

CSCI 1311: Quiz 9

13 Apr. 2020

Name: _____ email: _____

Question Weighting

Question:	1	2	3	Total
Points:	3	5	2	10
Score:				

Submission Instructions

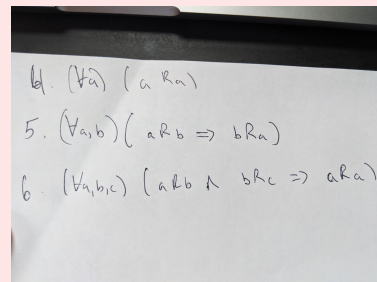
When submitting on gradescope, you can submit pictures of your answers. If you do so then ...

...you should upload a zoomed in image per question/part; do not submit a single large picture of an entire page if it can be practically avoided.

This will really help improve grading. For example, if I was answering the questions

5. What is the definition for a relation to be symmetric?

I would upload a zoomed in picture (like the one on the right) that clearly included the answer to Question 5. Perhaps the image would include the answer to some other questions, like Question 4 or 6, but each question is well marked and zoomed in for this group of related questions. **Please do not upload an entire page of answers, which makes it very difficult to grade, for example, to identify Question 5.**



- The quiz is due to Gradescope at 2:59am EDT (11:59 PM PDT)
- You can learn the answer to the "Lab Question" by attending one of the lab sections.

1. Imagine flipping three, fair coins all at the same time, where it's equally likely that the coins come up heads and tails.

(a) **[1 point]** What is the probability of all three coins come up heads?

(b) **[2 points]** Now suppose I flipped the coins without immediately showing you the result. If I told you one of the three coins was heads, what is the likelihood that the other two coins are heads.

2. Consider the following graph $G = \{V, E\}$

$$V = \{v_1, v_2, v_3, v_4, v_5, v_6, v_7\}$$

$$E = \{e_1 = (v_1, v_1), e_2 = (v_1, v_4), e_3 = (v_2, v_2), e_4 = (v_2, v_3), e_5 = (v_3, v_4), \\ e_6 = (v_3, v_7), e_7 = (v_4, v_6), e_8 = (v_4, v_5), e_9 = (v_5, v_4)\}$$

(a) **[1 point]** Draw the graph?

(b) [1 point] Is this graph connected? Why?

(c) [1 point] What is the total degree of the graph?

(d) [1 point] Does the graph have a Euler circuit? If so, what is it, if not, why not?

(e) [1 point] Does the graph have a Euler Trail? If so, what is it, if not, why not?

3. [2 points] What is the answer to the “Lab Question”