

CSc 245 Discrete Structures - Summer 2020

Quiz #1

Due: June 16th, 2020 by 11:59 pm (MST)

1. Consider the following four propositions:

p : Leslie wins the election q : Leslie campaigned hard

r : The election was rigged s : Leslie had a team of friends helping her

- (a) Convert the following statement into logic notation: The fact that Leslie wins the election follows from the fact that the election was rigged or she campaigned hard and had a team of friends helping her, but not both.

$$((q \wedge s) \oplus r) \rightarrow p$$

- (b) Convert the following logical expression to conversational English: $((q \wedge s) \wedge \neg p) \rightarrow r$

The fact that Leslie campaigns hard and has a team of friends helping her but loses the election implies that the election was rigged.