Exam 2 review guide

MAT 1070, Fall 2017

The second exam is Thursday, October 12. It covers the material on homework 3.1 through 3.6, 4.1, and 4.3.

Fundamentals

Use a formula to evaluate a function at an x-value
Simplify a difference quotient
Graph a function using a table
Analyze a graph by applying the vertical line test
Find the intercepts and domain of a function using a graph or using a formula
Find the range of a function from a graph
Using a graph, describe where a function is increasing, decreasing, and constant, and identify any maximum or minimum values

Find the average rate of change for a function
Sketch a basic graph for powers of x without a calculator, including fractional and negative powers

Combine a basic graph with the rules for transformations of graphs
Create a graph or write a formula using a piecewise function
Solve problems involving quadratic functions, including a problem with no solutions
Graph a parabola, and identify the vertex, intercepts, and axis of symmetry

Advanced topics

Analyze a graph or formula for symmetry with regard to the x-axis, the y-axis, or the origin
Write a function based on a geometry problem
Answer questions about an application based on a minimum or maximum value