, 11, 4, 10, 14, 3, 7, 15, 8, 6, 2, 17, 1], 157, 8.046536684036255s

Iteration: 196

[1, 5, 10, 16, 6, 3, 11, 9, 17, 4, 8, 14, 2, 12, 18, 15, 20, 19, 13, 7, 1], 191, 0.9527301788330078s

Iteration: 197

[1, 8, 17, 10, 13, 4, 18, 15, 14, 12, 6, 5, 3, 11, 7, 2, 16, 19, 20, 9, 1], 151, 0.5295989513397217s

Iteration: 198

[1, 7, 20, 12, 9, 19, 14, 11, 17, 6, 18, 4, 10, 5, 16, 3, 8, 13, 15, 2, 1], 160, 1.9080636501312256s

Iteration: 199

[1, 20, 17, 14, 3, 9, 18, 15, 8, 13, 19, 7, 11, 4, 12, 16, 2, 6, 5, 10, 1], 209, 1.014998197555542s

Iteration: 200

[1, 6, 16, 19, 17, 4, 15, 10, 8, 5, 14, 13, 20, 3, 2, 7, 9, 12, 11, 18, 1], 178, 1.2465367317199707s

Iteration: 201

[1, 20, 8, 4, 10, 9, 12, 13, 6, 2, 18, 15, 19, 14, 5, 16, 3, 11, 7, 17, 1], 237, 3.061699867248535s

Iteration: 202

[1, 2, 18, 12, 9, 13, 5, 3, 7, 4, 17, 19, 20, 10, 14, 16, 6, 11, 8, 15, 1], 178, 5.612773418426514s

Iteration: 203

[1, 15, 16, 2, 14, 5, 7, 19, 3, 18, 10, 12, 17, 13, 20, 6, 9, 4, 11, 8, 1], 197, 2.5990471839904785s

Iteration: 204

[1, 13, 15, 6, 4, 7, 20, 8, 19, 14, 12, 16, 9, 5, 18, 10, 11, 3, 17, 2, 1], 190, 3.6807861328125s

Iteration: 205

[1, 11, 2, 18, 12, 17, 10, 13, 20, 8, 15, 4, 19, 3, 5, 16, 14, 7, 9, 6, 1], 156, 2.5694217681884766s

Iteration: 206

[1, 5, 13, 9, 6, 2, 4, 7, 19, 3, 10, 20, 18, 17, 14, 11, 12, 15, 8, 16, 1], 150, 1.1401336193084717s

Iteration: 207

[1, 13, 5, 7, 8, 12, 3, 15, 17, 16, 10, 2, 11, 19, 14, 9, 4, 18, 6, 20, 1], 132, 21.882690906524658s

Iteration: 208

[1, 19, 2, 13, 8, 15, 6, 20, 5, 18, 14, 3, 12, 10, 11, 7, 16, 17, 4, 9, 1], 132, 5.187092065811157s

Iteration: 209

[1, 20, 3, 5, 7, 12, 4, 2, 17, 9, 10, 11, 19, 6, 18, 8, 14, 16, 13, 15, 1], 156, 0.6085877418518066s

Iteration: 210

[1, 8, 19, 7, 14, 9, 4, 18, 2, 3, 20, 5, 17, 15, 6, 11, 13, 12, 10, 16, 1], 204, 8.365325212478638s

Iteration: 211

[1, 9, 2, 4, 18, 15, 7, 11, 20, 16, 19, 8, 14, 17, 5, 6, 12, 3, 10, 13, 1], 129, 0.3031301498413086s

Iteration: 212

[1, 19, 6, 9, 7, 15, 14, 13, 11, 4, 10, 18, 16, 20, 3, 17, 8, 5, 12, 2, 1], 141, 0.21619057655334473s

Iteration: 213

[1, 9, 13, 18, 8, 2, 20, 3, 17, 10, 15, 19, 7, 16, 12, 14, 11, 4, 5, 6, 1], 140, 0.7665011882781982s

Iteration: 214

[1, 20, 15, 6, 9, 16, 11, 8, 10, 12, 3, 4, 5, 2, 7, 19, 17, 13, 18, 14, 1], 164, 2.0097999572753906s

Iteration: 215

[1, 4, 5, 18, 7, 9, 19, 3, 10, 2, 20, 12, 16, 17, 15, 6, 11, 8, 13, 14, 1], 184, 1.1344616413116455s

Iteration: 216

[1, 2, 17, 8, 19, 7, 11, 5, 6, 3, 13, 18, 10, 9, 20, 12, 15, 14, 4, 16, 1], 125, 1.081455945968628s

Iteration: 217

[1, 5, 8, 16, 13, 7, 11, 19, 17, 4, 3, 14, 15, 10, 6, 9, 18, 20, 12, 2, 1], 200, 2.2213222980499268s

Iteration: 218

[1, 20, 7, 15, 17, 2, 9, 4, 14, 6, 5, 8, 19, 16, 10, 11, 3, 12, 18, 13, 1], 148, 5.496227025985718s

Iteration: 219

[1, 6, 12, 13, 2, 20, 15, 11, 17, 4, 3, 14, 16, 19, 9, 7, 10, 18, 8, 5, 1], 164, 6.5501649379730225s

Iteration: 220

[1, 14, 7, 2, 3, 12, 4, 5, 17, 15, 9, 18, 20, 16, 8, 11, 19, 6, 10, 13, 1], 205, 6.7931389808654785s

Iteration: 221

[1, 5, 2, 14, 8, 12, 7, 17, 19, 10, 9, 16, 18, 20, 4, 13, 6, 15, 11, 3, 1], 166, 3.782536268234253s

Iteration: 222

[1, 9, 12, 11, 6, 2, 4, 17, 16, 14, 7, 19, 3, 18, 8, 15, 10, 20, 5, 13, 1], 121, 2.4611878395080566s

Iteration: 223

[1, 7, 14, 19, 6, 11, 8, 3, 4, 13, 9, 18, 10, 15, 2, 12, 5, 16, 17, 20, 1], 142, 0.6082048416137695s

Iteration: 224

[1, 7, 13, 17, 15, 14, 5, 4, 9, 19, 2, 11, 3, 12, 20, 10, 18, 16, 8, 6, 1], 183, 0.23593783378601074s

Iteration: 225

[1, 19, 2, 12, 7, 17, 14, 10, 9, 3, 11, 20, 6, 13, 4, 5, 15, 16, 8, 18, 1], 146, 2.96705961227417s

Iteration: 226

[1, 20, 14, 18, 6, 7, 11, 9, 16, 17, 15, 4, 10, 13, 8, 3, 19, 5, 12, 2, 1], 149, 8.07205581665039s

Iteration: 227

[1, 16, 5, 9, 8, 6, 14, 20, 19, 4, 13, 18, 17, 10, 11, 12, 3, 15, 7, 2, 1], 167, 7.2975263595581055s

Iteration: 228

[1, 4, 6, 16, 11, 18, 17, 9, 2, 5, 8, 3, 15, 12, 14, 10, 19, 13, 20, 7, 1], 198, 16.619264364242554s

Iteration: 229

[1, 8, 9, 2, 17, 11, 19, 16, 13, 10, 6, 5, 7, 12, 4, 3, 14, 20, 15, 18, 1], 213, 21.181589126586914s

Iteration: 230

[1, 12, 9, 18, 16, 13, 5, 19, 3, 10, 11, 4, 14, 2, 20, 6, 15, 8, 7, 17, 1], 182, 5.031270265579224s

Iteration: 231

[1, 13, 6, 18, 4, 11, 16, 2, 19, 15, 10, 5, 3, 9, 17, 7, 12, 8, 14, 20, 1], 143, 1.9282662868499756s

Iteration: 232

[1, 5, 4, 3, 20, 10, 7, 18, 11, 19, 12, 8, 2, 6, 17, 15, 16, 13, 9, 14, 1], 174, 5.545565605163574s

Iteration: 233

[1, 11, 4, 17, 16, 20, 8, 18, 5, 7, 9, 6, 12, 19, 15, 10, 2, 13, 3, 14, 1], 206, 14.518539667129517s

Iteration: 234

[1, 16, 9, 6, 12, 17, 4, 18, 15, 5, 19, 11, 10, 8, 3, 7, 14, 2, 20, 13, 1], 164, 1.0157005786895752s

Iteration: 235

[1, 2, 4, 18, 17, 8, 11, 6, 14, 15, 13, 7, 12, 3, 20, 5, 19, 9, 16, 10, 1], 172, 0.7859785556793213s

Iteration: 236

[1, 17, 11, 8, 19, 10, 20, 5, 12, 16, 13, 6, 15, 2, 4, 14, 3, 9, 18, 7, 1], 150, 1.8599441051483154s

Iteration: 237

[1, 13, 8, 9, 6, 16, 15, 2, 14, 4, 5, 18, 20, 19, 12, 11, 17, 10, 7, 3, 1], 177, 3.5040853023529053s

Iteration: 238

[1, 15, 11, 4, 10, 16, 7, 3, 19, 14, 6, 9, 12, 5, 8, 13, 2, 18, 20, 17, 1], 183, 4.549469470977783s

Iteration: 239

[1, 19, 2, 3, 11, 12, 13, 17, 14, 20, 5, 10, 4, 7, 6, 9, 16, 15, 18, 8, 1], 219, 7.446929454803467s

Iteration: 240

[1, 19, 15, 18, 3, 6, 5, 14, 20, 12, 8, 16, 7, 4, 10, 2, 17, 13, 9, 11, 1], 209, 6.184297323226929s

Iteration: 241

[1, 19, 12, 8, 11, 14, 9, 15, 16, 17, 10, 2, 7, 6, 5, 18, 20, 13, 4, 3, 1], 201, 3.968350648880005s

Iteration: 242

[1, 20, 6, 18, 9, 8, 15, 11, 19, 10, 3, 12, 16, 13, 7, 17, 2, 5, 4, 14, 1], 162, 4.585942506790161s

Iteration: 243

[1, 6, 9, 10, 16, 14, 19, 5, 11, 7, 15, 12, 20, 3, 18, 2, 13, 4, 17, 8, 1], 177, 6.642120838165283s

Iteration: 244

[1, 10, 5, 8, 12, 2, 17, 13, 9, 20, 6, 11, 3, 7, 19, 4, 16, 15, 18, 14, 1], 189, 1.8755979537963867s

Iteration: 245

[1, 8, 9, 16, 3, 14, 11, 7, 18, 5, 2, 13, 17, 10, 20, 6, 12, 19, 15, 4, 1], 190, 3.4540998935699463s

Iteration: 246

[1, 15, 3, 12, 2, 20, 18, 7, 4, 19, 6, 5, 9, 8, 13, 17, 16, 11, 10, 14, 1], 202, 10.971718072891235s

Iteration: 247

[1, 10, 20, 16, 2, 7, 4, 17, 12, 19, 15, 8, 13, 6, 9, 3, 11, 14, 5, 18, 1], 189, 1.818894863128662s

Iteration: 248

[1, 10, 8, 3, 17, 14, 2, 6, 18, 20, 4, 7, 19, 16, 5, 13, 11, 12, 9, 15, 1], 182, 3.631753444671631s

Iteration: 249

[1, 5, 16, 9, 14, 15, 18, 11, 4, 19, 7, 6, 10, 13, 17, 20, 2, 3, 12, 8, 1], 180, 1.7843072414398193s

Iteration: 250

[1, 19, 7, 18, 16, 17, 13, 5, 9, 3, 15, 6, 2, 8, 4, 12, 20, 10, 11, 14, 1], 136, 1.930274248123169s

Iteration: 251

[1, 5, 2, 20, 14, 8, 16, 7, 13, 3, 11, 4, 19, 17, 6, 15, 9, 10, 12, 18, 1], 203, 3.1535866260528564s

Iteration: 252

[1, 13, 9, 16, 11, 4, 7, 17, 8, 15, 2, 20, 19, 5, 12, 14, 3, 18, 10, 6, 1], 170, 0.6432125568389893s

Iteration: 253

[1, 16, 17, 14, 9, 10, 15, 6, 5, 13, 3, 11, 19, 2, 20, 18, 12, 8, 7, 4, 1], 132, 1.9826345443725586s

Iteration: 254

[1, 7, 14, 2, 13, 5, 16, 6, 17, 18, 20, 4, 12, 9, 11, 15, 10, 3, 8, 19, 1], 196, 10.702402591705322s

Iteration: 255

[1, 16, 8, 15, 12, 9, 14, 17, 19, 11, 3, 18, 10, 6, 5, 20, 13, 2, 4, 7, 1], 153, 1.6599860191345215s

Iteration: 256

[1, 18, 20, 8, 15, 2, 13, 4, 14, 11, 3, 19, 6, 7, 5, 10, 16, 17, 12, 9, 1], 194, 12.907926082611084s

Iteration: 257

[1, 4, 20, 19, 16, 8, 5, 6, 18, 9, 3, 15, 7, 14, 12, 11, 13, 2, 17, 10, 1], 207, 24.49066948890686s

Iteration: 258

[1, 18, 4, 9, 19, 10, 3, 13, 6, 8, 15, 17, 16, 5, 14, 2, 12, 11, 20, 7, 1], 139, 0.7219054698944092s

Iteration: 259

[1, 8, 16, 13, 17, 3, 11, 18, 14, 7, 2, 20, 9, 19, 4, 10, 12, 6, 5, 15, 1], 162, 0.8679137229919434s

Iteration: 260

[1, 19, 12, 15, 9, 13, 20, 10, 6, 16, 17, 4, 14, 3, 7, 2, 5, 18, 8, 11, 1], 178, 2.196234703063965s

Iteration: 261

[1, 11, 19, 3, 10, 17, 14, 12, 8, 20, 2, 5, 13, 18, 15, 7, 6, 16, 9, 4, 1], 202, 3.3979156017303467s

Iteration: 262

[1, 2, 15, 13, 11, 4, 20, 10, 8, 9, 12, 18, 5, 3, 14, 16, 17, 6, 7, 19, 1], 172, 2.224369764328003s

Iteration: 263

[1, 13, 15, 2, 12, 16, 10, 11, 7, 5, 6, 17, 14, 3, 4, 9, 8, 20, 18, 19, 1], 192, 2.9599807262420654s

Iteration: 264

[1, 18, 14, 15, 6, 7, 10, 17, 2, 20, 4, 19, 8, 3, 16, 9, 11, 13, 12, 5, 1], 145, 0.5454661846160889s

Iteration: 265

[1, 7, 13, 8, 3, 2, 9, 16, 5, 18, 12, 11, 20, 6, 4, 17, 15, 19, 14, 10, 1], 155, 1.115006446838379s

Iteration: 266

[1, 12, 20, 18, 11, 3, 13, 5, 9, 7, 15, 10, 16, 14, 17, 8, 4, 19, 2, 6, 1], 243, 0.7090144157409668s

Iteration: 267

[1, 12, 4, 10, 15, 17, 9, 18, 2, 5, 20, 16, 11, 8, 3, 19, 14, 7, 13, 6, 1], 230, 2.1808924674987793s

Iteration: 268

[1, 11, 16, 10, 8, 9, 20, 13, 7, 4, 12, 17, 5, 15, 6, 18, 19, 14, 2, 3, 1], 178, 9.795944452285767s

Iteration: 269

[1, 16, 20, 17, 18, 12, 10, 3, 5, 19, 9, 15, 2, 13, 4, 11, 6, 14, 7, 8, 1], 153, 5.654832601547241s

Iteration: 270

[1, 19, 2, 5, 15, 14, 12, 10, 18, 11, 3, 16, 20, 17, 8, 6, 13, 9, 7, 4, 1], 198, 3.0690481662750244s

Iteration: 271

[1, 16, 7, 5, 3, 19, 8, 6, 15, 11, 14, 2, 17, 9, 13, 20, 10, 12, 4, 18, 1], 168, 11.795968055725098s

Iteration: 272

[1, 2, 14, 18, 20, 16, 15, 13, 10, 17, 9, 12, 7, 4, 5, 6, 19, 3, 11, 8, 1], 192, 1.9484562873840332s

Iteration: 273

[1, 16, 3, 19, 2, 15, 7, 4, 6, 18, 10, 9, 5, 13, 14, 20, 17, 8, 11, 12, 1], 169, 13.709542512893677s

Iteration: 274

[1, 10, 16, 19, 17, 3, 14, 18, 6, 2, 4, 12, 8, 7, 13, 15, 5, 9, 20, 11, 1], 173, 0.791567325592041s

Iteration: 275

[1, 20, 15, 10, 5, 18, 11, 8, 4, 2, 6, 13, 17, 3, 19, 16, 12, 9, 14, 7, 1], 179, 2.0985629558563232s

Iteration: 276

[1, 18, 6, 20, 8, 14, 12, 19, 15, 4, 13, 7, 10, 11, 17, 16, 2, 3, 9, 5, 1], 149, 4.278785467147827s

Iteration: 277

[1, 10, 9, 5, 13, 12, 6, 2, 15, 14, 8, 4, 7, 11, 18, 16, 17, 3, 19, 20, 1], 152, 1.4267821311950684s

Iteration: 278

[1, 13, 6, 11, 9, 4, 19, 12, 17, 3, 15, 14, 18, 5, 8, 7, 20, 2, 16, 10, 1], 196, 4.97179388999939s

Iteration: 279

[1, 13, 2, 14, 16, 19, 10, 12, 9, 20, 4, 17, 6, 15, 8, 18, 3, 7, 11, 5, 1], 180, 10.388288497924805s

Iteration: 280

[1, 11, 12, 20, 10, 18, 2, 7, 13, 8, 4, 5, 17, 14, 6, 9, 19, 3, 16, 15, 1], 166, 0.2643158435821533s

Iteration: 281

[1, 6, 19, 3, 15, 18, 17, 12, 8, 7, 14, 16, 2, 5, 13, 20, 9, 10, 4, 11, 1], 167, 2.2507076263427734s

Iteration: 282

[1, 17, 2, 18, 20, 10, 6, 13, 8, 14, 4, 16, 7, 5, 3, 15, 19, 12, 11, 9, 1], 189, 5.400994539260864s

Iteration: 283

[1, 18, 15, 8, 11, 12, 7, 2, 9, 16, 5, 14, 3, 13, 10, 6, 17, 20, 19, 4, 1], 134, 0.3671104907989502s

Iteration: 284

[1, 5, 19, 17, 8, 14, 7, 9, 6, 11, 15, 16, 10, 2, 4, 13, 3, 18, 20, 12, 1], 134, 0.5564091205596924s

Iteration: 285

[1, 3, 15, 12, 7, 16, 13, 19, 14, 11, 8, 5, 4, 9, 6, 20, 18, 10, 17, 2, 1], 207, 4.344105243682861s

Iteration: 286

[1, 8, 19, 4, 7, 18, 10, 12, 14, 17, 16, 20, 11, 6, 15, 2, 5, 13, 9, 3, 1], 184, 1.4247491359710693s

Iteration: 287

[1, 2, 8, 16, 18, 19, 10, 17, 20, 11, 14, 9, 12, 6, 15, 3, 4, 5, 7, 13, 1], 171, 0.749478816986084s

Iteration: 288

[1, 9, 14, 13, 6, 4, 2, 5, 16, 3, 18, 12, 15, 11, 17, 20, 10, 8, 7, 19, 1], 180, 8.702352285385132s

Iteration: 289

[1, 2, 20, 16, 18, 9, 13, 10, 14, 8, 17, 12, 5, 6, 15, 3, 7, 19, 11, 4, 1], 143, 2.00339937210083s

Iteration: 290

[1, 9, 17, 10, 8, 12, 19, 16, 20, 5, 3, 2, 7, 15, 6, 14, 18, 11, 4, 13, 1], 179, 7.782790422439575s

Iteration: 291

[1, 16, 3, 14, 18, 7, 8, 6, 9, 20, 2, 11, 5, 10, 17, 15, 19, 12, 4, 13, 1], 178, 2.5236024856567383s

Iteration: 292

[1, 3, 2, 11, 8, 15, 13, 9, 14, 7, 6, 17, 19, 12, 20, 16, 18, 10, 4, 5, 1], 168, 2.6424248218536377s

Iteration: 293

[1, 7, 3, 20, 4, 17, 19, 15, 10, 16, 8, 12, 18, 2, 11, 14, 13, 9, 5, 6, 1], 210, 7.54738450050354s

Iteration: 294

[1, 14, 2, 16, 12, 6, 7, 5, 19, 9, 15, 11, 18, 17, 20, 13, 4, 8, 3, 10, 1], 189, 9.47727370262146s

Iteration: 295

[1, 19, 5, 6, 12, 3, 13, 14, 8, 16, 7, 9, 15, 4, 20, 11, 2, 10, 17, 18, 1], 175, 2.0900161266326904s

