

Quiz 11 Solutions

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This quiz does not count towards your grade. It exists to simply gauge your understanding. Treat this as though it were a portion of your midterm or final exam. "Intuition Practice" might be tricky; watch out for subtleties. "Proofs" will be challenging to start; develop an arsenal of *approaches* to starting a problem.

1 Intuition Practice

For each of the following, choose "Finite", "Countably Infinite", "Uncountable".

1. \mathbb{R}
Finite / Countable Infinite / Uncountable
Solution: Uncountable
2. \mathbb{Q}
Finite / Countable Infinite / Uncountable
Solution: Countable
3. Computer programs
Finite / Countable Infinite / Uncountable
Solution: Finite
4. Ternary numbers
Finite / Countable Infinite / Uncountable
Solution: Countably Infinite
5. Graphs (defined as any set of vertices and edges)
Finite / Countable Infinite / Uncountable
Solution: Uncountably Infinite