Midterm: Study Guide

The exam will be made available on Canvas from Feb 13 to Feb 15. You can either 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 exam. No notes are allowed. A non-graphing calculator is allowed. A blank sheet of paper for scratch is allowed. The time limit is 90 minutes.

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:

- Factor a polynomial using the synthetic division: *Example 3.4.2 on page 290.*

- Find real and complex roots of a quadratic equation using the quadratic formula: *Exercise 27-29 on page 295.*

- Add, subtract, multiply, divide complex numbers: *Exercises 1-10 on page 295.*

- Determine the horizontal, vertical, slant, and polynomial asymptotes of a rational function: *Exercises 1-10 on page 314.*

- Determine the domain, holes, x-intercepts, y-intercept of a rational function: *Exercises 1-10 on page 333.*

- Make a sign chart of a rational function.

- Solve equalities and inequalities involving rational functions: *Exercises 1-20 on page 353.*