Iteration: 296

[1, 8, 5, 11, 20, 2, 13, 14, 19, 15, 12, 3, 17, 18, 7, 6, 16, 4, 9, 10, 1], 109, 1.1256110668182373s

Iteration: 297

[1, 20, 4, 16, 8, 10, 7, 18, 17, 12, 2, 9, 14, 19, 5, 3, 11, 15, 13, 6, 1], 172, 28.035988330841064s

Iteration: 298

[1, 6, 7, 18, 13, 14, 16, 2, 5, 3, 20, 9, 4, 19, 15, 10, 8, 17, 12, 11, 1], 180, 11.560160160064697s

Iteration: 299

[1, 10, 13, 18, 4, 12, 8, 6, 7, 2, 16, 19, 5, 11, 9, 15, 17, 20, 14, 3, 1], 141, 0.47177815437316895s

Iteration: 300

[1, 2, 13, 6, 8, 17, 16, 11, 7, 3, 15, 20, 10, 14, 5, 18, 9, 12, 4, 19, 1], 144, 5.8742406368255615s

Iteration: 301

[1, 8, 10, 16, 19, 2, 11, 4, 20, 15, 17, 7, 6, 18, 14, 3, 9, 13, 12, 5, 1], 148, 0.4895904064178467s

Iteration: 302

[1, 7, 11, 6, 20, 9, 19, 5, 4, 8, 2, 16, 18, 17, 3, 15, 12, 13, 14, 10, 1], 154, 3.5375850200653076s

Iteration: 303

[1, 8, 11, 5, 19, 7, 10, 13, 18, 15, 2, 4, 16, 9, 17, 3, 20, 14, 12, 6, 1], 181, 9.395322561264038s

Iteration: 304

[1, 13, 12, 2, 14, 8, 11, 4, 7, 6, 5, 19, 16, 18, 20, 9, 3, 10, 17, 15, 1], 170, 5.447831153869629s

Iteration: 305

[1, 18, 16, 6, 8, 4, 7, 14, 12, 2, 15, 9, 13, 20, 19, 17, 5, 11, 3, 10, 1], 140, 2.264186143875122s

Iteration: 306

[1, 4, 18, 12, 20, 3, 16, 6, 9, 5, 19, 15, 7, 11, 13, 2, 17, 10, 8, 14, 1], 153, 1.425539493560791s

Iteration: 307

[1, 2, 18, 6, 9, 8, 19, 4, 20, 10, 12, 13, 16, 5, 17, 11, 15, 3, 14, 7, 1], 174, 4.3746232986450195s

Iteration: 308

[1, 13, 10, 4, 19, 20, 2, 18, 15, 8, 9, 11, 5, 16, 17, 3, 12, 14, 6, 7, 1], 155, 1.1673927307128906s

Iteration: 309

[1, 14, 10, 17, 15, 13, 19, 4, 3, 6, 12, 11, 7, 2, 16, 20, 18, 8, 5, 9, 1], 152, 1.1639702320098877s

Iteration: 310

[1, 6, 7, 20, 4, 9, 15, 13, 14, 19, 18, 5, 16, 2, 8, 11, 12, 17, 3, 10, 1], 180, 3.0075714588165283s

Iteration: 311

[1, 18, 11, 7, 20, 9, 8, 14, 6, 2, 13, 3, 10, 12, 4, 15, 19, 5, 16, 17, 1], 194, 0.990088701248169s

Iteration: 312

[1, 12, 7, 11, 5, 4, 8, 13, 15, 2, 20, 16, 6, 14, 9, 19, 17, 3, 18, 10, 1], 167, 1.0586597919464111s

Iteration: 313

[1, 5, 4, 20, 12, 19, 8, 3, 14, 17, 2, 16, 13, 15, 6, 10, 9, 11, 18, 7, 1], 170, 3.9830384254455566s

Iteration: 314

[1, 7, 6, 19, 16, 15, 4, 14, 12, 8, 20, 2, 11, 3, 5, 13, 17, 18, 9, 10, 1], 152, 2.1456046104431152s

Iteration: 315

[1, 13, 12, 16, 15, 8, 19, 2, 20, 14, 4, 6, 10, 11, 5, 17, 18, 3, 9, 7, 1], 181, 3.5389933586120605s

Iteration: 316

[1, 8, 16, 14, 9, 19, 12, 20, 18, 11, 15, 7, 2, 13, 5, 6, 17, 4, 10, 3, 1], 207, 79.45336580276489s

Iteration: 317

[1, 2, 15, 6, 9, 18, 7, 11, 14, 16, 13, 17, 5, 4, 20, 12, 19, 3, 10, 8, 1], 155, 11.948949575424194s

Iteration: 318

[1, 9, 12, 18, 13, 6, 19, 4, 2, 3, 7, 8, 5, 16, 15, 17, 11, 14, 10, 20, 1], 156, 3.677537679672241s

Iteration: 319

[1, 18, 2, 5, 11, 4, 12, 6, 8, 15, 20, 9, 7, 13, 16, 14, 19, 10, 17, 3, 1], 167, 0.8060424327850342s

Iteration: 320

[1, 19, 6, 7, 16, 17, 5, 14, 13, 4, 18, 10, 2, 11, 9, 15, 8, 3, 20, 12, 1], 207, 0.9128992557525635s

Iteration: 321

[1, 16, 5, 17, 13, 8, 15, 11, 7, 12, 4, 2, 18, 10, 14, 9, 20, 19, 3, 6, 1], 138, 1.077523946762085s

Iteration: 322

[1, 15, 18, 7, 19, 2, 10, 16, 12, 14, 6, 11, 9, 17, 3, 13, 20, 5, 8, 4, 1], 211, 27.534723043441772s

Iteration: 323

[1, 18, 4, 17, 3, 15, 11, 6, 14, 9, 5, 16, 20, 2, 12, 7, 13, 8, 10, 19, 1], 172, 2.632722854614258s

Iteration: 324

[1, 14, 3, 6, 19, 16, 17, 13, 11, 4, 5, 7, 10, 18, 15, 12, 2, 9, 8, 20, 1], 194, 4.118985652923584s

Iteration: 325

[1, 16, 15, 7, 6, 18, 9, 3, 13, 17, 10, 11, 20, 19, 14, 5, 12, 2, 8, 4, 1], 179, 8.168829202651978s

Iteration: 326

[1, 4, 20, 2, 14, 7, 5, 19, 13, 8, 18, 12, 10, 11, 6, 16, 15, 17, 3, 9, 1], 178, 10.87106704711914s

Iteration: 327

[1, 3, 19, 7, 5, 20, 2, 9, 16, 12, 13, 17, 14, 6, 15, 4, 11, 10, 8, 18, 1], 164, 1.8239545822143555s

Iteration: 328

[1, 6, 9, 17, 7, 20, 14, 8, 18, 5, 12, 2, 10, 4, 11, 19, 3, 13, 16, 15, 1], 173, 8.82469892501831s

Iteration: 329

[1, 3, 20, 17, 8, 14, 18, 4, 15, 16, 13, 10, 12, 2, 19, 11, 9, 5, 7, 6, 1], 219, 1.9194741249084473s

Iteration: 330

[1, 19, 13, 16, 18, 17, 5, 7, 11, 12, 4, 2, 3, 6, 9, 8, 14, 15, 20, 10, 1], 180, 2.0731191635131836s

Iteration: 331

[1, 8, 20, 4, 5, 18, 7, 6, 12, 15, 11, 10, 14, 9, 17, 16, 19, 2, 3, 13, 1], 222, 8.144957542419434s

Iteration: 332

[1, 13, 2, 3, 5, 11, 9, 16, 19, 14, 6, 15, 20, 18, 8, 4, 17, 12, 7, 10, 1], 141, 15.209458112716675s

Iteration: 333

[1, 20, 16, 17, 10, 3, 5, 12, 6, 8, 13, 14, 4, 11, 7, 15, 9, 18, 2, 19, 1], 201, 18.697043657302856s

Iteration: 334

[1, 17, 9, 11, 3, 6, 8, 19, 15, 14, 2, 10, 5, 7, 16, 13, 18, 4, 12, 20, 1], 188, 2.3084046840667725s

Iteration: 335

[1, 17, 8, 15, 4, 14, 10, 3, 7, 16, 20, 6, 19, 12, 2, 18, 5, 13, 9, 11, 1], 197, 8.553765535354614s

Iteration: 336

[1, 17, 18, 13, 9, 7, 15, 4, 8, 12, 20, 6, 3, 11, 10, 19, 16, 2, 14, 5, 1], 145, 0.7325356006622314s

Iteration: 337

[1, 2, 12, 6, 7, 9, 16, 5, 11, 14, 20, 4, 13, 3, 10, 19, 8, 17, 15, 18, 1], 166, 3.0378425121307373s

Iteration: 338

[1, 16, 9, 13, 17, 14, 5, 10, 6, 11, 3, 2, 7, 8, 15, 4, 20, 19, 18, 12, 1], 199, 7.578126668930054s

Iteration: 339

[1, 14, 2, 20, 9, 8, 15, 7, 5, 11, 13, 3, 10, 17, 6, 12, 16, 19, 4, 18, 1], 179, 1.115957260131836s

Iteration: 340

[1, 17, 5, 3, 15, 4, 16, 9, 6, 11, 10, 8, 18, 7, 2, 13, 19, 20, 12, 14, 1], 164, 1.4710743427276611s

Iteration: 341

[1, 14, 5, 6, 15, 20, 12, 2, 11, 17, 4, 19, 13, 18, 7, 10, 3, 8, 9, 16, 1], 179, 1.8040962219238281s

Iteration: 342

[1, 14, 11, 9, 7, 17, 20, 13, 4, 2, 10, 18, 5, 6, 15, 19, 8, 16, 12, 3, 1], 190, 4.501187801361084s

Iteration: 343

[1, 5, 13, 15, 11, 10, 4, 19, 9, 8, 12, 17, 3, 7, 6, 20, 2, 14, 18, 16, 1], 165, 0.6517064571380615s

Iteration: 344

[1, 7, 15, 9, 18, 10, 14, 6, 12, 2, 13, 4, 11, 19, 17, 16, 8, 3, 20, 5, 1], 178, 1.5211310386657715s

Iteration: 345

[1, 12, 19, 17, 13, 4, 18, 5, 14, 3, 16, 7, 6, 9, 11, 8, 20, 10, 15, 2, 1], 175, 0.9431283473968506s

Iteration: 346

[1, 8, 3, 10, 15, 9, 17, 16, 13, 18, 6, 20, 12, 14, 11, 4, 7, 19, 5, 2, 1], 238, 13.283902406692505s

Iteration: 347

[1, 11, 5, 4, 17, 16, 18, 14, 8, 20, 19, 10, 15, 9, 12, 13, 6, 2, 3, 7, 1], 154, 3.506575584411621s

Iteration: 348

[1, 5, 7, 9, 4, 15, 19, 20, 6, 8, 12, 14, 10, 17, 18, 2, 16, 3, 13, 11, 1], 141, 0.9664087295532227s

Iteration: 349

[1, 19, 18, 17, 16, 7, 4, 9, 5, 10, 13, 8, 2, 14, 11, 20, 3, 6, 12, 15, 1], 170, 4.2273430824279785s

Iteration: 350

[1, 10, 7, 8, 2, 14, 17, 20, 16, 13, 9, 3, 6, 15, 5, 19, 12, 11, 18, 4, 1], 174, 7.069950580596924s

Iteration: 351

[1, 17, 19, 6, 8, 5, 13, 11, 20, 18, 12, 10, 3, 7, 14, 2, 15, 4, 9, 16, 1], 144, 0.7634856700897217s

Iteration: 352

[1, 3, 8, 10, 17, 4, 12, 13, 5, 6, 9, 18, 16, 14, 7, 11, 19, 2, 15, 20, 1], 161, 0.8968970775604248s

Iteration: 353

[1, 4, 15, 17, 13, 11, 9, 12, 18, 7, 2, 16, 14, 10, 19, 8, 3, 6, 5, 20, 1], 198, 40.00008583068848s

Iteration: 354

[1, 15, 10, 12, 2, 19, 17, 6, 7, 16, 20, 8, 18, 3, 14, 5, 13, 4, 11, 9, 1], 181, 42.651530742645264s

Iteration: 355

[1, 16, 18, 15, 7, 3, 20, 6, 19, 11, 17, 4, 5, 2, 14, 10, 8, 12, 9, 13, 1], 167, 5.391846656799316s

Iteration: 356

[1, 14, 16, 3, 19, 17, 7, 20, 4, 15, 11, 8, 6, 18, 5, 12, 10, 9, 13, 2, 1], 130, 8.700655698776245s

Iteration: 357

[1, 5, 8, 18, 9, 4, 7, 6, 3, 19, 14, 17, 10, 12, 15, 2, 16, 20, 13, 11, 1], 206, 1.123168706893921s

Iteration: 358

[1, 17, 20, 10, 18, 12, 4, 15, 3, 13, 14, 8, 6, 5, 11, 16, 9, 19, 2, 7, 1], 231, 48.452250719070435s

Iteration: 359

[1, 18, 11, 8, 16, 13, 17, 12, 7, 3, 10, 5, 14, 4, 2, 19, 20, 9, 6, 15, 1], 222, 8.399213075637817s

Iteration: 360

[1, 13, 12, 17, 10, 18, 4, 5, 3, 15, 8, 16, 11, 6, 20, 14, 2, 9, 7, 19, 1], 208, 12.658903121948242s

Iteration: 361

[1, 3, 10, 12, 16, 13, 5, 20, 18, 19, 9, 7, 11, 8, 14, 2, 15, 4, 6, 17, 1], 175, 2.9539759159088135s

Iteration: 362

[1, 3, 5, 15, 9, 6, 13, 12, 19, 17, 4, 8, 7, 16, 11, 10, 2, 20, 18, 14, 1], 143, 3.6313540935516357s

Iteration: 363

[1, 10, 16, 15, 4, 20, 3, 6, 13, 11, 9, 18, 14, 8, 7, 5, 17, 12, 19, 2, 1], 184, 2.2093536853790283s

Iteration: 364

[1, 18, 14, 5, 4, 7, 19, 13, 10, 8, 12, 6, 17, 16, 11, 20, 15, 9, 3, 2, 1], 177, 2.3480279445648193s

Iteration: 365

[1, 7, 13, 12, 17, 3, 15, 2, 9, 14, 8, 5, 4, 20, 16, 18, 10, 6, 19, 11, 1], 173, 1.2963380813598633s

Iteration: 366

[1, 17, 2, 12, 15, 10, 7, 14, 19, 3, 5, 9, 13, 6, 4, 20, 8, 18, 11, 16, 1], 175, 7.5056939125061035s

Iteration: 367

[1, 5, 2, 7, 6, 16, 18, 19, 20, 11, 15, 13, 12, 8, 14, 17, 4, 3, 9, 10, 1], 191, 24.61322784423828s

Iteration: 368

[1, 8, 2, 20, 12, 7, 3, 18, 5, 9, 11, 15, 16, 19, 6, 13, 14, 17, 4, 10, 1], 174, 3.0728042125701904s

Iteration: 369

[1, 10, 13, 2, 3, 17, 20, 18, 16, 9, 19, 6, 12, 11, 4, 5, 7, 15, 8, 14, 1], 216, 0.7746169567108154s

Iteration: 370

[1, 4, 11, 3, 17, 5, 10, 14, 18, 8, 19, 9, 2, 20, 15, 6, 12, 16, 13, 7, 1], 187, 2.1349432468414307s

Iteration: 371

[1, 2, 7, 12, 9, 15, 20, 4, 8, 17, 5, 13, 10, 6, 18, 11, 16, 19, 14, 3, 1], 172, 13.707283735275269s

Iteration: 372

[1, 7, 16, 2, 13, 3, 14, 18, 5, 15, 9, 4, 20, 17, 10, 8, 19, 6, 12, 11, 1], 173, 2.493159532546997s

Iteration: 373

[1, 19, 13, 14, 7, 6, 4, 9, 8, 17, 18, 12, 5, 2, 15, 10, 20, 16, 3, 11, 1], 149, 4.946404457092285s

Iteration: 374

[1, 10, 14, 6, 5, 16, 9, 8, 18, 15, 11, 20, 2, 17, 4, 3, 13, 19, 12, 7, 1], 178, 1.4900219440460205s

Iteration: 375

[1, 19, 13, 18, 10, 16, 11, 7, 4, 8, 15, 20, 2, 14, 5, 17, 6, 3, 12, 9, 1], 168, 1.2765593528747559s

Iteration: 376

[1, 4, 3, 15, 16, 19, 14, 8, 18, 11, 20, 5, 17, 9, 12, 10, 7, 6, 13, 2, 1], 177, 4.217449426651001s

Iteration: 377

[1, 19, 11, 18, 20, 9, 16, 4, 15, 2, 3, 14, 7, 13, 17, 5, 12, 8, 6, 10, 1], 147, 1.9918498992919922s

Iteration: 378

[1, 5, 17, 2, 15, 10, 6, 13, 11, 12, 18, 16, 9, 8, 4, 20, 14, 7, 3, 19, 1], 136, 0.43383359909057617s

Iteration: 379

[1, 10, 15, 20, 18, 17, 14, 12, 4, 8, 11, 5, 2, 13, 19, 6, 16, 3, 9, 7, 1], 167, 3.8065378665924072s

Iteration: 380

[1, 19, 8, 17, 15, 13, 6, 2, 14, 11, 3, 20, 10, 12, 18, 9, 5, 16, 4, 7, 1], 192, 13.818520784378052s

Iteration: 381

[1, 12, 19, 14, 17, 11, 6, 4, 3, 8, 13, 15, 9, 10, 7, 20, 2, 16, 18, 5, 1], 175, 8.54344391822815s

Iteration: 382

[1, 12, 8, 9, 2, 5, 14, 15, 13, 17, 19, 4, 6, 3, 11, 10, 16, 7, 20, 18, 1], 143, 1.15171480178833s

Iteration: 383

[1, 12, 13, 5, 20, 18, 2, 14, 10, 19, 8, 9, 11, 3, 4, 7, 16, 15, 17, 6, 1], 180, 8.38628602027893s

Iteration: 384

[1, 9, 19, 20, 13, 12, 14, 7, 18, 4, 10, 6, 8, 5, 2, 17, 11, 16, 15, 3, 1], 190, 10.388795852661133s

Iteration: 385

[1, 18, 15, 10, 12, 11, 5, 9, 20, 7, 2, 19, 17, 6, 14, 3, 4, 8, 13, 16, 1], 148, 10.765403270721436s

Iteration: 386

[1, 7, 19, 16, 12, 4, 17, 11, 8, 10, 5, 14, 18, 15, 13, 3, 6, 20, 9, 2, 1], 200, 1.280700445175171s

Iteration: 387

[1, 4, 3, 16, 5, 19, 11, 17, 6, 8, 10, 12, 7, 2, 9, 20, 15, 13, 18, 14, 1], 170, 2.98097825050354s

Iteration: 388

[1, 13, 16, 3, 15, 14, 8, 19, 9, 17, 10, 7, 11, 18, 12, 6, 20, 4, 2, 5, 1], 171, 2.2411935329437256s

Iteration: 389

[1, 18, 17, 8, 20, 15, 6, 3, 14, 5, 2, 9, 12, 7, 19, 16, 4, 13, 11, 10, 1], 155, 0.8999853134155273s

Iteration: 390

[1, 15, 6, 11, 4, 16, 8, 18, 20, 13, 17, 9, 12, 7, 10, 19, 5, 14, 3, 2, 1], 146, 8.482113122940063s

Iteration: 391

[1, 16, 5, 10, 2, 12, 9, 14, 15, 20, 8, 11, 18, 7, 13, 17, 19, 4, 6, 3, 1], 160, 0.5563418865203857s

Iteration: 392

[1, 12, 15, 10, 4, 2, 6, 13, 14, 18, 9, 17, 16, 7, 20, 11, 8, 19, 3, 5, 1], 157, 1.0012288093566895s

Iteration: 393

[1, 18, 13, 15, 12, 16, 4, 7, 6, 5, 2, 11, 14, 9, 19, 17, 10, 3, 20, 8, 1], 195, 9.311780452728271s

Iteration: 394

[1, 11, 19, 9, 10, 2, 5, 12, 8, 17, 20, 15, 7, 13, 18, 4, 6, 3, 14, 16, 1], 213, 6.001644611358643s

Iteration: 395

[1, 11, 12, 19, 5, 3, 13, 9, 2, 17, 6, 8, 7, 10, 15, 20, 18, 14, 4, 16, 1], 202, 6.555002689361572s

Iteration: 396

[1, 9, 5, 17, 19, 8, 4, 13, 6, 14, 12, 2, 20, 10, 15, 3, 18, 16, 11, 7, 1], 171, 1.5057144165039062s

