

CS 311 Data Structures and Algorithms, Spring 2008
Quiz 8 Solutions

Quiz 8 was given in class on Wednesday, April 2, 2008.

1. [3 pts total] **Guarantees.**

1a. [1 pt] Which exception safety guarantee do we generally prefer?

We generally prefer the Strong Guarantee.

1b. [2 pts] What does this guarantee state?

If the operation throws an exception, then it makes no changes that are visible to the client.

Other formulations are fine: does nothing if it signals an error, commit or roll-back semantics, etc.

2. [2 pts] What does “amortized constant time” mean?

It means that k operations are $O(k)$ time.

Equivalently, the time required averages $O(1)$ over a large number of consecutive operations.