

## Midterm: A Study Guide

The exam will be made available on Canvas from November 3-8. You can take it on Canvas using the SmarterProctoring feature (\$5 fee applied), or at EOU's Testing Center or at an EOU Regional Center. It is a closed book and closed note exam. A non-graphing calculator is allowed. Scratch paper is allowed. The time limit is 90 minutes. The material covered is Chapter 1 of the textbook.

You should review the first 4 homework sets and read the examples and exercises in the textbook as directed below. Note that all exercises in the textbook have solutions. You are encouraged to organize a study session with each other over Zoom. The types of problems you may be asked on the exam include:

- Describe a set using interval notation (Problem 1-7 on page 14).
- Plot points on the Cartesian plane (Problem 20 and 21 on page 15).
- Find the distance between two points on the plane (Problem 28, 30, 31, 32 on page 16).
- Graph a relation (Problem 1, 3, 7, 9, 16, 17 page 29).
- Determine if a relation is a function using the Vertical Line Test (Problem 9,10,12,13-20 on page 49-50).
- Describe a graph using set-builder notation (Problem 21-30 on page 30-31).
- Graph a function by making a table of values (Example 1.6.1 and 1.6.2 on page 94).
- Evaluate the values of a function at given numbers (Problem 1-10 on page 63 and 1,3,5 on page 84).
- Find the domain of a given function (Example 1.4.3 page 58 and Problem 37,39,41,43,45,53 on page 65).
- Determine if a function is odd or even (Example 1.6.3 on page 95).
- Determine if a function is increasing or decreasing on an interval (Example 1.6.4 on page 102 and Problem 21, 22, 23, 24, 26 on page 107).
- Find the  $x, y$ -intercepts of the graph of a given function (Problem 1, 3, 7, 10 on page 107).