Iteration: 397

[1, 3, 12, 2, 10, 17, 16, 7, 11, 6, 4, 13, 5, 18, 20, 15, 19, 14, 9, 8, 1], 116, 0.8751745223999023s

Iteration: 398

[1, 17, 7, 10, 19, 9, 20, 13, 12, 4, 15, 8, 18, 5, 11, 3, 2, 16, 14, 6, 1], 168, 6.583575010299683s

Iteration: 399

[1, 3, 14, 13, 9, 6, 16, 19, 10, 18, 5, 20, 8, 4, 7, 11, 2, 15, 17, 12, 1], 176, 14.084489345550537s

Iteration: 400

[1, 14, 18, 6, 2, 11, 19, 9, 5, 3, 12, 16, 17, 15, 10, 4, 13, 8, 20, 7, 1], 163, 1.7585501670837402s

Iteration: 401

[1, 3, 11, 8, 12, 7, 14, 10, 18, 15, 2, 6, 19, 9, 16, 20, 17, 5, 13, 4, 1], 201, 1.5447962284088135s

Iteration: 402

[1, 18, 14, 3, 7, 15, 17, 12, 20, 10, 11, 19, 16, 6, 9, 2, 5, 13, 4, 8, 1], 139, 0.3420584201812744s

Iteration: 403

[1, 19, 18, 10, 2, 14, 4, 6, 7, 15, 5, 12, 20, 3, 9, 8, 17, 13, 11, 16, 1], 183, 1.6388721466064453s

Iteration: 404

[1, 9, 20, 18, 3, 19, 11, 13, 15, 14, 12, 7, 8, 6, 10, 4, 16, 17, 5, 2, 1], 168, 18.007574558258057s

Iteration: 405

[1, 11, 6, 2, 15, 3, 10, 4, 17, 18, 9, 20, 5, 8, 13, 7, 12, 16, 19, 14, 1], 189, 1.0286107063293457s

Iteration: 406

[1, 19, 7, 3, 5, 12, 11, 15, 9, 8, 10, 14, 13, 4, 6, 2, 16, 18, 17, 20, 1], 154, 1.6548328399658203s

Iteration: 407

[1, 18, 7, 2, 12, 15, 8, 4, 10, 9, 3, 17, 11, 14, 16, 19, 6, 20, 5, 13, 1], 211, 10.799591541290283s

Iteration: 408

[1, 12, 18, 17, 20, 11, 3, 16, 2, 5, 10, 7, 9, 14, 15, 8, 19, 13, 6, 4, 1], 175, 2.78017258644104s

Iteration: 409

[1, 3, 5, 8, 17, 11, 6, 13, 14, 16, 7, 2, 15, 20, 19, 4, 18, 12, 9, 10, 1], 182, 1.5848877429962158s

Iteration: 410

[1, 4, 8, 17, 6, 3, 2, 11, 14, 12, 7, 19, 9, 16, 13, 5, 15, 10, 18, 20, 1], 165, 2.460923194885254s

Iteration: 411

[1, 9, 17, 7, 15, 4, 20, 3, 12, 11, 16, 13, 5, 2, 10, 14, 19, 18, 6, 8, 1], 183, 5.8511528968811035s

Iteration: 412

[1, 10, 11, 6, 18, 3, 20, 13, 14, 7, 5, 15, 17, 12, 16, 9, 19, 8, 2, 4, 1], 175, 4.51010274887085s

Iteration: 413

[1, 17, 7, 13, 16, 15, 3, 18, 19, 12, 8, 9, 10, 11, 20, 6, 4, 5, 2, 14, 1], 202, 3.9278388023376465s

Iteration: 414

[1, 20, 19, 16, 7, 9, 12, 13, 10, 11, 5, 18, 6, 8, 15, 4, 17, 3, 2, 14, 1], 157, 1.5228090286254883s

Iteration: 415

[1, 12, 4, 19, 14, 8, 17, 6, 5, 15, 2, 16, 10, 11, 20, 9, 13, 7, 18, 3, 1], 135, 5.015823125839233s

Iteration: 416

[1, 2, 18, 3, 13, 5, 9, 14, 15, 17, 10, 16, 8, 6, 11, 7, 4, 20, 12, 19, 1], 153, 8.057606935501099s

Iteration: 417

[1, 18, 20, 8, 2, 6, 9, 16, 3, 7, 12, 11, 10, 5, 14, 4, 13, 17, 19, 15, 1], 163, 3.305166244506836s

Iteration: 418

[1, 20, 17, 12, 5, 19, 9, 13, 18, 16, 4, 8, 2, 11, 14, 6, 10, 15, 3, 7, 1], 203, 2.052471160888672s

Iteration: 419

[1, 13, 17, 16, 12, 20, 9, 19, 4, 11, 7, 3, 5, 15, 14, 6, 2, 18, 8, 10, 1], 154, 2.1076571941375732s

Iteration: 420

[1, 5, 19, 20, 2, 9, 14, 8, 4, 3, 16, 13, 15, 7, 18, 10, 17, 12, 6, 11, 1], 229, 26.90454864501953s

Iteration: 421

[1, 12, 16, 10, 7, 20, 4, 17, 11, 9, 2, 15, 6, 3, 18, 8, 5, 19, 14, 13, 1], 215, 12.482070922851562s

Iteration: 422

[1, 15, 3, 19, 10, 4, 11, 12, 16, 8, 2, 5, 7, 18, 17, 9, 6, 20, 13, 14, 1], 193, 3.5702855587005615s

Iteration: 423

[1, 13, 15, 9, 17, 14, 12, 5, 6, 8, 20, 11, 3, 18, 2, 10, 7, 19, 4, 16, 1], 156, 2.188331127166748s

Iteration: 424

[1, 19, 6, 10, 11, 17, 9, 14, 13, 3, 15, 7, 20, 16, 2, 5, 8, 12, 18, 4, 1], 182, 0.9128580093383789s

Iteration: 425

[1, 2, 12, 9, 15, 3, 14, 5, 4, 16, 19, 13, 17, 6, 8, 10, 11, 18, 7, 20, 1], 139, 2.3256916999816895s

Iteration: 426

[1, 9, 5, 20, 10, 6, 7, 15, 17, 19, 12, 4, 14, 3, 2, 11, 13, 18, 8, 16, 1], 165, 12.188572883605957s

Iteration: 427

[1, 9, 4, 2, 10, 11, 15, 13, 17, 18, 8, 16, 20, 12, 5, 14, 3, 6, 7, 19, 1], 145, 8.303699016571045s

Iteration: 428

[1, 20, 14, 6, 13, 5, 11, 17, 2, 12, 4, 19, 8, 15, 9, 16, 18, 10, 3, 7, 1], 154, 0.2473447322845459s

Iteration: 429

[1, 7, 10, 2, 3, 20, 6, 8, 19, 16, 17, 5, 18, 4, 9, 15, 13, 14, 12, 11, 1], 164, 5.30652928352356s

Iteration: 430

[1, 10, 4, 7, 13, 19, 2, 11, 18, 17, 14, 8, 15, 3, 16, 5, 6, 9, 20, 12, 1], 227, 1.828615427017212s

Iteration: 431

[1, 12, 9, 14, 3, 2, 6, 5, 4, 17, 7, 13, 8, 16, 15, 20, 19, 11, 18, 10, 1], 171, 5.884615182876587s

Iteration: 432

[1, 11, 19, 5, 17, 2, 8, 20, 18, 14, 7, 9, 12, 13, 6, 16, 4, 3, 10, 15, 1], 144, 0.5235519409179688s

Iteration: 433

[1, 18, 7, 2, 8, 10, 19, 14, 11, 13, 4, 12, 3, 15, 16, 9, 5, 20, 17, 6, 1], 148, 0.8039276599884033s

Iteration: 434

[1, 20, 3, 16, 19, 11, 17, 12, 14, 7, 8, 2, 18, 6, 15, 4, 13, 10, 9, 5, 1], 198, 0.4333767890930176s

Iteration: 435

[1, 7, 12, 14, 20, 17, 19, 2, 13, 4, 9, 5, 16, 15, 10, 8, 11, 18, 6, 3, 1], 185, 10.758100748062134s

Iteration: 436

[1, 15, 4, 20, 14, 2, 13, 8, 5, 3, 7, 6, 17, 9, 19, 16, 18, 11, 12, 10, 1], 171, 2.4641025066375732s

Iteration: 437

[1, 14, 13, 10, 11, 6, 8, 2, 17, 15, 9, 20, 12, 7, 18, 5, 4, 19, 3, 16, 1], 146, 0.9949226379394531s

Iteration: 438

[1, 16, 17, 10, 7, 3, 19, 9, 12, 5, 8, 13, 11, 20, 2, 6, 18, 15, 4, 14, 1], 191, 5.204697847366333s

Iteration: 439

[1, 13, 6, 20, 8, 3, 2, 15, 19, 12, 16, 18, 7, 10, 17, 9, 11, 4, 14, 5, 1], 197, 7.217156171798706s

Iteration: 440

[1, 11, 17, 5, 2, 14, 9, 20, 19, 7, 3, 18, 13, 12, 4, 8, 15, 16, 6, 10, 1], 213, 11.093367099761963s

Iteration: 441

[1, 10, 7, 13, 3, 14, 17, 8, 19, 12, 9, 11, 2, 15, 5, 20, 18, 16, 4, 6, 1], 197, 2.6680524349212646s

Iteration: 442

[1, 3, 7, 6, 19, 11, 17, 14, 10, 8, 13, 20, 15, 4, 18, 5, 16, 2, 12, 9, 1], 153, 7.579854488372803s

Iteration: 443

[1, 13, 10, 9, 2, 14, 20, 7, 17, 6, 5, 19, 3, 12, 16, 15, 18, 11, 4, 8, 1], 178, 2.146250009536743s

Iteration: 444

[1, 18, 16, 19, 17, 8, 5, 15, 7, 9, 20, 10, 6, 3, 12, 2, 4, 13, 11, 14, 1], 230, 3.5158779621124268s

Iteration: 445

[1, 11, 17, 9, 3, 14, 15, 18, 20, 8, 19, 2, 12, 6, 5, 13, 16, 4, 10, 7, 1], 206, 7.5256922245025635s

Iteration: 446

[1, 13, 15, 6, 5, 4, 18, 17, 19, 3, 11, 12, 7, 16, 2, 10, 14, 9, 8, 20, 1], 225, 10.462040185928345s

Iteration: 447

[1, 3, 2, 7, 10, 15, 18, 5, 11, 16, 13, 8, 20, 4, 14, 19, 17, 6, 12, 9, 1], 224, 2.1632280349731445s

Iteration: 448

[1, 2, 3, 8, 6, 20, 9, 14, 4, 13, 18, 10, 17, 12, 15, 19, 7, 11, 5, 16, 1], 228, 4.2253007888793945s

Iteration: 449

[1, 4, 6, 13, 8, 7, 3, 10, 2, 12, 11, 9, 5, 20, 19, 18, 16, 15, 14, 17, 1], 143, 2.042590856552124s

Iteration: 450

[1, 6, 8, 3, 5, 11, 2, 9, 19, 10, 7, 13, 16, 15, 14, 4, 12, 17, 18, 20, 1], 196, 1.4235053062438965s

Iteration: 451

[1, 12, 19, 7, 17, 2, 20, 15, 10, 8, 4, 9, 11, 14, 13, 5, 18, 16, 6, 3, 1], 109, 1.8291888236999512s

Iteration: 452

[1, 11, 4, 6, 3, 8, 2, 7, 15, 14, 5, 10, 18, 19, 17, 13, 20, 12, 9, 16, 1], 187, 4.4701478481292725s

Iteration: 453

[1, 15, 2, 8, 10, 9, 20, 5, 18, 7, 11, 13, 19, 6, 14, 4, 17, 3, 16, 12, 1], 164, 8.362694263458252s

Iteration: 454

[1, 3, 12, 4, 20, 10, 6, 17, 8, 13, 2, 15, 9, 19, 7, 11, 14, 18, 5, 16, 1], 164, 2.028347969055176s

Iteration: 455

[1, 18, 10, 2, 16, 14, 19, 6, 12, 5, 20, 11, 4, 3, 17, 7, 15, 8, 13, 9, 1], 164, 5.746383190155029s

Iteration: 456

[1, 3, 5, 7, 6, 2, 10, 16, 17, 13, 12, 20, 18, 15, 14, 4, 8, 11, 19, 9, 1], 163, 0.22553730010986328s

Iteration: 457

[1, 4, 10, 8, 15, 7, 19, 3, 13, 17, 6, 2, 12, 9, 18, 14, 20, 11, 5, 16, 1], 129, 6.386971950531006s

Iteration: 458

[1, 15, 9, 11, 10, 20, 19, 6, 2, 14, 5, 18, 8, 12, 3, 17, 16, 4, 13, 7, 1], 208, 14.107764720916748s

Iteration: 459

[1, 3, 18, 9, 7, 19, 6, 5, 15, 8, 12, 16, 20, 17, 10, 11, 2, 14, 4, 13, 1], 139, 0.22455406188964844s

Iteration: 460

[1, 13, 15, 19, 6, 18, 14, 20, 3, 12, 16, 17, 5, 8, 7, 11, 9, 10, 2, 4, 1], 151, 1.6571717262268066s

Iteration: 461

[1, 19, 16, 9, 7, 5, 8, 6, 11, 12, 15, 17, 3, 4, 18, 10, 14, 2, 20, 13, 1], 182, 1.7601921558380127s

Iteration: 462

[1, 18, 3, 7, 10, 5, 20, 19, 14, 9, 8, 6, 17, 11, 12, 16, 15, 2, 4, 13, 1], 163, 1.6596086025238037s

Iteration: 463

[1, 13, 11, 6, 16, 20, 7, 15, 3, 19, 8, 18, 12, 10, 17, 4, 14, 2, 5, 9, 1], 165, 2.687647819519043s

Iteration: 464

[1, 18, 12, 5, 9, 2, 10, 8, 15, 13, 14, 16, 4, 20, 7, 6, 19, 3, 11, 17, 1], 207, 4.06190037727356s

Iteration: 465

[1, 17, 19, 4, 9, 7, 13, 14, 12, 16, 2, 11, 18, 15, 3, 20, 10, 6, 8, 5, 1], 187, 7.056730270385742s

Iteration: 466

[1, 12, 7, 2, 14, 16, 6, 9, 8, 15, 17, 5, 13, 3, 10, 11, 20, 19, 4, 18, 1], 226, 17.81351065635681s

Iteration: 467

[1, 7, 4, 10, 19, 3, 2, 18, 8, 15, 6, 16, 14, 17, 11, 9, 13, 20, 12, 5, 1], 229, 4.30258846282959s

Iteration: 468

[1, 16, 14, 6, 10, 4, 8, 3, 2, 20, 17, 18, 9, 12, 19, 5, 15, 11, 13, 7, 1], 202, 3.6598048210144043s

Iteration: 469

[1, 18, 10, 5, 12, 2, 9, 20, 15, 13, 17, 14, 4, 6, 19, 16, 8, 3, 7, 11, 1], 196, 0.7644410133361816s

Iteration: 470

[1, 17, 20, 19, 7, 12, 5, 3, 10, 6, 18, 8, 4, 15, 16, 11, 2, 14, 13, 9, 1], 177, 16.769354820251465s

Iteration: 471

[1, 12, 20, 18, 5, 4, 7, 19, 17, 8, 11, 10, 16, 2, 14, 3, 15, 13, 9, 6, 1], 179, 4.374712705612183s

Iteration: 472

[1, 10, 17, 2, 12, 16, 7, 9, 8, 13, 4, 11, 3, 15, 5, 18, 6, 19, 20, 14, 1], 249, 4.01274299621582s

Iteration: 473

[1, 6, 9, 7, 17, 10, 4, 12, 3, 15, 20, 19, 2, 14, 16, 18, 8, 13, 11, 5, 1], 235, 12.378062725067139s

Iteration: 474

[1, 19, 20, 2, 6, 7, 12, 3, 8, 15, 5, 4, 9, 11, 17, 10, 18, 16, 13, 14, 1], 227, 4.250428915023804s

Iteration: 475

[1, 16, 20, 2, 6, 4, 13, 10, 17, 15, 11, 18, 14, 12, 3, 8, 19, 9, 7, 5, 1], 238, 4.704303026199341s

Iteration: 476

[1, 8, 15, 13, 3, 9, 12, 11, 18, 4, 19, 5, 7, 16, 2, 6, 10, 14, 17, 20, 1], 178, 8.938042163848877s

Iteration: 477

[1, 19, 5, 9, 8, 4, 6, 13, 2, 18, 11, 14, 10, 16, 15, 20, 17, 12, 3, 7, 1], 152, 0.7418367862701416s

Iteration: 478

[1, 20, 2, 10, 16, 12, 9, 5, 14, 4, 17, 11, 7, 6, 19, 3, 15, 18, 13, 8, 1], 150, 2.0342020988464355s

Iteration: 479

[1, 19, 10, 7, 5, 2, 3, 17, 15, 12, 9, 14, 16, 13, 18, 6, 11, 8, 4, 20, 1], 186, 1.0735280513763428s

Iteration: 480

[1, 11, 14, 16, 17, 7, 8, 4, 9, 3, 20, 10, 13, 2, 12, 19, 15, 5, 18, 6, 1], 134, 1.0542278289794922s

Iteration: 481

[1, 14, 13, 9, 15, 3, 10, 16, 17, 7, 5, 4, 8, 2, 20, 18, 6, 12, 19, 11, 1], 137, 1.2313859462738037s

Iteration: 482

[1, 18, 7, 19, 4, 15, 9, 6, 20, 12, 5, 14, 3, 8, 10, 17, 2, 11, 16, 13, 1], 112, 0.47913169860839844s

Iteration: 483

[1, 5, 17, 8, 6, 4, 20, 9, 3, 13, 16, 12, 14, 7, 15, 2, 11, 10, 18, 19, 1], 220, 29.451305150985718s

Iteration: 484

[1, 5, 4, 11, 18, 9, 8, 3, 16, 13, 7, 17, 20, 15, 19, 14, 6, 12, 10, 2, 1], 169, 3.895143747329712s

Iteration: 485

[1, 13, 2, 14, 18, 9, 5, 8, 11, 19, 7, 15, 20, 12, 16, 3, 4, 17, 6, 10, 1], 211, 2.4702069759368896s

Iteration: 486

[1, 19, 11, 8, 20, 7, 13, 15, 2, 5, 14, 12, 18, 3, 6, 9, 17, 10, 4, 16, 1], 177, 1.666203498840332s

Iteration: 487

[1, 8, 16, 19, 18, 5, 20, 2, 11, 14, 9, 6, 3, 13, 10, 12, 4, 17, 15, 7, 1], 187, 5.39982008934021s

Iteration: 488

[1, 19, 18, 12, 7, 3, 17, 16, 2, 10, 9, 6, 4, 11, 15, 20, 5, 14, 8, 13, 1], 194, 5.252101898193359s

Iteration: 489

[1, 10, 5, 3, 7, 9, 15, 11, 2, 13, 18, 19, 6, 8, 17, 14, 4, 16, 20, 12, 1], 238, 0.9430410861968994s

Iteration: 490

[1, 3, 12, 11, 4, 9, 14, 15, 16, 2, 20, 18, 6, 19, 10, 8, 7, 17, 5, 13, 1], 151, 0.7645230293273926s

Iteration: 491

[1, 19, 2, 10, 17, 16, 6, 7, 12, 15, 5, 13, 8, 20, 4, 9, 11, 3, 14, 18, 1], 159, 3.1575217247009277s

Iteration: 492

[1, 6, 3, 4, 18, 9, 14, 5, 8, 11, 2, 10, 13, 15, 7, 20, 17, 19, 16, 12, 1], 133, 1.8501973152160645s

Iteration: 493

[1, 3, 13, 4, 19, 10, 12, 6, 9, 5, 20, 14, 7, 8, 2, 15, 16, 17, 11, 18, 1], 156, 1.8258233070373535s

Iteration: 494

[1, 20, 13, 5, 6, 7, 15, 9, 14, 8, 11, 10, 3, 4, 2, 19, 18, 12, 17, 16, 1], 218, 1.4912590980529785s

Iteration: 495

[1, 19, 16, 4, 3, 17, 18, 15, 13, 20, 7, 6, 12, 2, 9, 11, 5, 14, 10, 8, 1], 154, 2.728095293045044s

Iteration: 496

[1, 19, 14, 17, 20, 11, 2, 10, 6, 3, 9, 7, 4, 15, 5, 13, 12, 16, 18, 8, 1], 173, 0.8965346813201904s

Iteration: 497

[1, 7, 8, 2, 18, 3, 19, 11, 14, 15, 4, 16, 10, 9, 12, 13, 6, 5, 17, 20, 1], 168, 3.1535346508026123s

