

MATH 4590 – Study for exam 1

Definitions: cuts (also being given two sets and being able to identify “yes this is a cut” or “no this is not a cut”), definition of metric space, definition of convergent sequence in a metric space, definition of continuous function between metric spaces

Stuff from homework: set theory “element chasing” proofs (i.e. showing two sets are equal), proving things like $\sqrt{2}$ or $\sqrt[5]{3}$ are irrational, proving convergent sequences like $\lim_{n \rightarrow \infty} \frac{3n+2}{-2n+3} = \frac{-3}{2}$, prove that a described (M, d) is a metric space, drawing or identifying a unit circle in a metric space

Stuff from quizzes: prove that a polynomial is continuous, proving things like “a constant function is continuous”, “the sum of continuous functions is continuous”, “a constant multiple of a continuous function is continuous”