School of Mathematics, Sciences & Engineering Transfer
ALGB 097 - Introductory Algebra II Lecture
COURSE OBJECTIVES

Chapter 5A: Polynomials: Factoring

1. Factor out common factors.
2. Factor trinomials of the form $x^2 + bx + c$.
3. Factor trinomials of the form $ax^2 + bx + c$.
4. Factor the difference of two squares.
5. Factor perfect square trinomials.

Chapter 5B: Polynomials: Factoring

1. Factor out common factors.
2. Factor trinomials of the form $x^2 + bx + c$.
3. Factor trinomials of the form $ax^2 + bx + c$.
4. Factor the difference of two squares.
5. Factor the above forms with a common factor.
6. Solve quadratic equations.
7. Solve applications of quadratic equations.

Chapter 6A: Rational Expressions and Equations

1. Simplify rational expressions.
2. Multiply and simplify rational expressions.
3. Divide and simplify rational expressions.

Chapter 6B: Rational Expressions and Equations

1. Add rational expressions.
2. Subtract rational expressions.

Chapter 6C: Rational Expressions and Equations

1. Solve rational equations.
2. Solve applications of rational equations.
2. Simplify complex fractions.
3. Find an equation of direct variation given a point.
4. Find an equation of inverse variation given a point.
5. Solve applications of inverse and direct variation.

Chapter 7A: Radical Expressions and Equations

1. Find the square root of perfect squares and opposite of the square root of perfect squares.
2. Approximate the square root of a number.
3. Simplify square roots.
4. Multiply and divide square roots.
5. Rationalize the denominator having one term.

Chapter 7B: Radical Expressions and Equations

1. Add and subtract (combine and simplify) square roots.
2. Multiply two-term square root expressions together.
3. Solve square root equations.
4. Solve application problems involving right triangles.

Chapter 8A: Quadratic Equations

1. Write a quadratic equation in standard form, identifying the "a", "b", and "c".
2. Solve quadratic equations by the factoring method.
3. Solve quadratic equations using the quadratic formula.
4. Solve formulas of the types: square roots and quadratic.

Chapter 8B: Quadratic Equations

1. Solve application problems resulting in quadratic equations.
2. Determine whether the graph of a quadratic equation (a parabola) opens up or down.
3. Find the vertex of a parabola.
4. Given a function, find the function value at a point.