Iteration: 498

[1, 3, 19, 6, 5, 10, 13, 12, 8, 9, 17, 2, 15, 4, 18, 16, 20, 11, 14, 7, 1], 142, 1.9708025455474854s

Iteration: 499

[1, 19, 20, 7, 18, 4, 11, 3, 17, 6, 14, 16, 8, 9, 2, 12, 13, 15, 10, 5, 1], 175, 1.7414958477020264s

Iteration: 500

[1, 20, 15, 8, 4, 5, 2, 18, 13, 10, 12, 11, 17, 3, 9, 6, 14, 19, 16, 7, 1], 130, 0.12493276596069336s

Iteration: 501

[1, 4, 10, 11, 12, 9, 7, 5, 20, 14, 19, 8, 13, 2, 18, 3, 6, 17, 16, 15, 1], 150, 2.761549234390259s

Iteration: 502

[1, 9, 15, 11, 13, 19, 5, 2, 14, 4, 16, 20, 7, 8, 6, 18, 3, 17, 12, 10, 1], 216, 1.543686866760254s

Iteration: 503

[1, 19, 17, 15, 7, 3, 6, 9, 16, 13, 20, 10, 11, 4, 14, 2, 18, 5, 12, 8, 1], 174, 1.8409521579742432s

Iteration: 504

[1, 11, 14, 10, 2, 6, 12, 8, 13, 18, 19, 15, 20, 3, 5, 17, 9, 4, 16, 7, 1], 160, 6.9672932624816895s

Iteration: 505

[1, 18, 8, 5, 17, 16, 14, 2, 15, 19, 4, 9, 20, 10, 12, 7, 6, 11, 13, 3, 1], 193, 1.3983500003814697s

Iteration: 506

[1, 9, 4, 18, 14, 11, 7, 17, 10, 13, 15, 20, 3, 19, 8, 12, 6, 5, 2, 16, 1], 191, 8.632211446762085s

Iteration: 507

[1, 14, 5, 7, 10, 8, 18, 11, 20, 13, 16, 2, 3, 9, 4, 6, 19, 12, 15, 17, 1], 169, 1.2562685012817383s

Iteration: 508

[1, 12, 16, 13, 5, 10, 6, 18, 19, 11, 9, 20, 14, 4, 15, 3, 2, 17, 7, 8, 1], 143, 0.7624454498291016s

Iteration: 509

[1, 11, 5, 6, 12, 19, 2, 9, 20, 10, 3, 18, 15, 4, 8, 17, 16, 13, 14, 7, 1], 219, 12.116369009017944s

Iteration: 510

[1, 5, 17, 7, 11, 18, 10, 19, 4, 3, 2, 9, 16, 6, 15, 13, 20, 14, 8, 12, 1], 235, 5.97098445892334s

Iteration: 511

[1, 15, 5, 8, 18, 14, 3, 2, 10, 16, 7, 13, 19, 12, 6, 17, 20, 11, 4, 9, 1], 216, 10.643896579742432s

Iteration: 512

[1, 18, 2, 8, 16, 7, 12, 14, 19, 11, 6, 9, 15, 20, 10, 17, 13, 3, 4, 5, 1], 198, 11.666835069656372s

Iteration: 513

[1, 15, 13, 2, 16, 4, 9, 10, 6, 7, 17, 14, 5, 19, 12, 8, 11, 20, 3, 18, 1], 279, 22.60568404197693s

Iteration: 514

[1, 19, 20, 16, 15, 10, 17, 13, 8, 9, 12, 2, 5, 7, 11, 14, 18, 4, 3, 6, 1], 190, 2.49896502494812s

Iteration: 515

[1, 4, 7, 10, 16, 8, 20, 15, 5, 11, 18, 14, 2, 12, 17, 6, 13, 3, 9, 19, 1], 177, 1.281073808670044s

Iteration: 516

[1, 9, 6, 11, 10, 17, 13, 8, 7, 15, 18, 19, 16, 12, 20, 14, 5, 2, 4, 3, 1], 151, 1.3335161209106445s

Iteration: 517

[1, 17, 12, 10, 16, 9, 18, 20, 7, 14, 11, 8, 6, 2, 19, 13, 4, 3, 15, 5, 1], 193, 3.1389412879943848s

Iteration: 518

[1, 7, 5, 2, 16, 8, 3, 12, 14, 17, 11, 6, 15, 13, 9, 20, 19, 4, 18, 10, 1], 167, 2.8131723403930664s

Iteration: 519

[1, 7, 11, 8, 4, 19, 14, 18, 15, 16, 6, 9, 2, 17, 10, 20, 5, 13, 3, 12, 1], 132, 4.0454747676849365s

Iteration: 520

[1, 9, 5, 4, 11, 3, 6, 10, 13, 8, 2, 12, 15, 20, 7, 16, 14, 18, 17, 19, 1], 163, 2.7839603424072266s

Iteration: 521

[1, 9, 8, 10, 4, 15, 11, 19, 5, 13, 2, 6, 7, 17, 20, 14, 3, 12, 16, 18, 1], 185, 1.250633716583252s

Iteration: 522

[1, 12, 13, 8, 11, 10, 18, 14, 19, 15, 7, 9, 20, 16, 3, 5, 2, 4, 6, 17, 1], 175, 2.905454635620117s

Iteration: 523

[1, 15, 19, 4, 7, 16, 17, 2, 6, 14, 13, 18, 20, 10, 3, 9, 8, 5, 12, 11, 1], 171, 1.9591712951660156s

Iteration: 524

[1, 10, 7, 4, 20, 6, 11, 9, 8, 12, 3, 17, 16, 14, 2, 13, 5, 19, 18, 15, 1], 186, 5.492655038833618s

Iteration: 525

[1, 3, 4, 10, 20, 17, 11, 16, 14, 2, 8, 9, 19, 18, 5, 6, 12, 15, 13, 7, 1], 145, 0.8918070793151855s

Iteration: 526

[1, 2, 11, 12, 17, 6, 9, 8, 4, 7, 19, 16, 10, 14, 3, 13, 18, 5, 15, 20, 1], 184, 15.104588031768799s

Iteration: 527

[1, 14, 9, 16, 10, 15, 17, 4, 6, 18, 11, 2, 20, 12, 19, 5, 3, 13, 7, 8, 1], 196, 3.1840503215789795s

Iteration: 528

[1, 3, 12, 6, 19, 9, 14, 8, 18, 20, 5, 7, 10, 4, 17, 11, 2, 16, 13, 15, 1], 137, 0.9239153861999512s

Iteration: 529

[1, 12, 5, 7, 2, 14, 16, 13, 8, 18, 20, 10, 3, 6, 4, 11, 19, 9, 17, 15, 1], 149, 1.6334624290466309s

Iteration: 530

[1, 13, 6, 2, 3, 19, 9, 4, 10, 8, 18, 5, 11, 12, 16, 15, 7, 20, 17, 14, 1], 180, 8.679322004318237s

Iteration: 531

[1, 16, 3, 14, 6, 5, 10, 12, 13, 7, 8, 17, 11, 2, 4, 20, 18, 15, 19, 9, 1], 188, 1.6441082954406738s

Iteration: 532

[1, 17, 6, 3, 10, 2, 5, 7, 9, 19, 15, 12, 13, 20, 4, 18, 16, 14, 11, 8, 1], 149, 1.7219574451446533s

Iteration: 533

[1, 5, 14, 17, 15, 9, 4, 3, 20, 19, 8, 2, 6, 12, 18, 13, 11, 16, 10, 7, 1], 145, 1.260249376296997s

Iteration: 534

[1, 8, 9, 7, 2, 15, 13, 17, 20, 19, 6, 3, 11, 18, 12, 5, 4, 14, 16, 10, 1], 152, 0.9529707431793213s

Iteration: 535

[1, 11, 13, 6, 12, 5, 15, 18, 8, 10, 17, 19, 3, 4, 9, 14, 20, 2, 7, 16, 1], 231, 0.4908018112182617s

Iteration: 536

[1, 18, 2, 13, 16, 8, 4, 3, 17, 19, 6, 11, 7, 14, 10, 15, 20, 9, 5, 12, 1], 199, 3.129652261734009s

Iteration: 537

[1, 12, 14, 20, 19, 18, 8, 11, 5, 17, 6, 4, 16, 9, 15, 7, 2, 3, 10, 13, 1], 173, 1.1845123767852783s

Iteration: 538

[1, 4, 8, 13, 6, 15, 2, 17, 7, 20, 11, 5, 12, 10, 19, 3, 16, 18, 9, 14, 1], 158, 1.5348708629608154s

Iteration: 539

[1, 8, 4, 20, 7, 13, 5, 6, 18, 3, 17, 12, 16, 15, 19, 10, 9, 14, 2, 11, 1], 158, 3.056771755218506s

Iteration: 540

[1, 11, 14, 9, 19, 4, 2, 8, 16, 3, 13, 12, 20, 10, 7, 5, 15, 18, 17, 6, 1], 163, 1.094261646270752s

Iteration: 541

[1, 4, 15, 19, 2, 20, 6, 8, 5, 13, 16, 3, 17, 7, 10, 18, 12, 9, 11, 14, 1], 187, 0.897986888885498s

Iteration: 542

[1, 9, 18, 14, 13, 4, 6, 8, 12, 10, 19, 20, 2, 5, 17, 7, 16, 11, 15, 3, 1], 244, 29.56913471221924s

Iteration: 543

[1, 20, 10, 9, 3, 11, 2, 7, 19, 6, 16, 5, 4, 13, 18, 15, 8, 12, 17, 14, 1], 172, 4.627684831619263s

Iteration: 544

[1, 6, 5, 11, 3, 8, 20, 16, 17, 14, 10, 19, 12, 2, 18, 7, 15, 9, 4, 13, 1], 192, 1.324270486831665s

Iteration: 545

[1, 4, 12, 8, 11, 6, 16, 15, 9, 5, 13, 14, 20, 7, 18, 19, 17, 2, 10, 3, 1], 245, 63.37239456176758s

Iteration: 546

[1, 7, 6, 16, 12, 17, 4, 2, 13, 20, 5, 10, 9, 14, 19, 15, 11, 18, 8, 3, 1], 203, 2.99847149848938s

Iteration: 547

[1, 17, 18, 14, 10, 6, 7, 19, 20, 4, 3, 2, 12, 16, 5, 11, 8, 13, 15, 9, 1], 174, 2.70072603225708s

Iteration: 548

[1, 2, 14, 16, 4, 8, 10, 20, 5, 7, 19, 9, 11, 18, 17, 15, 3, 6, 13, 12, 1], 176, 2.864499807357788s

Iteration: 549

[1, 6, 9, 7, 5, 10, 2, 14, 4, 16, 13, 19, 20, 18, 15, 12, 3, 11, 8, 17, 1], 149, 7.429418087005615s

Iteration: 550

[1, 12, 3, 15, 19, 16, 4, 8, 17, 11, 7, 6, 18, 20, 10, 13, 9, 2, 14, 5, 1], 182, 4.2186949253082275s

Iteration: 551

[1, 12, 6, 16, 8, 19, 11, 13, 2, 3, 18, 9, 5, 4, 20, 10, 7, 17, 15, 14, 1], 127, 2.6436238288879395s

Iteration: 552

[1, 13, 16, 5, 2, 6, 9, 8, 11, 14, 12, 4, 15, 7, 20, 18, 19, 3, 17, 10, 1], 167, 2.2065579891204834s

Iteration: 553

[1, 9, 3, 11, 10, 18, 6, 4, 7, 8, 13, 5, 2, 17, 12, 14, 19, 16, 20, 15, 1], 142, 0.6044309139251709s

Iteration: 554

[1, 20, 5, 3, 17, 9, 14, 10, 2, 4, 8, 12, 15, 19, 11, 7, 6, 13, 16, 18, 1], 183, 4.32093358039856s

Iteration: 555

[1, 3, 5, 18, 2, 10, 8, 9, 6, 12, 7, 14, 11, 19, 4, 13, 17, 16, 15, 20, 1], 215, 8.616519927978516s

Iteration: 556

[1, 10, 12, 18, 9, 17, 6, 11, 8, 4, 20, 19, 16, 5, 14, 2, 7, 13, 3, 15, 1], 154, 1.3031620979309082s

Iteration: 557

[1, 8, 12, 15, 9, 14, 19, 16, 17, 20, 11, 10, 5, 2, 4, 6, 7, 13, 3, 18, 1], 175, 1.0768992900848389s

Iteration: 558

[1, 17, 7, 8, 6, 18, 3, 4, 15, 14, 5, 2, 12, 20, 9, 16, 13, 10, 11, 19, 1], 167, 6.669456481933594s

Iteration: 559

[1, 3, 7, 6, 10, 5, 2, 17, 20, 13, 19, 14, 9, 8, 12, 16, 4, 15, 11, 18, 1], 153, 0.613513708114624s

Iteration: 560

[1, 12, 7, 4, 8, 14, 15, 11, 13, 16, 18, 20, 19, 9, 6, 5, 17, 10, 2, 3, 1], 182, 4.047775506973267s

Iteration: 561

[1, 16, 6, 7, 3, 17, 15, 20, 11, 4, 13, 2, 9, 12, 10, 18, 5, 8, 19, 14, 1], 125, 0.45079541206359863s

Iteration: 562

[1, 20, 4, 17, 7, 6, 15, 16, 18, 14, 10, 12, 11, 9, 5, 19, 3, 8, 13, 2, 1], 242, 30.7567081451416s

Iteration: 563

[1, 16, 19, 8, 13, 11, 15, 10, 9, 18, 12, 7, 20, 6, 5, 3, 17, 2, 14, 4, 1], 219, 12.416492700576782s

Iteration: 564

[1, 5, 7, 13, 3, 4, 14, 11, 9, 6, 8, 10, 15, 12, 17, 2, 18, 20, 19, 16, 1], 152, 1.8321754932403564s

Iteration: 565

[1, 10, 18, 14, 17, 6, 13, 5, 4, 12, 16, 7, 9, 19, 11, 3, 8, 15, 2, 20, 1], 124, 0.23513031005859375s

Iteration: 566

[1, 7, 9, 15, 6, 17, 20, 8, 14, 19, 16, 11, 4, 18, 5, 13, 12, 3, 2, 10, 1], 151, 1.5664725303649902s

Iteration: 567

[1, 12, 10, 8, 9, 19, 2, 17, 13, 16, 4, 3, 6, 11, 18, 14, 20, 7, 5, 15, 1], 194, 8.207693338394165s

Iteration: 568

[1, 5, 12, 10, 14, 17, 16, 11, 4, 19, 15, 18, 7, 20, 13, 9, 8, 2, 6, 3, 1], 138, 4.393706321716309s

Iteration: 569

[1, 15, 17, 12, 20, 11, 13, 5, 19, 14, 16, 9, 8, 6, 7, 2, 4, 10, 18, 3, 1], 211, 3.551241874694824s

Iteration: 570

[1, 12, 17, 6, 8, 11, 2, 15, 4, 14, 3, 10, 16, 18, 19, 5, 7, 20, 13, 9, 1], 145, 0.8654415607452393s

Iteration: 571

[1, 5, 15, 19, 14, 11, 3, 8, 13, 12, 9, 16, 18, 20, 17, 6, 7, 10, 2, 4, 1], 148, 0.7907757759094238s

Iteration: 572

[1, 19, 2, 4, 11, 7, 18, 20, 5, 17, 6, 14, 10, 15, 8, 12, 3, 16, 9, 13, 1], 176, 1.8218445777893066s

Iteration: 573

[1, 5, 10, 9, 8, 4, 20, 16, 13, 18, 12, 15, 14, 11, 19, 6, 3, 17, 7, 2, 1], 191, 1.0130016803741455s

Iteration: 574

[1, 14, 17, 6, 4, 9, 8, 10, 20, 3, 18, 5, 12, 15, 11, 7, 2, 16, 13, 19, 1], 165, 1.9633467197418213s

Iteration: 575

[1, 12, 19, 15, 13, 7, 6, 10, 2, 16, 8, 5, 20, 14, 3, 9, 11, 4, 18, 17, 1], 174, 0.313244104385376s

Iteration: 576

[1, 13, 18, 3, 20, 10, 8, 19, 17, 7, 14, 6, 11, 12, 9, 2, 15, 16, 4, 5, 1], 161, 1.5429868698120117s

Iteration: 577

[1, 13, 16, 19, 15, 6, 8, 4, 20, 5, 18, 12, 17, 3, 14, 2, 10, 11, 9, 7, 1], 177, 0.5897574424743652s

Iteration: 578

[1, 3, 18, 13, 7, 11, 8, 4, 10, 19, 5, 15, 17, 20, 9, 12, 16, 2, 14, 6, 1], 148, 46.88880443572998s

Iteration: 579

[1, 6, 20, 19, 16, 9, 3, 18, 17, 5, 13, 2, 4, 15, 11, 7, 8, 12, 14, 10, 1], 158, 1.676509141921997s

Iteration: 580

[1, 3, 10, 5, 14, 7, 9, 17, 12, 18, 19, 4, 2, 20, 13, 16, 6, 15, 8, 11, 1], 135, 8.574887752532959s

Iteration: 581

[1, 16, 8, 20, 14, 13, 4, 7, 9, 5, 15, 2, 11, 18, 3, 19, 6, 17, 12, 10, 1], 212, 6.466898441314697s

Iteration: 582

[1, 10, 3, 17, 11, 16, 8, 15, 12, 4, 6, 5, 18, 20, 7, 19, 14, 2, 13, 9, 1], 220, 53.995283126831055s

Iteration: 583

[1, 4, 7, 19, 8, 15, 9, 11, 10, 6, 3, 17, 2, 14, 18, 16, 12, 13, 20, 5, 1], 140, 1.9299070835113525s

Iteration: 584

[1, 18, 12, 7, 4, 20, 9, 6, 5, 14, 2, 8, 16, 19, 11, 3, 13, 15, 10, 17, 1], 172, 1.9180433750152588s

Iteration: 585

[1, 5, 15, 16, 4, 9, 14, 10, 12, 7, 2, 3, 8, 18, 6, 11, 19, 13, 17, 20, 1], 151, 1.9722340106964111s

Iteration: 586

[1, 14, 8, 5, 17, 19, 6, 7, 9, 12, 20, 3, 15, 18, 2, 11, 10, 13, 16, 4, 1], 158, 0.15491366386413574s

Iteration: 587

[1, 19, 15, 3, 6, 7, 14, 18, 20, 9, 16, 2, 4, 10, 13, 8, 12, 11, 5, 17, 1], 184, 9.269259452819824s

Iteration: 588

[1, 13, 12, 2, 14, 20, 7, 16, 17, 8, 6, 4, 19, 5, 15, 11, 18, 9, 3, 10, 1], 140, 1.8923068046569824s

Iteration: 589

[1, 10, 11, 13, 19, 17, 20, 7, 6, 2, 14, 8, 16, 15, 4, 3, 9, 12, 18, 5, 1], 169, 1.705766201019287s

Iteration: 590

[1, 9, 10, 8, 5, 3, 2, 7, 19, 4, 12, 16, 15, 14, 17, 20, 18, 6, 13, 11, 1], 165, 1.4389193058013916s

Iteration: 591

[1, 6, 11, 12, 17, 3, 19, 14, 8, 4, 2, 15, 9, 13, 16, 20, 7, 5, 18, 10, 1], 177, 1.188887357711792s

Iteration: 592

[1, 15, 5, 18, 11, 19, 9, 17, 10, 14, 6, 20, 2, 3, 7, 8, 12, 16, 13, 4, 1], 183, 1.3620421886444092s

Iteration: 593

[1, 10, 5, 11, 16, 12, 4, 13, 18, 15, 2, 19, 17, 7, 20, 6, 9, 14, 3, 8, 1], 150, 5.645868301391602s

Iteration: 594

[1, 13, 6, 17, 15, 5, 12, 14, 8, 7, 3, 18, 2, 11, 20, 10, 9, 4, 19, 16, 1], 208, 4.195801019668579s

Iteration: 595

[1, 13, 18, 17, 16, 5, 11, 6, 4, 3, 2, 8, 15, 14, 9, 20, 10, 12, 7, 19, 1], 185, 13.627241373062134s

Iteration: 596

[1, 11, 14, 8, 7, 13, 2, 12, 3, 10, 16, 19, 5, 4, 18, 9, 15, 6, 20, 17, 1], 150, 1.9621779918670654s

Iteration: 597

[1, 17, 18, 4, 5, 9, 16, 7, 20, 19, 3, 8, 15, 12, 13, 6, 2, 14, 10, 11, 1], 193, 6.755909204483032s

