

## Math 40 - Final Exam Study Guide

### Chapter 1

1. Be able to add, subtract, multiply, divide, and simplify fractions. (*Section: 1.2*)
2. Be able to simplify expressions properly using the order of operations. (*Section 1.3*)

### Chapter 2

1. Be able to solve equations. (*Sections: 2.1-2.3*)
2. Know how to read a word problem and find key words. Be able to use this information to formulate and solve algebraic equations. (*Section 2.4-2.5*)
3. Be able to solve formulas for a given variable. (*Section 2.6*)
4. Be able to solve inequalities and write the solution in interval notation as well as graph the solution on a number line. (*Section 2.7*)

### Chapter 3

1. Be able to make a table of points for a given equation and be able to plot those points to make a line. Also, be able to find the  $x$  and  $y$  intercepts. (*Sections 3.1-3.2*)
2. Be able to solve systems of equations graphically, by substitution, and by elimination (addition method). (*Sections 3.4-3.5*)
3. Be able to solve application problems involving systems of linear equations. (*Section 3.6*)

## Chapter 4

1. Know the exponent rules and be able to simplify expressions with exponents. (*Section 4.1-4.2*)
2. Understand and be able to simplify expressions involving scientific notation. (*Section 4.3*)
3. Be able to add, subtract, multiply, and divide (including long division) polynomial expressions. (*Section 4.4-4.8*)

## Chapter 5

1. Be able to factor monomials, binomials, trinomials, and four term polynomials. (*Sections 5.1-5.4*)
2. Be able to solve equations by factoring. (*Section 5.7*)
3. Be able to solve polynomial applications by factoring. (*Section 5.8*)