

# Quiz Guide

## CSC 28 – Discrete Structures for Computer Science

To maximize your quiz performance: attend lectures, do readings, start homework early, ask for help when you need it, review problems and solutions before the quiz. If anything in this assignment does not make sense, please ask for help.

- 1) Make sure you've done the assigned reading and have reviewed your notes. Some people find it useful to rewrite their notes into a second notebook, cleaning them up and correcting them as they go.
- 2) Any problem similar to the ones in the homework may be on the quiz. Study them until you completely understand. Some people find it useful to try to write their own problems and then have their classmates try to solve them.
- 3) Here are some problems from old quizzes. There is no guarantee that the problems on your quiz will be like these, but it may be useful to see what I've asked in the past.

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Prove the following.

Theorem: Suppose  $a$ ,  $b$  and  $c$  are integers. If  $a|(b + c)$  and  $a|b$ , then  $a|c$ .

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Prove the following by contraposition.

Theorem: If  $2a$  is not rational, then  $a$  is not rational.

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Consider how to prove the following theorem by induction. (Don't use  $P$  or  $a$  in your answers.)

Theorem: A dukus with a positive number of trilps is grop.

What statement do you need to show in the base case?

In the inductive case what do you suppose to be true?

Based on this supposition, what statement do you need to show?