Iteration: 598

[1, 3, 13, 9, 6, 4, 19, 20, 12, 10, 2, 17, 18, 11, 14, 7, 5, 16, 8, 15, 1], 196, 1.4736576080322266s

Iteration: 599

[1, 16, 19, 2, 17, 6, 9, 3, 13, 5, 10, 8, 20, 4, 11, 18, 15, 14, 12, 7, 1], 195, 1.862168312072754s

Iteration: 600

[1, 5, 14, 16, 18, 19, 11, 9, 20, 8, 10, 6, 7, 15, 4, 17, 13, 2, 3, 12, 1], 149, 0.8284988403320312s

Iteration: 601

[1, 14, 6, 19, 20, 12, 2, 9, 16, 18, 11, 13, 10, 3, 8, 4, 7, 5, 17, 15, 1], 167, 7.6027326583862305s

Iteration: 602

[1, 7, 10, 3, 6, 19, 12, 14, 20, 11, 5, 16, 2, 18, 8, 13, 15, 17, 4, 9, 1], 193, 7.438673257827759s

Iteration: 603

[1, 19, 9, 20, 10, 12, 18, 7, 8, 4, 15, 2, 5, 6, 14, 13, 3, 11, 16, 17, 1], 188, 0.6259651184082031s

Iteration: 604

[1, 14, 15, 16, 13, 17, 3, 8, 6, 5, 19, 9, 2, 10, 18, 7, 4, 12, 20, 11, 1], 180, 6.022711277008057s

Iteration: 605

[1, 15, 18, 13, 3, 16, 11, 17, 7, 14, 19, 5, 2, 8, 12, 4, 10, 6, 9, 20, 1], 190, 1.037529468536377s

Iteration: 606

[1, 19, 9, 2, 6, 15, 14, 16, 13, 18, 7, 3, 17, 12, 4, 10, 5, 8, 20, 11, 1], 166, 1.677215337753296s

Iteration: 607

[1, 3, 14, 5, 11, 8, 13, 9, 6, 15, 16, 7, 17, 18, 20, 19, 10, 2, 4, 12, 1], 167, 4.545095682144165s

Iteration: 608

[1, 3, 15, 7, 4, 2, 8, 16, 10, 18, 9, 6, 19, 12, 20, 11, 13, 5, 17, 14, 1], 138, 12.364298820495605s

Iteration: 609

[1, 6, 15, 8, 9, 3, 12, 14, 4, 19, 10, 5, 16, 13, 7, 11, 20, 2, 18, 17, 1], 184, 3.5334572792053223s

Iteration: 610

[1, 8, 2, 13, 4, 19, 18, 17, 7, 11, 14, 16, 3, 5, 12, 6, 9, 15, 10, 20, 1], 181, 0.9658911228179932s

Iteration: 611

[1, 13, 4, 6, 3, 12, 16, 7, 8, 10, 17, 2, 19, 5, 9, 14, 11, 20, 15, 18, 1], 185, 2.6360855102539062s

Iteration: 612

[1, 13, 6, 4, 18, 2, 8, 9, 3, 7, 17, 10, 20, 16, 5, 11, 19, 15, 12, 14, 1], 171, 0.11227059364318848s

Iteration: 613

[1, 14, 8, 17, 9, 4, 12, 7, 16, 6, 3, 10, 20, 5, 2, 19, 13, 11, 15, 18, 1], 185, 5.402096748352051s

Iteration: 614

[1, 18, 16, 12, 17, 10, 20, 3, 14, 6, 15, 2, 5, 8, 11, 7, 13, 9, 4, 19, 1], 187, 2.2453882694244385s

Iteration: 615

[1, 15, 18, 7, 12, 6, 8, 9, 14, 5, 17, 3, 13, 11, 4, 19, 2, 20, 16, 10, 1], 185, 26.61171579360962s

Iteration: 616

[1, 2, 7, 11, 6, 14, 19, 9, 3, 4, 10, 20, 5, 12, 17, 15, 16, 18, 8, 13, 1], 149, 2.7404050827026367s

Iteration: 617

[1, 7, 11, 4, 13, 20, 5, 2, 9, 12, 10, 3, 8, 6, 19, 17, 18, 15, 14, 16, 1], 159, 6.1383957862854s

Iteration: 618

[1, 3, 14, 16, 2, 18, 6, 17, 12, 11, 19, 8, 5, 7, 13, 4, 9, 10, 20, 15, 1], 160, 3.6187350749969482s

Iteration: 619

[1, 12, 10, 9, 2, 13, 20, 19, 8, 7, 5, 16, 18, 6, 14, 3, 4, 17, 11, 15, 1], 138, 1.3099143505096436s

Iteration: 620

[1, 2, 18, 12, 3, 6, 15, 5, 16, 13, 11, 9, 14, 19, 20, 4, 17, 8, 10, 7, 1], 149, 0.5154767036437988s

Iteration: 621

[1, 2, 16, 14, 4, 11, 15, 8, 12, 13, 10, 5, 17, 3, 6, 20, 18, 7, 9, 19, 1], 148, 0.9260096549987793s

Iteration: 622

[1, 2, 14, 5, 8, 7, 15, 12, 4, 10, 18, 17, 19, 16, 9, 3, 20, 13, 6, 11, 1], 144, 7.965241432189941s

Iteration: 623

[1, 3, 13, 6, 20, 10, 16, 4, 14, 15, 12, 17, 9, 5, 7, 18, 2, 11, 19, 8, 1], 189, 8.946725368499756s

Iteration: 624

[1, 9, 7, 17, 13, 16, 20, 18, 10, 14, 12, 3, 4, 15, 2, 6, 8, 11, 5, 19, 1], 204, 1.8431975841522217s

Iteration: 625

[1, 10, 3, 14, 19, 20, 4, 7, 9, 2, 11, 18, 16, 15, 5, 6, 8, 17, 12, 13, 1], 162, 2.3193650245666504s

Iteration: 626

[1, 10, 20, 12, 2, 7, 4, 17, 5, 8, 9, 18, 6, 11, 16, 19, 3, 15, 13, 14, 1], 183, 12.081747770309448s

Iteration: 627

[1, 4, 13, 18, 2, 17, 12, 3, 8, 20, 6, 9, 16, 11, 15, 5, 14, 7, 19, 10, 1], 186, 6.6746602058410645s

Iteration: 628

[1, 9, 19, 10, 8, 17, 5, 2, 12, 4, 15, 3, 20, 16, 6, 14, 18, 13, 11, 7, 1], 161, 2.9201114177703857s

Iteration: 629

[1, 11, 7, 19, 18, 5, 2, 14, 17, 10, 6, 15, 8, 13, 4, 3, 16, 12, 20, 9, 1], 173, 1.3714885711669922s

Iteration: 630

[1, 16, 18, 12, 6, 19, 20, 14, 2, 7, 13, 15, 4, 3, 10, 9, 11, 8, 5, 17, 1], 159, 2.8056249618530273s

Iteration: 631

[1, 7, 20, 8, 10, 9, 4, 18, 6, 2, 14, 17, 19, 11, 13, 15, 12, 16, 5, 3, 1], 251, 26.673959016799927s

Iteration: 632

[1, 13, 8, 20, 18, 5, 16, 19, 10, 2, 6, 7, 15, 17, 3, 14, 9, 11, 4, 12, 1], 176, 4.141326904296875s

Iteration: 633

[1, 15, 16, 19, 10, 3, 2, 9, 17, 12, 20, 7, 18, 5, 8, 4, 6, 14, 13, 11, 1], 174, 13.826143503189087s

Iteration: 634

[1, 10, 14, 11, 6, 5, 15, 2, 3, 16, 12, 7, 4, 8, 20, 18, 13, 19, 9, 17, 1], 163, 1.3885083198547363s

Iteration: 635

[1, 11, 10, 15, 16, 9, 7, 18, 8, 14, 3, 20, 13, 17, 2, 4, 5, 12, 6, 19, 1], 154, 0.6689751148223877s

Iteration: 636

[1, 10, 4, 14, 5, 15, 9, 6, 17, 18, 7, 11, 3, 8, 16, 13, 2, 20, 19, 12, 1], 176, 5.892582416534424s

Iteration: 637

[1, 5, 7, 6, 18, 10, 11, 16, 13, 19, 4, 14, 20, 8, 3, 2, 12, 17, 15, 9, 1], 217, 30.074869871139526s

Iteration: 638

[1, 9, 6, 2, 16, 17, 5, 7, 11, 4, 14, 10, 18, 8, 3, 15, 13, 20, 19, 12, 1], 168, 9.054909706115723s

Iteration: 639

[1, 18, 4, 13, 10, 6, 9, 11, 20, 7, 19, 17, 16, 12, 8, 5, 15, 3, 2, 14, 1], 196, 2.8896727561950684s

Iteration: 640

[1, 18, 19, 12, 13, 6, 15, 20, 5, 11, 14, 3, 7, 8, 10, 17, 16, 4, 9, 2, 1], 215, 6.41155743598938s

Iteration: 641

[1, 2, 13, 5, 10, 3, 20, 4, 11, 16, 9, 12, 7, 6, 15, 18, 14, 8, 19, 17, 1], 183, 0.7092247009277344s

Iteration: 642

[1, 13, 14, 16, 8, 7, 2, 17, 20, 12, 19, 3, 10, 6, 15, 11, 5, 4, 18, 9, 1], 124, 3.396811008453369s

Iteration: 643

[1, 17, 2, 14, 3, 16, 6, 4, 10, 19, 18, 20, 15, 12, 13, 11, 7, 9, 8, 5, 1], 190, 0.32273173332214355s

Iteration: 644

[1, 20, 12, 16, 2, 7, 10, 9, 18, 5, 3, 17, 15, 11, 13, 19, 14, 6, 8, 4, 1], 90, 0.211147546768188 48s

Iteration: 645

[1, 9, 12, 13, 18, 17, 15, 10, 4, 6, 3, 2, 14, 16, 11, 20, 7, 19, 5, 8, 1], 150, 1.766084909439087s

Iteration: 646

[1, 17, 8, 3, 15, 6, 13, 5, 2, 10, 14, 20, 11, 18, 19, 9, 7, 16, 12, 4, 1], 155, 0.5376176834106445s

Iteration: 647

[1, 14, 17, 20, 4, 7, 15, 6, 11, 16, 3, 5, 19, 9, 10, 2, 13, 12, 8, 18, 1], 145, 1.355891466140747s

Iteration: 648

[1, 14, 4, 3, 9, 15, 19, 20, 5, 13, 2, 6, 18, 12, 11, 8, 16, 17, 10, 7, 1], 165, 3.5185978412628174s

Iteration: 649

[1, 19, 14, 13, 2, 3, 20, 15, 11, 18, 5, 8, 12, 16, 17, 6, 9, 7, 10, 4, 1], 166, 0.9650125503540039s

Iteration: 650

[1, 10, 9, 13, 6, 4, 12, 5, 18, 14, 8, 7, 16, 15, 19, 11, 2, 3, 17, 20, 1], 206, 11.632230997085571s

Iteration: 651

[1, 17, 20, 16, 11, 9, 19, 10, 15, 7, 3, 2, 13, 4, 12, 6, 14, 5, 8, 18, 1], 169, 3.3527989387512207s

Iteration: 652

[1, 18, 3, 20, 9, 15, 14, 16, 19, 10, 8, 12, 13, 2, 17, 5, 7, 6, 4, 11, 1], 204, 5.020816802978516s

Iteration: 653

[1, 5, 16, 4, 2, 6, 20, 7, 13, 11, 15, 19, 10, 17, 8, 14, 9, 18, 12, 3, 1], 194, 23.823654413223267s

Iteration: 654

[1, 17, 14, 20, 7, 9, 15, 12, 6, 8, 11, 2, 18, 3, 19, 4, 16, 13, 10, 5, 1], 156, 0.5214715003967285s

Iteration: 655

[1, 17, 4, 2, 16, 13, 15, 7, 6, 11, 20, 10, 5, 3, 19, 8, 12, 9, 14, 18, 1], 169, 10.30636191368103s

Iteration: 656

[1, 12, 15, 8, 16, 19, 11, 13, 3, 7, 6, 5, 2, 18, 17, 14, 20, 10, 4, 9, 1], 200, 16.997678756713867s

Iteration: 657

[1, 4, 7, 17, 2, 20, 15, 13, 14, 9, 18, 12, 11, 19, 3, 8, 10, 16, 5, 6, 1], 217, 30.744755506515503s

Iteration: 658

[1, 15, 10, 19, 11, 6, 18, 9, 14, 12, 17, 16, 20, 13, 5, 4, 8, 7, 3, 2, 1], 240, 4.09606409072876s

Iteration: 659

[1, 2, 12, 5, 16, 13, 3, 7, 19, 15, 18, 20, 17, 8, 4, 10, 6, 14, 11, 9, 1], 153, 3.42541241645813s

Iteration: 660

[1, 10, 13, 11, 8, 15, 6, 2, 7, 19, 3, 14, 5, 17, 12, 20, 9, 4, 16, 18, 1], 220, 1.7480993270874023s

Iteration: 661

[1, 5, 10, 15, 12, 2, 16, 11, 20, 18, 4, 6, 8, 7, 14, 3, 9, 13, 17, 19, 1], 162, 0.46851372718811035s

Iteration: 662

[1, 13, 3, 10, 5, 19, 8, 12, 4, 17, 16, 11, 18, 15, 20, 2, 7, 14, 6, 9, 1], 126, 0.3243577480316162s

Iteration: 663

[1, 7, 14, 16, 3, 8, 6, 19, 9, 15, 2, 17, 5, 10, 18, 20, 11, 13, 12, 4, 1], 107, 0.9191439151763916s

Iteration: 664

[1, 18, 15, 7, 9, 6, 17, 10, 8, 2, 5, 3, 13, 19, 11, 16, 4, 20, 14, 12, 1], 203, 10.237347841262817s

Iteration: 665

[1, 8, 13, 6, 18, 4, 15, 7, 20, 9, 12, 3, 19, 16, 5, 11, 2, 14, 17, 10, 1], 162, 1.6602673530578613s

Iteration: 666

[1, 20, 15, 2, 5, 6, 13, 18, 19, 12, 17, 7, 11, 16, 8, 10, 4, 3, 9, 14, 1], 166, 0.25921177864074707s

Iteration: 667

[1, 18, 10, 7, 13, 14, 2, 9, 17, 8, 20, 16, 19, 6, 15, 5, 12, 11, 3, 4, 1], 238, 4.458226919174194s

Iteration: 668

[1, 17, 13, 20, 11, 9, 14, 2, 15, 12, 10, 8, 4, 3, 19, 7, 18, 5, 6, 16, 1], 170, 4.34325385093689s

Iteration: 669

[1, 3, 7, 11, 16, 20, 9, 19, 13, 14, 18, 15, 17, 12, 8, 10, 2, 4, 6, 5, 1], 183, 4.401622295379639s

Iteration: 670

[1, 6, 3, 7, 4, 10, 9, 19, 2, 8, 5, 17, 18, 20, 13, 16, 14, 12, 11, 15, 1], 155, 0.38051605224609375s

Iteration: 671

[1, 3, 16, 2, 5, 11, 12, 20, 7, 18, 17, 15, 10, 4, 14, 19, 13, 6, 8, 9, 1], 181, 3.243579626083374s

Iteration: 672

[1, 17, 6, 2, 18, 9, 4, 5, 8, 7, 3, 14, 16, 11, 15, 20, 13, 10, 19, 12, 1], 235, 7.203132390975952s

Iteration: 673

[1, 14, 7, 6, 9, 11, 4, 10, 3, 8, 17, 13, 2, 18, 5, 16, 12, 20, 15, 19, 1], 173, 0.6824018955230713s

Iteration: 674

[1, 19, 2, 18, 11, 6, 17, 20, 8, 13, 9, 16, 3, 5, 4, 12, 7, 15, 14, 10, 1], 179, 3.375549077987671s

Iteration: 675

[1, 5, 6, 17, 3, 14, 4, 9, 18, 10, 12, 15, 13, 19, 11, 16, 8, 2, 7, 20, 1], 148, 5.248923301696777s

Iteration: 676

[1, 17, 16, 10, 3, 4, 20, 2, 6, 7, 14, 8, 18, 13, 15, 12, 5, 9, 19, 11, 1], 184, 0.8887667655944824s

Iteration: 677

[1, 15, 2, 7, 14, 6, 3, 9, 8, 10, 19, 12, 4, 11, 5, 13, 17, 18, 16, 20, 1], 119, 0.6699817180633545s

Iteration: 678

[1, 2, 15, 16, 13, 9, 4, 12, 19, 18, 8, 6, 7, 17, 20, 10, 5, 3, 14, 11, 1], 155, 0.4985177516937256s

Iteration: 679

[1, 18, 2, 7, 11, 12, 15, 10, 5, 8, 9, 17, 3, 19, 13, 14, 4, 16, 6, 20, 1], 178, 14.623727560043335s

Iteration: 680

[1, 2, 3, 14, 9, 10, 12, 8, 5, 6, 11, 15, 13, 19, 17, 18, 4, 16, 7, 20, 1], 159, 2.8896877765655518s

Iteration: 681

[1, 17, 16, 8, 12, 9, 3, 4, 13, 7, 19, 15, 5, 6, 14, 2, 10, 18, 20, 11, 1], 170, 0.28509068489074707s

Iteration: 682

[1, 15, 20, 5, 14, 8, 9, 11, 17, 13, 10, 19, 2, 18, 3, 7, 4, 16, 6, 12, 1], 174, 3.5592432022094727s

Iteration: 683

[1, 4, 15, 2, 19, 14, 7, 3, 18, 6, 9, 10, 16, 5, 11, 17, 13, 20, 8, 12, 1], 181, 1.3044006824493408s

Iteration: 684

[1, 9, 18, 7, 19, 14, 5, 20, 12, 4, 6, 8, 16, 15, 10, 11, 13, 3, 17, 2, 1], 172, 0.7843730449676514s

Iteration: 685

[1, 3, 16, 10, 7, 4, 9, 11, 13, 2, 17, 6, 5, 20, 19, 12, 14, 8, 15, 18, 1], 161, 2.6514155864715576s

Iteration: 686

[1, 16, 2, 20, 10, 15, 9, 5, 13, 3, 4, 18, 7, 19, 8, 14, 6, 17, 12, 11, 1], 182, 7.98558235168457s

Iteration: 687

[1, 2, 11, 19, 18, 8, 4, 13, 5, 16, 3, 7, 20, 14, 17, 9, 15, 10, 12, 6, 1], 175, 0.4820725917816162s

Iteration: 688

[1, 16, 4, 17, 12, 14, 5, 13, 15, 11, 7, 6, 19, 8, 10, 9, 20, 18, 3, 2, 1], 192, 6.716601610183716s

Iteration: 689

[1, 12, 13, 11, 6, 14, 10, 17, 3, 18, 8, 16, 5, 9, 15, 4, 19, 20, 7, 2, 1], 145, 8.666729211807251s

Iteration: 690

[1, 17, 4, 7, 3, 16, 5, 14, 13, 2, 8, 11, 20, 12, 19, 6, 9, 15, 10, 18, 1], 170, 0.7904303073883057s

Iteration: 691

[1, 5, 11, 7, 8, 3, 18, 12, 19, 6, 17, 14, 9, 16, 20, 15, 13, 4, 2, 10, 1], 163, 2.677689790725708s

Iteration: 692

[1, 6, 15, 12, 18, 14, 7, 5, 11, 17, 3, 19, 13, 2, 20, 16, 10, 9, 8, 4, 1], 168, 1.802488088607788s

Iteration: 693

[1, 20, 8, 13, 9, 17, 19, 4, 7, 16, 12, 5, 18, 10, 3, 14, 2, 11, 6, 15, 1], 151, 1.12514328956604s

Iteration: 694

[1, 14, 5, 19, 6, 17, 9, 8, 2, 20, 11, 18, 16, 10, 4, 13, 15, 3, 7, 12, 1], 167, 3.1689231395721436s

Iteration: 695

[1, 6, 16, 20, 8, 19, 18, 10, 17, 14, 3, 2, 11, 15, 9, 4, 12, 7, 5, 13, 1], 136, 3.275691509246826s

Iteration: 696

[1, 5, 20, 14, 3, 15, 17, 4, 11, 13, 19, 12, 2, 16, 7, 9, 6, 8, 10, 18, 1], 206, 2.2619194984436035s

Iteration: 697

[1, 12, 18, 10, 16, 13, 15, 19, 11, 20, 9, 4, 6, 5, 7, 14, 8, 3, 2, 17, 1], 163, 25.54761815071106s

Iteration: 698

[1, 5, 17, 12, 11, 18, 4, 3, 6, 20, 9, 8, 15, 13, 10, 2, 16, 14, 7, 19, 1], 181, 4.657302618026733s

