

## Midterm Spring 2020 Clarifications

- **Question 1:**

- 03/04/2020 16:02 - 1) When counting the number of pruned nodes, please use the total number of checkmarks as the number of pruned nodes. That means that if you are pruning a subtree, also count all the leaf nodes of that subtree.
- Score pruned nodes as if they had not been pruned, but do not otherwise use them for determining algorithm outcomes.

- **Question 2:**

- 03/03/2020 16:47 - There are two edges in Figure 1.2 that have weight values less than the euclidean distance heuristic. To reinforce the fact that the euclidean distance is an admissible heuristic for the graph you can consider the new edge values below. **We will accept any answers that use the weights provided in the PDF as well:** we don't want anyone to lose points for this clarification or redo the problem over again!
  - Thrunway <-> Serbankia: 212
  - Joyneria <-> Balchea: 155
- 03/03/2020 20:10 - When completing two or more currency exchanges, you should consider the path as a series of exchanges. For example, consider you're exchanging from currency A to B, and then B to C. You'll perform two separate exchanges, each with their own calculations of loss.

- **Question 3:**

- 03/03/2020 21:43 - 3.A.1 Please report the fitness score for all the four networks.
- 03/03/2020 21:43 - 3.A.6 The indexing starts with 1 and **not 0**.
- 03/04/2020 20:58 - 3.A.5 "New value" here refers to new network as the offspring being added to the next generation's population; not the individual gene.

- **Question 4:**

- 03/03/2020 22:17 - For Q.4.A.3.b and Q.4.A.4.b If answering "yes" the itinerary should be end-to-end such that it covers entrance to exit of Starnaria. Visiting regions more than once if necessary is okay.
- 03/05/2020 02:18 - For Q.4.A The map is not meant to convey any additional information for the problem. Only utilize the information in the written descriptions.
- 03/05/2020 02:18 - For Q.4.A Coastal regions are regions described as having coastline or being coastal.
- 03/05/2020 02:18 - For Q.4.A Regions "officially" in the north are "northern" regions.
- 03/05/2020 02:18 - For Q.4.A.2 Only place an "X" if visiting the region will satisfy a request/constraint for visiting a region listed for the corresponding client. If the client is able to go to a region, but makes no request to go, place an "O".

- 03/03/2020 16:59 - For Q.4.B.3 Please ignore the "no adjacent slices can have alfredo sauce" for John
- 03/03/2020 16:59 - For Q.4.B.3 Assume the machine operates sequentially and starts at slice 1.
- 03/03/2020 16:59 - For Q.4.B.3 Assume the machine places sauces and toppings during the same pass. The machine only makes one pass around the pizza.
- 03/03/2020 17:09 - For Q.4.B.3 Each slice must have a sauce and a topping assigned to it from the variables given.
- 03/05/2020 16:00 - For Q.4.B.3 Pineapple is indeed a vegetarian compatible topping but the vegetarian topping option is different than the pineapple topping option
- 03/06/2020 10:00 - For Q.4.B.1 & Q.4.B.2 Please select only one correct option
- **Question 5:**
  - 03/03/2020 09:22 - In Q.5.B.1.3 Please use the betting strategy(Black 40%, Red 50%, Green 10%) to calculate the expected amount that you will have after the round.
  - 03/04/2020 11:32 - In Q.5.A.3 Both percentage or rate are acceptable.
  - 03/07/2020 20:30 - In Q.5.B.1.4 The gambler has to place a bet. Probability of betting on black = 0, Probability of betting on red = 0, Probability of betting on green = 0 is not a valid answer
- **Question 6:**
  - 03/05/2020 11:21 - You must solve all questions by hand and show your work. Using code from Assignment 3 is not allowed.
  - 03/05/2020 23:48 - Q.6.B.2.b Make no assumptions about optimizations, use the vanilla Variable Elimination to answer this question.
  - 03/08/2020 00:05 - Q.6.A3-6 - You must evaluate the statement with each option for X separately.
- **Question 7:**
  - 03/03/2020 20:13 - Question 7.1: Do not consider the point itself as the neighbor for any of the KNN calculations.
  - 03/05/2020 09:10 - Question 7.2: Calculate precision and recall by taking highly rated movies as the true positive.
  - 03/07/2020 12:54 - Question 7.3.a: Note that the representation in the fourth iteration is unordered.
  - 03/07/2020 12:56 - Question 7.1.b: K refers to the K nearest neighbors.
  - 03/07/2020 12:59 - Question 7.3: Complete linkage: should be read as "between any PAIRS of points"