Iteration: 699

[1, 14, 8, 13, 19, 3, 5, 18, 15, 11, 20, 10, 12, 7, 17, 9, 16, 6, 2, 4, 1], 170, 0.8059582710266113s

Iteration: 700

[1, 14, 11, 6, 7, 8, 16, 19, 2, 13, 4, 5, 18, 20, 17, 3, 15, 10, 9, 12, 1], 143, 0.26114964485168457s

Iteration: 701

[1, 6, 20, 7, 4, 19, 15, 11, 17, 2, 12, 5, 18, 8, 16, 9, 14, 10, 13, 3, 1], 159, 1.0495600700378418s

Iteration: 702

[1, 2, 15, 9, 10, 19, 13, 6, 17, 12, 11, 4, 14, 7, 8, 16, 18, 20, 5, 3, 1], 213, 6.351548433303833s

Iteration: 703

[1, 2, 11, 10, 6, 20, 5, 12, 19, 16, 9, 13, 8, 7, 17, 3, 15, 14, 18, 4, 1], 151, 0.6694972515106201s

Iteration: 704

[1, 19, 8, 15, 5, 10, 9, 20, 13, 18, 14, 3, 7, 17, 6, 11, 2, 4, 16, 12, 1], 151, 0.7549853324890137s

Iteration: 705

[1, 16, 18, 11, 13, 19, 2, 5, 6, 14, 12, 10, 8, 3, 9, 4, 20, 15, 7, 17, 1], 182, 8.46824836730957s

Iteration: 706

[1, 14, 13, 9, 5, 15, 18, 4, 8, 19, 7, 11, 10, 2, 16, 20, 12, 6, 3, 17, 1], 224, 3.4066555500030518s

Iteration: 707

[1, 8, 16, 2, 6, 14, 17, 9, 10, 7, 13, 15, 4, 5, 3, 19, 12, 11, 20, 18, 1], 183, 3.4980976581573486s

Iteration: 708

[1, 8, 19, 10, 20, 5, 18, 3, 6, 17, 15, 14, 16, 13, 2, 9, 4, 11, 7, 12, 1], 192, 0.8800160884857178s

Iteration: 709

[1, 16, 12, 6, 10, 20, 5, 7, 9, 8, 3, 2, 17, 4, 15, 18, 13, 11, 19, 14, 1], 204, 8.471257448196411s

Iteration: 710

[1, 13, 17, 7, 11, 15, 19, 20, 10, 16, 3, 6, 5, 2, 4, 12, 9, 14, 18, 8, 1], 174, 0.45597267150878906s

Iteration: 711

[1, 6, 10, 12, 9, 4, 2, 15, 19, 13, 5, 18, 11, 7, 20, 17, 14, 3, 8, 16, 1], 176, 2.0997538566589355s

Iteration: 712

[1, 5, 19, 11, 10, 3, 8, 9, 17, 20, 15, 6, 13, 7, 2, 18, 14, 4, 12, 16, 1], 199, 26.549323558807373s

Iteration: 713

[1, 15, 2, 8, 5, 16, 4, 14, 18, 10, 9, 19, 11, 17, 3, 20, 12, 6, 13, 7, 1], 128, 1.4616093635559082s

Iteration: 714

[1, 7, 16, 14, 2, 19, 17, 15, 8, 12, 13, 10, 3, 9, 5, 11, 6, 4, 20, 18, 1], 148, 0.8732199668884277s

Iteration: 715

[1, 4, 11, 6, 5, 14, 2, 10, 9, 16, 8, 13, 15, 19, 3, 7, 18, 12, 20, 17, 1], 165, 4.156124830245972s

Iteration: 716

[1, 7, 5, 2, 13, 12, 17, 6, 14, 3, 18, 10, 16, 8, 19, 20, 11, 4, 15, 9, 1], 183, 4.340021848678589s

Iteration: 717

[1, 10, 6, 13, 11, 12, 14, 2, 18, 8, 3, 20, 19, 9, 15, 16, 7, 17, 4, 5, 1], 176, 1.734865665435791s

Iteration: 718

[1, 9, 20, 10, 12, 15, 14, 4, 3, 8, 17, 13, 7, 11, 18, 16, 19, 5, 2, 6, 1], 145, 0.9162640571594238s

Iteration: 719

[1, 15, 6, 10, 8, 12, 13, 9, 17, 2, 5, 14, 7, 20, 4, 11, 18, 16, 19, 3, 1], 175, 12.92307424545288s

Iteration: 720

[1, 2, 18, 8, 20, 14, 19, 4, 12, 11, 3, 15, 9, 16, 10, 13, 17, 7, 5, 6, 1], 176, 0.8984372615814209s

Iteration: 721

[1, 4, 2, 8, 17, 15, 11, 5, 19, 6, 9, 7, 18, 16, 10, 3, 14, 13, 20, 12, 1], 157, 4.060903072357178s

Iteration: 722

[1, 2, 16, 11, 13, 14, 17, 8, 9, 5, 20, 4, 19, 10, 18, 15, 7, 3, 12, 6, 1], 216, 3.9841678142547607s

Iteration: 723

[1, 6, 2, 8, 15, 16, 10, 5, 19, 14, 17, 20, 3, 9, 7, 18, 13, 4, 11, 12, 1], 188, 0.7302720546722412s

Iteration: 724

[1, 12, 16, 19, 4, 3, 9, 11, 13, 2, 14, 10, 18, 20, 6, 8, 5, 7, 17, 15, 1], 182, 0.5084991455078125s

Iteration: 725

[1, 14, 20, 10, 9, 19, 16, 4, 17, 3, 18, 12, 13, 11, 15, 8, 5, 7, 2, 6, 1], 186, 0.6680738925933838s

Iteration: 726

[1, 9, 8, 13, 12, 6, 10, 2, 15, 11, 14, 20, 5, 4, 19, 18, 16, 3, 7, 17, 1], 174, 2.0106277465820312s

Iteration: 727

[1, 20, 15, 11, 5, 8, 18, 10, 2, 13, 6, 7, 19, 16, 17, 3, 9, 12, 4, 14, 1], 185, 23.18404483795166s

Iteration: 728

[1, 4, 8, 10, 15, 17, 2, 9, 18, 11, 6, 13, 12, 14, 7, 3, 19, 20, 16, 5, 1], 175, 5.821946859359741s

Iteration: 729

[1, 16, 15, 2, 9, 8, 4, 17, 11, 7, 12, 14, 6, 18, 19, 10, 5, 20, 13, 3, 1], 191, 3.105492353439331s

Iteration: 730

[1, 19, 5, 11, 4, 17, 3, 20, 12, 18, 10, 7, 13, 15, 6, 14, 9, 2, 16, 8, 1], 179, 2.5024805068969727s

Iteration: 731

[1, 16, 20, 7, 4, 5, 12, 11, 2, 17, 13, 18, 15, 3, 10, 8, 9, 14, 19, 6, 1], 160, 2.0605452060699463s

Iteration: 732

[1, 8, 7, 19, 10, 17, 20, 18, 13, 5, 6, 11, 12, 14, 3, 16, 9, 15, 4, 2, 1], 202, 2.6085498332977295s

Iteration: 733

[1, 18, 20, 11, 15, 6, 14, 13, 12, 16, 19, 10, 3, 9, 7, 17, 5, 2, 8, 4, 1], 142, 1.3329637050628662s

Iteration: 734

[1, 9, 5, 8, 17, 6, 12, 10, 20, 19, 14, 4, 3, 16, 7, 18, 15, 2, 11, 13, 1], 159, 1.0126686096191406s

Iteration: 735

[1, 19, 20, 8, 5, 16, 3, 14, 7, 9, 12, 10, 6, 11, 17, 2, 4, 15, 18, 13, 1], 141, 4.798050403594971s

Iteration: 736

[1, 5, 16, 19, 8, 18, 10, 20, 11, 13, 9, 4, 12, 14, 7, 6, 2, 17, 3, 15, 1], 150, 1.3246369361877441s

Iteration: 737

[1, 9, 17, 19, 2, 8, 10, 6, 13, 20, 4, 11, 12, 15, 18, 3, 7, 5, 14, 16, 1], 219, 5.83708930015564s

Iteration: 738

[1, 20, 16, 10, 3, 18, 13, 6, 17, 15, 8, 4, 2, 7, 12, 14, 19, 9, 11, 5, 1], 244, 4.457313299179077s

Iteration: 739

[1, 6, 13, 14, 12, 15, 16, 18, 19, 20, 17, 10, 7, 8, 5, 2, 11, 3, 9, 4, 1], 144, 5.041010856628418s

Iteration: 740

[1, 14, 7, 15, 8, 12, 10, 18, 19, 3, 17, 13, 11, 2, 6, 4, 5, 20, 9, 16, 1], 183, 1.2141644954681396s

Iteration: 741

[1, 10, 4, 15, 16, 5, 20, 14, 2, 13, 19, 8, 18, 9, 11, 6, 12, 3, 17, 7, 1], 174, 8.517128229141235s

Iteration: 742

[1, 18, 17, 9, 5, 14, 8, 16, 10, 15, 4, 2, 6, 20, 19, 3, 12, 7, 11, 13, 1], 161, 0.8782317638397217s

Iteration: 743

[1, 13, 12, 2, 6, 20, 7, 4, 10, 9, 5, 8, 3, 18, 16, 14, 17, 11, 15, 19, 1], 169, 2.7825372219085693s

Iteration: 744

[1, 10, 12, 20, 4, 2, 7, 3, 9, 8, 19, 15, 6, 5, 17, 11, 13, 18, 16, 14, 1], 166, 5.5681445598602295s

Iteration: 745

[1, 10, 12, 14, 9, 2, 4, 8, 5, 19, 7, 16, 3, 18, 20, 13, 6, 17, 15, 11, 1], 208, 1.398573398590088s

Iteration: 746

[1, 2, 13, 12, 11, 16, 8, 4, 18, 14, 17, 7, 20, 5, 3, 6, 15, 19, 9, 10, 1], 100, 0.587116003036499s

Iteration: 747

[1, 10, 15, 20, 13, 14, 6, 3, 4, 11, 16, 12, 5, 17, 9, 2, 18, 19, 7, 8, 1], 177, 0.9977200031280518s

Iteration: 748

[1, 2, 20, 10, 6, 19, 14, 3, 5, 9, 16, 15, 18, 12, 13, 11, 8, 17, 7, 4, 1], 149, 2.9771885871887207s

Iteration: 749

[1, 16, 4, 2, 15, 17, 9, 13, 7, 6, 11, 10, 12, 18, 8, 14, 3, 5, 20, 19, 1], 197, 2.8943538665771484s

Iteration: 750

[1, 14, 6, 13, 10, 4, 5, 11, 7, 20, 18, 8, 9, 17, 2, 16, 3, 19, 12, 15, 1], 171, 0.6308145523071289s

Iteration: 751

[1, 17, 18, 8, 15, 10, 11, 13, 14, 9, 7, 2, 4, 20, 19, 3, 16, 5, 12, 6, 1], 229, 7.0794055461883545s

Iteration: 752

[1, 12, 16, 9, 6, 13, 3, 11, 7, 10, 5, 8, 19, 18, 2, 15, 14, 20, 17, 4, 1], 178, 17.613664150238037s

Iteration: 753

[1, 11, 12, 20, 16, 19, 2, 13, 10, 14, 6, 9, 3, 18, 17, 15, 7, 8, 4, 5, 1], 150, 0.42729663848876953s

Iteration: 754

[1, 17, 7, 13, 12, 15, 19, 3, 18, 5, 8, 2, 11, 14, 20, 6, 4, 16, 10, 9, 1], 207, 7.701256275177002s

Iteration: 755

[1, 4, 14, 12, 17, 9, 19, 5, 3, 13, 11, 18, 6, 2, 15, 20, 8, 10, 7, 16, 1], 197, 7.1688220500946045s

Iteration: 756

[1, 3, 18, 16, 20, 10, 6, 15, 17, 12, 2, 11, 13, 7, 19, 9, 8, 5, 4, 14, 1], 210, 2.6734812259674072s

Iteration: 757

[1, 14, 11, 15, 13, 19, 20, 6, 9, 10, 2, 3, 4, 8, 5, 18, 16, 7, 12, 17, 1], 187, 3.846902847290039s

Iteration: 758

[1, 12, 17, 18, 13, 7, 16, 11, 9, 10, 14, 2, 3, 6, 4, 15, 20, 8, 5, 19, 1], 141, 11.49524712562561s

Iteration: 759

[1, 7, 10, 9, 15, 6, 19, 16, 11, 14, 20, 18, 8, 12, 13, 5, 3, 17, 4, 2, 1], 167, 1.1092543601989746s

Iteration: 760

[1, 8, 16, 9, 7, 14, 5, 18, 6, 3, 10, 20, 15, 19, 2, 13, 4, 17, 11, 12, 1], 173, 1.7702538967132568s

Iteration: 761

[1, 3, 16, 15, 9, 8, 20, 6, 5, 13, 10, 7, 14, 17, 2, 12, 19, 18, 4, 11, 1], 139, 1.4512500762939453s

Iteration: 762

[1, 12, 16, 6, 8, 10, 7, 19, 2, 17, 20, 9, 18, 11, 15, 13, 3, 4, 14, 5, 1], 191, 11.00388765335083s

Iteration: 763

[1, 8, 9, 19, 2, 3, 13, 11, 14, 17, 10, 15, 16, 4, 12, 18, 6, 5, 7, 20, 1], 222, 0.9537181854248047s

Iteration: 764

[1, 7, 4, 19, 3, 9, 6, 8, 10, 20, 11, 12, 17, 16, 5, 13, 2, 15, 18, 14, 1], 143, 3.0084009170532227s

Iteration: 765

[1, 9, 7, 20, 11, 6, 18, 12, 4, 3, 13, 17, 8, 14, 16, 19, 15, 10, 2, 5, 1], 213, 12.849855184555054s

Iteration: 766

[1, 11, 2, 19, 4, 3, 15, 9, 7, 10, 5, 16, 6, 13, 14, 18, 17, 12, 20, 8, 1], 196, 1.4420452117919922s

Iteration: 767

[1, 20, 2, 12, 19, 4, 7, 5, 8, 15, 11, 3, 17, 16, 9, 18, 13, 6, 14, 10, 1], 157, 5.287611961364746s

Iteration: 768

[1, 20, 5, 3, 13, 17, 4, 15, 10, 18, 16, 6, 12, 8, 19, 9, 2, 11, 14, 7, 1], 188, 25.64582061767578s

Iteration: 769

[1, 20, 6, 2, 10, 14, 13, 4, 17, 15, 16, 12, 5, 7, 8, 19, 3, 9, 18, 11, 1], 223, 2.7711284160614014s

Iteration: 770

[1, 12, 16, 9, 10, 19, 11, 5, 8, 14, 13, 18, 2, 6, 4, 17, 20, 7, 15, 3, 1], 172, 7.5091118812561035s

Iteration: 771

[1, 19, 9, 18, 12, 11, 3, 10, 8, 16, 7, 15, 20, 6, 4, 2, 14, 17, 5, 13, 1], 185, 1.5369625091552734s

Iteration: 772

[1, 13, 17, 9, 11, 18, 20, 7, 16, 19, 3, 6, 5, 10, 8, 12, 14, 15, 2, 4, 1], 164, 7.699618101119995s

Iteration: 773

[1, 19, 20, 5, 10, 17, 8, 9, 6, 7, 13, 16, 12, 2, 14, 3, 18, 11, 4, 15, 1], 122, 0.3527672290802002s

Iteration: 774

[1, 11, 20, 10, 14, 9, 19, 17, 15, 8, 13, 16, 4, 7, 5, 3, 12, 18, 2, 6, 1], 222, 17.460665702819824s

Iteration: 775

[1, 10, 7, 14, 3, 17, 9, 5, 13, 6, 15, 18, 19, 11, 2, 4, 16, 20, 8, 12, 1], 142, 3.005521297454834s

Iteration: 776

[1, 4, 18, 20, 7, 5, 8, 2, 19, 17, 13, 12, 15, 3, 9, 14, 11, 16, 6, 10, 1], 195, 3.9953856468200684s

Iteration: 777

[1, 3, 20, 10, 13, 19, 5, 2, 14, 9, 18, 17, 7, 15, 11, 8, 16, 12, 6, 4, 1], 188, 20.138519048690796s

Iteration: 778

[1, 13, 18, 8, 5, 10, 15, 3, 20, 9, 14, 12, 16, 17, 7, 19, 2, 4, 11, 6, 1], 187, 1.7869226932525635s

Iteration: 779

[1, 19, 5, 11, 16, 15, 13, 4, 2, 10, 20, 12, 14, 8, 7, 6, 9, 3, 17, 18, 1], 195, 11.076056957244873s

Iteration: 780

[1, 19, 16, 5, 14, 8, 7, 13, 9, 18, 11, 3, 20, 2, 10, 17, 15, 4, 12, 6, 1], 227, 3.1558284759521484s

Iteration: 781

[1, 15, 12, 20, 9, 14, 13, 2, 4, 17, 10, 16, 19, 8, 11, 6, 5, 7, 18, 3, 1], 174, 13.296333312988281s

Iteration: 782

[1, 10, 3, 16, 17, 9, 15, 7, 11, 6, 2, 12, 20, 5, 19, 4, 14, 18, 13, 8, 1], 178, 1.412214756011963s

Iteration: 783

[1, 3, 4, 5, 12, 2, 8, 18, 20, 11, 16, 13, 7, 15, 10, 14, 9, 17, 19, 6, 1], 202, 25.022876501083374s

Iteration: 784

[1, 9, 4, 18, 5, 13, 17, 7, 20, 11, 19, 10, 3, 14, 12, 16, 15, 8, 2, 6, 1], 153, 24.982214212417603s

Iteration: 785

[1, 18, 16, 2, 4, 9, 17, 7, 5, 19, 11, 13, 12, 3, 14, 10, 6, 8, 15, 20, 1], 164, 2.7242817878723145s

Iteration: 786

[1, 8, 17, 9, 16, 7, 15, 3, 11, 20, 18, 14, 4, 10, 6, 13, 5, 2, 19, 12, 1], 192, 4.479147672653198s

Iteration: 787

[1, 4, 18, 14, 16, 7, 3, 15, 6, 2, 11, 12, 19, 13, 20, 5, 9, 8, 10, 17, 1], 211, 10.363422155380249s

Iteration: 788

[1, 5, 7, 9, 16, 4, 18, 13, 15, 8, 12, 17, 19, 14, 10, 11, 3, 20, 6, 2, 1], 177, 0.7432200908660889s

Iteration: 789

[1, 19, 16, 7, 6, 20, 15, 17, 11, 13, 12, 9, 18, 14, 4, 5, 8, 10, 2, 3, 1], 205, 4.5372209548950195s

Iteration: 790

[1, 19, 4, 14, 18, 5, 13, 16, 11, 12, 8, 20, 9, 10, 6, 15, 7, 3, 2, 17, 1], 171, 8.169339895248413s

Iteration: 791

[1, 20, 6, 19, 3, 2, 18, 13, 17, 4, 16, 8, 12, 14, 7, 5, 15, 10, 9, 11, 1], 163, 2.115283489227295s

Iteration: 792

[1, 13, 4, 19, 10, 18, 12, 5, 14, 7, 3, 6, 15, 9, 11, 8, 16, 2, 17, 20, 1], 192, 6.671733140945435s

Iteration: 793

[1, 17, 14, 4, 18, 9, 8, 7, 16, 3, 10, 19, 20, 11, 13, 6, 12, 2, 5, 15, 1], 155, 0.17751097679138184s

Iteration: 794

[1, 4, 13, 19, 15, 18, 17, 8, 5, 7, 9, 2, 16, 14, 10, 3, 11, 20, 12, 6, 1], 183, 5.78808331489563s

Iteration: 795

[1, 5, 19, 20, 11, 16, 13, 6, 7, 12, 15, 10, 14, 4, 3, 18, 17, 9, 2, 8, 1], 160, 1.3020451068878174s

Iteration: 796

[1, 12, 3, 19, 5, 14, 20, 10, 6, 16, 15, 17, 4, 13, 11, 2, 9, 8, 18, 7, 1], 136, 1.9662065505981445s

Iteration: 797

[1, 8, 12, 10, 19, 9, 18, 13, 5, 14, 11, 7, 4, 17, 6, 20, 3, 15, 2, 16, 1], 183, 0.28194379806518555s

Iteration: 798

[1, 4, 10, 11, 16, 3, 6, 15, 19, 5, 8, 14, 18, 13, 2, 17, 20, 9, 7, 12, 1], 172, 3.5898451805114746s

Iteration: 799

[1, 17, 5, 7, 8, 19, 4, 12, 11, 6, 3, 14, 10, 9, 15, 20, 2, 18, 16, 13, 1], 156, 1.710883378982544s

Iteration: 800

[1, 15, 10, 11, 19, 20, 6, 9, 16, 7, 5, 12, 17, 13, 8, 14, 4, 3, 18, 2, 1], 182, 1.6585557460784912s

Iteration: 801

[1, 14, 9, 4, 10, 19, 5, 13, 3, 17, 6, 16, 20, 8, 15, 18, 12, 11, 2, 7, 1], 169, 1.5137009620666504s

Iteration: 802

[1, 14, 2, 18, 11, 13, 10, 7, 19, 9, 5, 17, 16, 15, 20, 6, 3, 12, 8, 4, 1], 194, 1.096890926361084s

Iteration: 803

[1, 6, 19, 4, 8, 13, 10, 9, 14, 5, 15, 3, 2, 20, 18, 17, 16, 12, 11, 7, 1], 146, 0.473461389541626s

Iteration: 804

[1, 12, 3, 5, 10, 4, 11, 2, 19, 6, 20, 17, 16, 18, 9, 8, 13, 7, 14, 15, 1], 204, 17.209897994995117s

Iteration: 805

[1, 20, 17, 19, 11, 7, 13, 2, 12, 18, 14, 8, 3, 10, 4, 15, 6, 16, 9, 5, 1], 162, 5.490195989608765s

Iteration: 806

[1, 11, 5, 6, 12, 8, 16, 9, 4, 19, 18, 10, 7, 14, 3, 20, 15, 2, 17, 13, 1], 125, 3.1403658390045166s

Iteration: 807

[1, 4, 20, 2, 15, 7, 19, 5, 13, 12, 17, 9, 16, 11, 8, 14, 18, 10, 6, 3, 1], 221, 5.130389213562012s

Iteration: 808

[1, 14, 9, 19, 2, 18, 12, 20, 10, 17, 13, 6, 16, 15, 4, 8, 7, 5, 11, 3, 1], 222, 10.358539342880249s

Iteration: 809

[1, 10, 4, 18, 17, 16, 12, 19, 6, 3, 13, 20, 15, 8, 2, 9, 7, 5, 11, 14, 1], 121, 0.5135154724121094s

Iteration: 810

[1, 14, 5, 18, 15, 7, 6, 17, 20, 3, 10, 8, 2, 13, 12, 9, 11, 4, 16, 19, 1], 182, 0.9853472709655762s

Iteration: 811

[1, 19, 3, 7, 20, 13, 16, 12, 8, 18, 11, 14, 2, 15, 4, 10, 9, 5, 17, 6, 1], 151, 12.696038961410522s

Iteration: 812

[1, 18, 15, 10, 2, 8, 11, 16, 17, 20, 19, 4, 7, 6, 9, 14, 13, 3, 5, 12, 1], 165, 5.968910217285156s

Iteration: 813

[1, 9, 3, 14, 13, 15, 17, 8, 5, 2, 12, 19, 4, 18, 16, 10, 6, 20, 7, 11, 1], 220, 3.123471736907959s

Iteration: 814

[1, 20, 15, 16, 3, 10, 12, 17, 8, 2, 7, 11, 6, 4, 14, 18, 9, 13, 5, 19, 1], 148, 0.8045430183410645s

Iteration: 815

[1, 9, 19, 2, 16, 20, 15, 5, 7, 11, 13, 3, 8, 4, 10, 6, 12, 17, 14, 18, 1], 185, 2.6751596927642822s

Iteration: 816

[1, 12, 15, 11, 8, 6, 9, 13, 3, 4, 18, 2, 7, 16, 5, 14, 17, 20, 19, 10, 1], 168, 6.145741939544678s

Iteration: 817

[1, 14, 18, 12, 17, 7, 15, 6, 13, 2, 20, 5, 3, 16, 4, 8, 11, 19, 10, 9, 1], 159, 1.363783836364746s

Iteration: 818

[1, 12, 18, 11, 15, 2, 5, 6, 10, 19, 13, 7, 8, 20, 14, 4, 9, 17, 16, 3, 1], 120, 1.6969306468963623s

Iteration: 819

[1, 14, 19, 8, 12, 17, 20, 16, 5, 4, 7, 13, 15, 6, 11, 9, 18, 3, 10, 2, 1], 245, 7.022806406021118s

Iteration: 820

[1, 19, 6, 10, 13, 11, 16, 18, 17, 9, 3, 20, 15, 7, 14, 2, 12, 8, 5, 4, 1], 195, 1.0548934936523438s

Iteration: 821

[1, 12, 11, 3, 6, 18, 8, 2, 15, 5, 4, 9, 13, 16, 10, 7, 14, 17, 20, 19, 1], 163, 3.0731775760650635s

Iteration: 822

[1, 11, 19, 17, 13, 12, 2, 3, 15, 16, 6, 4, 5, 7, 8, 10, 14, 9, 20, 18, 1], 163, 4.0541181564331055s

Iteration: 823

[1, 18, 14, 4, 8, 15, 13, 10, 7, 17, 11, 5, 3, 16, 12, 20, 2, 6, 19, 9, 1], 223, 1.8975727558135986s

Iteration: 824

[1, 16, 8, 13, 2, 9, 3, 7, 20, 11, 17, 12, 10, 18, 5, 4, 15, 6, 14, 19, 1], 173, 1.8046739101409912s

Iteration: 825

[1, 8, 11, 15, 13, 9, 3, 17, 20, 7, 14, 2, 4, 10, 19, 6, 12, 5, 18, 16, 1], 210, 5.20731520652771s

Iteration: 826

[1, 5, 9, 12, 13, 17, 18, 8, 19, 3, 6, 11, 2, 16, 14, 4, 15, 10, 20, 7, 1], 145, 0.7430722713470459s

Iteration: 827

[1, 17, 4, 11, 12, 13, 2, 14, 8, 5, 16, 15, 6, 20, 10, 19, 18, 7, 9, 3, 1], 169, 2.9525833129882812s

Iteration: 828

[1, 3, 4, 5, 16, 2, 10, 11, 18, 13, 17, 7, 9, 6, 20, 14, 19, 12, 8, 15, 1], 193, 3.9442250728607178s

Iteration: 829

[1, 5, 12, 19, 7, 10, 20, 4, 2, 16, 6, 17, 13, 15, 3, 9, 11, 8, 14, 18, 1], 159, 0.8197576999664307s

Iteration: 830

[1, 7, 15, 20, 18, 11, 3, 10, 14, 2, 13, 17, 9, 4, 8, 16, 5, 19, 6, 12, 1], 194, 11.099611282348633s

Iteration: 831

[1, 12, 14, 9, 16, 6, 17, 15, 11, 2, 8, 4, 10, 13, 5, 19, 7, 20, 18, 3, 1], 191, 0.5369598865509033s

Iteration: 832

[1, 15, 14, 9, 5, 2, 4, 10, 13, 3, 19, 12, 20, 16, 18, 8, 6, 11, 7, 17, 1], 163, 1.6400978565216064s

Iteration: 833

[1, 10, 7, 20, 4, 6, 8, 15, 9, 16, 5, 3, 12, 13, 19, 11, 14, 17, 2, 18, 1], 165, 2.0939505100250244s

Iteration: 834

[1, 9, 10, 15, 7, 6, 19, 17, 11, 12, 3, 5, 20, 16, 8, 14, 2, 13, 18, 4, 1], 179, 3.585446834564209s

Iteration: 835

[1, 16, 8, 18, 17, 19, 5, 9, 3, 20, 12, 2, 11, 7, 14, 13, 4, 10, 6, 15, 1], 139, 0.9551734924316406s

Iteration: 836

[1, 11, 6, 16, 5, 18, 7, 9, 13, 17, 19, 10, 3, 12, 8, 2, 4, 14, 20, 15, 1], 157, 5.955035448074341s

Iteration: 837

[1, 7, 16, 20, 10, 15, 2, 19, 18, 12, 4, 9, 6, 11, 14, 3, 5, 17, 8, 13, 1], 182, 6.7404258251190186s

Iteration: 838

[1, 4, 15, 2, 11, 13, 20, 6, 10, 14, 16, 18, 7, 9, 5, 8, 3, 12, 17, 19, 1], 147, 5.974697589874268s

Iteration: 839

[1, 7, 20, 3, 18, 6, 11, 14, 12, 15, 5, 8, 19, 9, 2, 4, 13, 10, 16, 17, 1], 219, 3.617277145385742s

Iteration: 840

[1, 17, 15, 18, 4, 20, 19, 8, 2, 13, 11, 14, 9, 5, 3, 10, 16, 12, 7, 6, 1], 192, 24.123855352401733s

Iteration: 841

[1, 14, 8, 13, 15, 6, 19, 5, 12, 10, 20, 7, 18, 3, 11, 9, 17, 2, 4, 16, 1], 162, 0.8818886280059814s

Iteration: 842

[1, 5, 7, 16, 9, 2, 18, 15, 12, 20, 13, 8, 19, 17, 6, 10, 4, 11, 3, 14, 1], 153, 3.4760208129882812s

Iteration: 843

[1, 10, 8, 16, 17, 2, 5, 7, 12, 4, 20, 15, 3, 18, 11, 19, 14, 6, 9, 13, 1], 163, 21.724201917648315s

Iteration: 844

[1, 5, 4, 11, 13, 12, 17, 20, 8, 3, 9, 2, 15, 6, 16, 7, 14, 18, 19, 10, 1], 144, 2.825650691986084s

Iteration: 845

[1, 7, 10, 20, 4, 18, 3, 14, 15, 8, 16, 13, 2, 11, 6, 17, 9, 5, 12, 19, 1], 178, 3.1485226154327393s

Iteration: 846

[1, 20, 13, 18, 12, 14, 7, 17, 15, 6, 4, 8, 3, 10, 16, 5, 9, 2, 11, 19, 1], 155, 6.1287055015563965s

Iteration: 847

[1, 7, 18, 10, 19, 12, 8, 4, 20, 6, 13, 9, 11, 16, 15, 17, 2, 3, 5, 14, 1], 192, 1.4640686511993408s

Iteration: 848

[1, 11, 4, 2, 6, 18, 16, 12, 17, 3, 15, 5, 14, 8, 20, 13, 10, 19, 9, 7, 1], 152, 5.588688373565674s

Iteration: 849

[1, 7, 3, 6, 14, 10, 20, 4, 5, 17, 12, 15, 2, 16, 18, 13, 11, 9, 8, 19, 1], 171, 3.7018322944641113s

Iteration: 850

[1, 2, 10, 7, 11, 15, 14, 5, 16, 18, 3, 4, 13, 6, 12, 20, 19, 8, 9, 17, 1], 126, 5.516364336013794s

Iteration: 851

[1, 9, 19, 15, 7, 10, 12, 20, 8, 5, 16, 11, 13, 14, 17, 18, 4, 3, 6, 2, 1], 150, 1.642674446105957s

Iteration: 852

[1, 19, 15, 7, 16, 14, 9, 8, 6, 10, 5, 2, 20, 13, 4, 17, 12, 3, 11, 18, 1], 184, 0.9273579120635986s

Iteration: 853

[1, 5, 18, 15, 14, 19, 17, 13, 3, 16, 8, 9, 7, 4, 11, 20, 2, 6, 10, 12, 1], 188, 4.551551342010498s

Iteration: 854

[1, 6, 4, 19, 9, 14, 13, 5, 11, 8, 15, 16, 3, 7, 20, 12, 17, 2, 18, 10, 1], 182, 1.8007192611694336s

Iteration: 855

[1, 18, 5, 6, 3, 4, 10, 8, 20, 17, 11, 13, 2, 19, 16, 14, 12, 9, 15, 7, 1], 160, 2.69046688079834s

Iteration: 856

[1, 8, 16, 17, 2, 18, 19, 5, 15, 20, 9, 14, 12, 10, 7, 6, 13, 11, 3, 4, 1], 184, 11.248242378234863s

Iteration: 857

[1, 5, 16, 8, 3, 20, 9, 18, 11, 10, 17, 2, 14, 4, 19, 6, 12, 13, 7, 15, 1], 168, 1.4089908599853516s

Iteration: 858

[1, 10, 18, 2, 4, 20, 16, 8, 11, 6, 12, 7, 3, 9, 19, 13, 14, 5, 17, 15, 1], 188, 2.9892871379852295s

Iteration: 859

[1, 8, 2, 5, 15, 3, 19, 13, 9, 12, 20, 10, 18, 6, 16, 14, 4, 17, 11, 7, 1], 200, 34.46831464767456s

Iteration: 860

[1, 4, 12, 8, 2, 5, 15, 13, 11, 17, 10, 14, 19, 6, 20, 7, 3, 18, 9, 16, 1], 174, 3.3190486431121826s

Iteration: 861

[1, 7, 6, 11, 8, 15, 19, 14, 5, 12, 10, 20, 13, 2, 16, 9, 17, 3, 4, 18, 1], 171, 22.40477228164673s

Iteration: 862

[1, 5, 17, 9, 8, 14, 7, 13, 10, 15, 19, 16, 20, 12, 4, 18, 2, 11, 6, 3, 1], 155, 0.5692875385284424s

Iteration: 863

[1, 14, 10, 6, 18, 11, 17, 3, 5, 15, 16, 12, 8, 20, 19, 7, 2, 13, 9, 4, 1], 110, 0.9837675094604492s

Iteration: 864

[1, 4, 13, 3, 7, 11, 6, 9, 20, 16, 2, 17, 19, 5, 14, 18, 15, 10, 12, 8, 1], 281, 29.673197269439697s

Iteration: 865

[1, 8, 3, 15, 11, 18, 10, 16, 14, 7, 6, 2, 19, 12, 17, 20, 5, 4, 9, 13, 1], 164, 8.4163236618042s

Iteration: 866

[1, 20, 16, 19, 9, 4, 18, 11, 12, 7, 2, 10, 3, 6, 15, 13, 17, 5, 14, 8, 1], 203, 1.6787559986114502s

Iteration: 867

[1, 6, 15, 10, 5, 12, 19, 20, 11, 8, 2, 18, 17, 14, 16, 3, 4, 13, 9, 7, 1], 192, 5.3530213832855225s

Iteration: 868

[1, 14, 6, 10, 19, 11, 7, 17, 2, 20, 8, 13, 15, 4, 18, 5, 9, 3, 16, 12, 1], 150, 4.660312175750732s

Iteration: 869

[1, 9, 20, 6, 18, 11, 4, 12, 15, 3, 2, 19, 10, 16, 17, 5, 8, 13, 7, 14, 1], 189, 3.3725149631500244s

Iteration: 870

[1, 16, 6, 8, 11, 7, 3, 12, 5, 2, 10, 14, 9, 17, 4, 13, 20, 18, 15, 19, 1], 179, 2.7499897480010986s

Iteration: 871

[1, 7, 5, 20, 2, 13, 15, 17, 19, 10, 14, 8, 18, 11, 6, 16, 12, 9, 3, 4, 1], 167, 8.507245540618896s

Iteration: 872

[1, 14, 9, 2, 15, 11, 16, 3, 4, 12, 7, 5, 10, 19, 6, 18, 20, 17, 13, 8, 1], 262, 5.222110748291016s

Iteration: 873

[1, 6, 10, 11, 2, 12, 13, 19, 7, 3, 9, 20, 5, 16, 4, 14, 15, 8, 17, 18, 1], 175, 0.4164426326751709s

Iteration: 874

[1, 3, 17, 14, 6, 4, 11, 12, 18, 9, 20, 15, 2, 19, 8, 5, 10, 7, 13, 16, 1], 141, 2.5180931091308594s

Iteration: 875

[1, 8, 7, 6, 10, 16, 19, 5, 14, 13, 2, 11, 3, 4, 17, 20, 15, 12, 18, 9, 1], 134, 1.4341518878936768s

Iteration: 876

[1, 19, 7, 20, 13, 15, 4, 11, 10, 2, 12, 18, 6, 5, 8, 16, 9, 14, 17, 3, 1], 156, 1.551896572113037s

Iteration: 877

[1, 11, 5, 15, 13, 3, 20, 10, 18, 9, 14, 19, 16, 7, 12, 6, 17, 8, 4, 2, 1], 174, 1.2987451553344727s

Iteration: 878

[1, 5, 3, 20, 17, 10, 4, 14, 7, 2, 18, 16, 6, 15, 13, 11, 12, 8, 9, 19, 1], 217, 0.9964163303375244s

Iteration: 879

[1, 11, 20, 17, 13, 4, 14, 15, 2, 9, 12, 10, 5, 18, 19, 16, 6, 3, 8, 7, 1], 185, 3.245220899581909s

Iteration: 880

[1, 6, 5, 17, 11, 13, 18, 7, 3, 9, 4, 15, 19, 12, 14, 20, 8, 2, 16, 10, 1], 165, 0.6669206619262695s

Iteration: 881

[1, 6, 8, 7, 10, 5, 3, 12, 20, 2, 13, 19, 14, 16, 11, 4, 18, 9, 15, 17, 1], 215, 0.8813040256500244s

Iteration: 882

[1, 11, 10, 14, 7, 19, 20, 18, 8, 5, 3, 15, 2, 13, 17, 4, 12, 6, 9, 16, 1], 205, 2.7448790073394775s

Iteration: 883

[1, 10, 9, 15, 20, 8, 13, 14, 2, 17, 11, 5, 6, 12, 16, 18, 4, 3, 7, 19, 1], 154, 1.5921146869659424s

Iteration: 884

[1, 19, 9, 18, 17, 3, 10, 2, 16, 14, 20, 5, 13, 15, 8, 7, 12, 4, 11, 6, 1], 195, 2.9704976081848145s

Iteration: 885

[1, 2, 6, 16, 10, 13, 17, 4, 19, 5, 18, 20, 9, 11, 7, 15, 8, 14, 3, 12, 1], 184, 7.888770818710327s

Iteration: 886

[1, 14, 6, 7, 10, 15, 8, 13, 17, 4, 9, 20, 16, 5, 3, 2, 11, 18, 19, 12, 1], 186, 1.152918815612793s

Iteration: 887

[1, 2, 4, 13, 19, 10, 20, 6, 16, 3, 11, 9, 17, 14, 18, 15, 8, 5, 12, 7, 1], 189, 0.8881182670593262s

Iteration: 888

[1, 17, 7, 20, 16, 3, 9, 14, 13, 4, 6, 12, 8, 18, 19, 10, 2, 11, 15, 5, 1], 208, 3.034663438796997s

Iteration: 889

[1, 18, 11, 20, 12, 16, 4, 2, 8, 5, 10, 9, 14, 6, 19, 3, 13, 7, 15, 17, 1], 214, 17.551958084106445s

Iteration: 890

[1, 12, 20, 17, 19, 5, 13, 8, 16, 15, 3, 11, 6, 7, 2, 9, 14, 4, 18, 10, 1], 190, 4.263337135314941s

Iteration: 891

[1, 4, 20, 6, 16, 8, 15, 11, 18, 13, 3, 9, 2, 7, 19, 10, 14, 5, 12, 17, 1], 149, 1.6081442832946777s

Iteration: 892

[1, 16, 8, 18, 15, 3, 10, 14, 13, 5, 4, 20, 12, 19, 7, 11, 6, 17, 2, 9, 1], 172, 1.102710485458374s

Iteration: 893

[1, 6, 14, 18, 11, 12, 16, 7, 10, 8, 20, 2, 15, 19, 5, 9, 4, 13, 3, 17, 1], 182, 2.2330191135406494s

Iteration: 894

[1, 20, 2, 17, 8, 14, 6, 16, 10, 18, 5, 7, 4, 19, 11, 9, 3, 13, 15, 12, 1], 190, 2.868565082550049s

Iteration: 895

[1, 11, 12, 8, 15, 16, 13, 19, 2, 17, 5, 14, 3, 20, 9, 18, 6, 10, 7, 4, 1], 159, 13.844130039215088s

Iteration: 896

[1, 15, 12, 18, 20, 19, 4, 7, 16, 9, 2, 8, 6, 11, 13, 3, 14, 5, 10, 17, 1], 165, 4.073182582855225s

Iteration: 897

[1, 3, 14, 6, 8, 4, 16, 17, 10, 7, 5, 12, 2, 19, 11, 15, 13, 20, 9, 18, 1], 190, 0.4185161590576172s

Iteration: 898

[1, 6, 17, 19, 16, 11, 9, 7, 15, 20, 8, 2, 3, 5, 10, 12, 4, 14, 13, 18, 1], 185, 29.573010683059692s

Iteration: 899

[1, 18, 2, 16, 6, 4, 10, 17, 12, 15, 14, 5, 19, 8, 7, 3, 20, 13, 11, 9, 1], 182, 1.0365769863128662s

Iteration: 900

[1, 18, 9, 19, 2, 4, 10, 5, 20, 3, 11, 16, 17, 15, 13, 6, 7, 14, 12, 8, 1], 166, 0.985619306564331s

Iteration: 901

[1, 15, 17, 12, 13, 2, 7, 11, 3, 6, 10, 4, 19, 8, 18, 5, 9, 16, 20, 14, 1], 190, 3.229769468307495s

Iteration: 902

[1, 16, 18, 8, 3, 7, 5, 19, 20, 15, 13, 4, 2, 6, 9, 11, 10, 14, 17, 12, 1], 204, 3.370565176010132s

Iteration: 903

[1, 5, 7, 11, 16, 17, 19, 14, 18, 6, 13, 4, 2, 10, 12, 20, 3, 8, 9, 15, 1], 150, 2.045769214630127s

Iteration: 904

[1, 8, 14, 10, 13, 2, 7, 20, 3, 18, 17, 4, 11, 6, 12, 16, 5, 15, 9, 19, 1], 168, 4.683493614196777s

Iteration: 905

[1, 12, 8, 7, 6, 10, 5, 11, 20, 3, 9, 18, 4, 14, 17, 19, 15, 2, 16, 13, 1], 157, 1.7841174602508545s

Iteration: 906

[1, 6, 13, 4, 9, 10, 5, 19, 18, 20, 2, 7, 15, 16, 14, 17, 3, 12, 11, 8, 1], 194, 1.0582294464111328s

Iteration: 907

[1, 13, 7, 9, 18, 6, 12, 17, 3, 14, 5, 11, 16, 8, 4, 19, 15, 20, 2, 10, 1], 157, 2.3467249870300293s

Iteration: 908

[1, 13, 3, 8, 4, 15, 5, 17, 6, 7, 2, 18, 20, 12, 10, 16, 19, 11, 9, 14, 1], 173, 0.33577752113342285s

Iteration: 909

[1, 16, 4, 6, 19, 10, 5, 20, 3, 14, 13, 18, 8, 12, 2, 17, 15, 11, 9, 7, 1], 156, 5.737087726593018s

Iteration: 910

[1, 19, 9, 16, 4, 6, 13, 2, 3, 17, 12, 11, 15, 5, 10, 20, 14, 7, 18, 8, 1], 171, 11.597556114196777s

Iteration: 911

[1, 20, 10, 11, 9, 5, 6, 14, 13, 15, 7, 2, 17, 18, 19, 3, 12, 8, 16, 4, 1], 184, 5.265150785446167s

Iteration: 912

[1, 6, 11, 13, 2, 18, 4, 16, 17, 19, 12, 10, 7, 15, 3, 20, 14, 9, 5, 8, 1], 168, 0.5842649936676025s

Iteration: 913

[1, 15, 7, 17, 18, 12, 3, 4, 19, 14, 10, 8, 5, 20, 2, 6, 16, 13, 9, 11, 1], 158, 0.9815793037414551s

Iteration: 914

[1, 20, 10, 5, 9, 6, 4, 11, 13, 2, 3, 7, 18, 19, 12, 15, 17, 16, 14, 8, 1], 139, 0.9131004810333252s

Iteration: 915

[1, 12, 2, 5, 10, 13, 9, 18, 4, 19, 16, 8, 20, 11, 17, 3, 6, 14, 7, 15, 1], 212, 3.7699928283691406s

Iteration: 916

[1, 16, 3, 10, 5, 6, 2, 9, 18, 19, 20, 7, 13, 12, 4, 14, 11, 15, 17, 8, 1], 169, 1.8226640224456787s

Iteration: 917

[1, 3, 17, 2, 7, 14, 6, 16, 5, 18, 4, 13, 15, 8, 10, 20, 19, 12, 9, 11, 1], 134, 1.791261911392212s

Iteration: 918

[1, 19, 3, 11, 18, 9, 4, 7, 20, 5, 16, 10, 2, 15, 17, 8, 13, 12, 14, 6, 1], 161, 1.0190184116363525s

Iteration: 919

[1, 2, 14, 19, 18, 11, 16, 17, 3, 9, 7, 6, 5, 12, 13, 15, 4, 20, 10, 8, 1], 202, 11.762126445770264s

Iteration: 920

[1, 8, 9, 19, 15, 17, 14, 5, 10, 20, 12, 11, 2, 6, 7, 13, 18, 16, 4, 3, 1], 202, 18.40666651725769s

Iteration: 921

[1, 18, 9, 4, 10, 19, 13, 15, 7, 3, 16, 5, 8, 2, 20, 12, 14, 11, 6, 17, 1], 185, 4.09296727180481s

Iteration: 922

[1, 6, 10, 9, 19, 7, 4, 8, 3, 18, 5, 2, 14, 13, 17, 20, 15, 16, 12, 11, 1], 161, 0.5899596214294434s

Iteration: 923

[1, 17, 20, 7, 8, 3, 5, 16, 10, 15, 6, 18, 19, 9, 4, 11, 14, 2, 12, 13, 1], 200, 1.5799720287322998s

Iteration: 924

[1, 2, 4, 13, 3, 10, 9, 16, 14, 12, 8, 20, 7, 19, 15, 17, 5, 11, 18, 6, 1], 148, 2.108071804046631s

Iteration: 925

[1, 10, 11, 2, 8, 15, 19, 14, 12, 16, 17, 13, 7, 6, 9, 4, 18, 5, 3, 20, 1], 203, 0.5630125999450684s

Iteration: 926

[1, 19, 7, 17, 6, 13, 4, 10, 9, 2, 5, 11, 3, 16, 15, 20, 12, 8, 14, 18, 1], 200, 5.72810173034668s

Iteration: 927

[1, 9, 2, 17, 5, 11, 10, 19, 4, 18, 12, 14, 8, 15, 6, 7, 16, 20, 13, 3, 1], 187, 4.198343276977539s

Iteration: 928

[1, 7, 12, 19, 18, 17, 16, 10, 5, 9, 3, 8, 11, 14, 2, 4, 15, 20, 6, 13, 1], 167, 2.6705353260040283s

Iteration: 929

[1, 4, 2, 14, 12, 13, 5, 19, 20, 3, 8, 7, 16, 11, 9, 15, 17, 10, 6, 18, 1], 119, 1.1473455429077148s

Iteration: 930

[1, 6, 13, 10, 12, 3, 4, 7, 9, 19, 8, 2, 5, 15, 17, 11, 14, 16, 20, 18, 1], 160, 3.835883855819702s

Iteration: 931

[1, 16, 15, 3, 4, 17, 19, 18, 6, 9, 7, 20, 5, 8, 14, 12, 10, 13, 11, 2, 1], 179, 15.331015348434448s

Iteration: 932

[1, 2, 16, 12, 17, 5, 3, 8, 19, 20, 14, 13, 15, 9, 18, 4, 10, 6, 11, 7, 1], 125, 0.8683946132659912s

Iteration: 933

[1, 12, 18, 8, 2, 13, 4, 17, 15, 11, 7, 20, 9, 6, 5, 19, 14, 3, 10, 16, 1], 179, 6.644477367401123s

Iteration: 934

[1, 14, 10, 16, 2, 13, 12, 4, 6, 17, 5, 19, 11, 8, 9, 3, 7, 18, 15, 20, 1], 181, 6.48458456993103s

Iteration: 935

[1, 10, 3, 8, 12, 18, 16, 4, 15, 14, 7, 11, 17, 2, 9, 6, 5, 19, 13, 20, 1], 171, 2.9096271991729736s

Iteration: 936

[1, 19, 6, 18, 7, 5, 15, 9, 13, 2, 16, 3, 20, 14, 12, 17, 11, 10, 4, 8, 1], 126, 1.0050034523010254s

Iteration: 937

[1, 9, 20, 12, 11, 7, 8, 10, 4, 17, 3, 18, 2, 15, 5, 19, 16, 14, 6, 13, 1], 209, 2.9501287937164307s

Iteration: 938

[1, 15, 12, 9, 20, 5, 16, 3, 4, 8, 11, 2, 17, 6, 10, 7, 14, 19, 13, 18, 1], 156, 1.312608242034912s

Iteration: 939

[1, 15, 7, 11, 20, 19, 14, 9, 6, 10, 16, 5, 17, 13, 2, 12, 8, 3, 4, 18, 1], 179, 2.9509670734405518s

Iteration: 940

[1, 12, 17, 13, 14, 3, 5, 2, 15, 19, 10, 9, 16, 7, 6, 8, 20, 4, 11, 18, 1], 177, 2.3090226650238037s

Iteration: 941

[1, 4, 8, 20, 11, 10, 13, 3, 14, 12, 6, 17, 15, 5, 2, 16, 19, 18, 7, 9, 1], 151, 15.99893069267273s

Iteration: 942

[1, 17, 7, 9, 5, 10, 4, 8, 20, 11, 15, 3, 14, 13, 12, 19, 16, 2, 18, 6, 1], 222, 5.745108127593994s

Iteration: 943

[1, 10, 14, 19, 7, 9, 2, 20, 18, 13, 12, 11, 16, 4, 15, 8, 5, 6, 17, 3, 1], 170, 2.8198184967041016s

Iteration: 944

[1, 13, 16, 9, 5, 17, 18, 7, 14, 10, 20, 11, 19, 8, 4, 3, 6, 15, 2, 12, 1], 126, 1.4418156147003174s

Iteration: 945

[1, 2, 14, 7, 12, 18, 3, 8, 10, 9, 15, 13, 5, 4, 6, 20, 16, 19, 17, 11, 1], 172, 24.023081302642822s

Iteration: 946

[1, 2, 9, 17, 12, 18, 6, 8, 14, 7, 13, 3, 10, 4, 11, 15, 16, 19, 5, 20, 1], 129, 1.1367535591125488s

Iteration: 947

[1, 18, 9, 14, 15, 19, 6, 17, 16, 7, 12, 13, 11, 3, 4, 20, 8, 2, 10, 5, 1], 161, 1.4595155715942383s

Iteration: 948

[1, 20, 3, 17, 6, 13, 16, 15, 2, 10, 19, 9, 18, 14, 11, 12, 4, 8, 7, 5, 1], 145, 0.8813519477844238s

Iteration: 949

[1, 10, 3, 19, 17, 16, 20, 6, 12, 5, 11, 15, 4, 7, 9, 13, 14, 8, 2, 18, 1], 231, 5.186960458755493s

Iteration: 950

[1, 7, 10, 12, 15, 18, 4, 20, 3, 13, 6, 16, 17, 14, 9, 2, 19, 8, 11, 5, 1], 162, 8.186626195907593s

Iteration: 951

[1, 19, 18, 16, 15, 5, 20, 9, 8, 12, 7, 10, 11, 17, 2, 6, 13, 14, 3, 4, 1], 187, 3.021623373031616s

Iteration: 952

[1, 17, 14, 4, 15, 9, 12, 8, 5, 11, 16, 18, 19, 13, 7, 10, 2, 20, 3, 6, 1], 215, 5.908698081970215s

Iteration: 953

[1, 20, 4, 17, 2, 11, 14, 13, 10, 16, 3, 12, 9, 18, 19, 6, 15, 5, 8, 7, 1], 193, 0.23227810859680176s

Iteration: 954

[1, 20, 11, 7, 15, 10, 16, 3, 6, 12, 17, 9, 2, 13, 5, 18, 4, 8, 19, 14, 1], 186, 6.564270257949829s

Iteration: 955

[1, 6, 15, 7, 16, 10, 8, 11, 4, 9, 19, 18, 12, 13, 5, 2, 3, 20, 14, 17, 1], 177, 3.963676929473877s

Iteration: 956

[1, 10, 20, 17, 12, 13, 15, 5, 19, 9, 6, 3, 18, 14, 8, 11, 16, 4, 2, 7, 1], 148, 3.4369425773620605s

Iteration: 957

[1, 20, 2, 10, 14, 6, 13, 12, 11, 19, 16, 8, 18, 7, 17, 5, 9, 15, 3, 4, 1], 129, 2.106201410293579s

Iteration: 958

[1, 20, 17, 10, 14, 13, 4, 12, 9, 3, 11, 19, 6, 15, 7, 8, 5, 2, 18, 16, 1], 166, 0.4350759983062744s

Iteration: 959

[1, 16, 18, 13, 2, 4, 3, 14, 5, 12, 7, 9, 6, 17, 20, 8, 10, 11, 19, 15, 1], 138, 0.3154103755950928s

Iteration: 960

[1, 11, 7, 3, 5, 19, 8, 16, 2, 12, 14, 20, 10, 6, 4, 17, 15, 9, 13, 18, 1], 172, 10.696857213973999s

Iteration: 961

[1, 17, 16, 12, 9, 18, 14, 7, 5, 19, 2, 10, 3, 8, 6, 15, 13, 20, 11, 4, 1], 164, 8.320947408676147s

Iteration: 962

[1, 8, 4, 12, 17, 3, 20, 10, 2, 19, 9, 11, 16, 15, 5, 18, 13, 14, 6, 7, 1], 155, 1.458876609802246s

Iteration: 963

[1, 14, 2, 8, 6, 13, 16, 18, 15, 9, 7, 20, 17, 4, 3, 11, 5, 12, 19, 10, 1], 215, 0.5798535346984863s

Iteration: 964

[1, 8, 4, 11, 13, 19, 2, 18, 3, 16, 17, 15, 6, 20, 7, 14, 9, 10, 5, 12, 1], 129, 7.019791603088379s

Iteration: 965

[1, 3, 18, 14, 20, 2, 6, 7, 9, 12, 10, 15, 4, 11, 19, 5, 13, 17, 16, 8, 1], 177, 2.0040652751922607s

Iteration: 966

[1, 15, 14, 8, 4, 5, 18, 7, 2, 11, 13, 17, 16, 6, 3, 19, 20, 9, 10, 12, 1], 154, 3.827343702316284s

Iteration: 967

[1, 2, 11, 7, 5, 8, 15, 3, 14, 6, 18, 16, 20, 13, 17, 10, 9, 4, 19, 12, 1], 188, 7.106040954589844s

Iteration: 968

[1, 17, 15, 7, 16, 18, 5, 12, 9, 13, 20, 4, 10, 19, 14, 3, 2, 11, 8, 6, 1], 163, 1.3243229389190674s

Iteration: 969

[1, 11, 12, 20, 7, 4, 2, 18, 8, 16, 14, 6, 15, 9, 17, 3, 19, 10, 5, 13, 1], 154, 1.2596955299377441s

Iteration: 970

[1, 2, 9, 7, 11, 12, 13, 10, 18, 4, 6, 3, 20, 8, 5, 19, 16, 17, 15, 14, 1], 232, 67.40695786476135s

Iteration: 971

[1, 13, 12, 15, 5, 3, 8, 19, 10, 18, 4, 7, 20, 17, 16, 14, 9, 6, 2, 11, 1], 210, 3.3695826530456543s

Iteration: 972

[1, 4, 10, 15, 14, 18, 16, 8, 17, 11, 2, 3, 12, 7, 9, 20, 6, 19, 13, 5, 1], 208, 0.2869124412536621s

Iteration: 973

[1, 2, 20, 16, 5, 13, 8, 10, 19, 3, 18, 9, 12, 11, 4, 14, 7, 15, 17, 6, 1], 173, 12.352049827575684s

Iteration: 974

[1, 19, 13, 16, 7, 4, 9, 10, 8, 18, 5, 17, 12, 14, 2, 6, 3, 20, 15, 11, 1], 171, 2.6828789710998535s

Iteration: 975

[1, 2, 12, 11, 5, 14, 15, 7, 20, 17, 10, 9, 13, 3, 4, 6, 19, 18, 16, 8, 1], 146, 2.0310890674591064s

Iteration: 976

[1, 15, 12, 20, 11, 7, 2, 4, 8, 16, 10, 9, 13, 17, 5, 6, 3, 18, 14, 19, 1], 182, 22.972676992416382s

Iteration: 977

[1, 9, 19, 6, 7, 4, 16, 5, 12, 15, 3, 11, 10, 14, 8, 13, 17, 20, 2, 18, 1], 197, 2.4386074542999268s

Iteration: 978

[1, 4, 3, 13, 9, 12, 17, 5, 2, 7, 19, 8, 11, 20, 6, 15, 10, 16, 14, 18, 1], 199, 0.543982982635498s

Iteration: 979

[1, 14, 19, 16, 6, 4, 9, 13, 11, 17, 5, 10, 2, 12, 18, 20, 7, 3, 8, 15, 1], 122, 0.726179838180542s

Iteration: 980

[1, 17, 15, 13, 4, 2, 7, 12, 18, 9, 10, 11, 5, 3, 20, 14, 6, 19, 8, 16, 1], 204, 9.675554752349854s

Iteration: 981

[1, 16, 7, 18, 8, 5, 19, 3, 13, 20, 15, 14, 9, 10, 2, 12, 6, 17, 11, 4, 1], 186, 0.8544306755065918s

Iteration: 982

[1, 2, 6, 10, 7, 17, 15, 16, 9, 20, 3, 14, 12, 4, 11, 8, 13, 18, 19, 5, 1], 157, 8.95977783203125s

Iteration: 983

[1, 8, 14, 13, 18, 12, 7, 6, 5, 3, 11, 15, 19, 20, 2, 16, 9, 10, 4, 17, 1], 136, 5.660863399505615s

Iteration: 984

[1, 5, 10, 8, 15, 13, 19, 12, 3, 4, 2, 11, 9, 20, 7, 14, 17, 6, 16, 18, 1], 151, 0.6728463172912598s

Iteration: 985

[1, 12, 17, 10, 2, 19, 4, 7, 6, 3, 20, 5, 9, 13, 8, 14, 18, 15, 16, 11, 1], 165, 4.075310230255127s

Iteration: 986

[1, 2, 18, 17, 16, 6, 9, 11, 3, 10, 13, 12, 8, 7, 15, 19, 20, 5, 14, 4, 1], 157, 4.18777060508728s

Iteration: 987

[1, 20, 13, 7, 18, 17, 19, 14, 10, 6, 12, 9, 11, 2, 15, 16, 8, 3, 4, 5, 1], 195, 20.428603649139404s

Iteration: 988

[1, 4, 14, 16, 13, 3, 17, 20, 9, 2, 10, 19, 6, 15, 5, 11, 18, 7, 12, 8, 1], 152, 4.529087781906128s

Iteration: 989

[1, 3, 4, 5, 10, 19, 16, 12, 9, 14, 6, 2, 18, 13, 15, 7, 11, 17, 8, 20, 1], 169, 4.424275159835815s

Iteration: 990

[1, 19, 18, 16, 15, 9, 6, 7, 13, 11, 14, 8, 2, 17, 20, 12, 10, 5, 3, 4, 1], 223, 4.1380274295806885s

Iteration: 991

[1, 12, 16, 2, 4, 14, 20, 5, 7, 8, 9, 17, 15, 18, 11, 3, 19, 13, 10, 6, 1], 145, 12.573896646499634s

Iteration: 992

[1, 17, 6, 19, 11, 14, 8, 4, 9, 15, 18, 5, 12, 20, 10, 7, 16, 3, 2, 13, 1], 174, 4.515351057052612s

Iteration: 993

[1, 4, 17, 9, 15, 12, 5, 19, 11, 20, 13, 16, 8, 2, 6, 10, 18, 7, 3, 14, 1], 164, 2.5643904209136963s

Iteration: 994

[1, 19, 12, 17, 11, 18, 15, 9, 8, 2, 4, 3, 6, 20, 5, 10, 14, 16, 7, 13, 1], 198, 2.2221310138702393s

Iteration: 995

[1, 5, 9, 7, 12, 8, 14, 13, 2, 11, 19, 16, 15, 20, 6, 4, 10, 17, 18, 3, 1], 161, 5.934066295623779s

Iteration: 996

[1, 9, 6, 10, 11, 5, 18, 17, 16, 13, 3, 12, 14, 15, 7, 8, 20, 19, 4, 2, 1], 162, 0.6549506187438965s

Iteration: 997

[1, 5, 18, 13, 20, 9, 14, 3, 15, 8, 11, 2, 7, 17, 16, 19, 4, 12, 10, 6, 1], 179, 2.7025039196014404s

Iteration: 998

[1, 7, 8, 20, 9, 14, 12, 15, 6, 13, 17, 19, 4, 16, 2, 18, 3, 11, 5, 10, 1], 231, 1.512665033340454s

Iteration: 999

[1, 4, 20, 18, 15, 8, 14, 10, 7, 6, 19, 12, 17, 16, 5, 9, 3, 11, 2, 13, 1], 157, 1.4186756610870361s

Iteration: 1000

[1, 20, 14, 6, 11, 17, 7, 13, 16, 15, 5, 9, 12, 8, 19, 3, 10, 18, 4, 2, 1], 168, 1.2792761325836182s