REVIEW TEST 1

Chapter 3 (3.1 – 3.3) Systems of linear equations
Chapter 4 (4.1, 4.2, 4.4) Linear inequalities in one and two variables
Chapter 5 - Factoring polynomials

Chapter 3 - Systems of Linear Equations – very important to know how to solve a 3 x 3 linear system
- All exercises done in class.
- Handout Section 3.3
- Homework Chapter 3 - All homework problems (especially 3.3)

Examples of types of questions on the test:

1) Solve the following system algebraically and graphically:

$$\begin{cases} 4x-3y=14 \\ 3x-y=3 \end{cases}$$

A: (-1,-6)

2) Solve the following system by substitution or elimination:

$$\begin{cases} 2x+3y+z=2 \\ 3x+3y-z=0 \\ x-2y-3z=1 \end{cases}$$

A: (4, -3, 3)

3) One world problem similar to those on Handout 3.3 and textbook 3.3 (41, 42, 43, 44)

Chapter 4 – Sections 4.1, 4.2, 4.4
- All exercises done in class
- Handout Section 4.1
- Homework Chapter 4 – All homework problems

Textbook
Section 4.1 – Exercises 33, 35, 37, 59, 63
Section 4.2 – Exercises 55, 57
Section 4.4 – Exercises 23, 31, 41, 45

Examples of types of questions on the test:

4) Solve the following inequalities; graph the solution set on the number line; write the solution set in interval notation.

a) $-\frac{2}{3}(2x+\frac{3}{2}) \geq 14$; b) $-\frac{2}{5} < \frac{x-4}{3} \leq 4$; c) $\frac{1}{2}x-3 > 2x+3(x-\frac{1}{3})$;

d) $2(x+2) \geq \frac{1}{5}+2x$ e) $\frac{2x+3}{3}+\frac{3x-4}{2} > \frac{x-2}{2}$

5) Graph the solution set of the following system. Find the coordinates of all corners of the solution set:

$$\begin{cases} 2x + y < 6 \\ x + 2y \geq 0 \\ x \geq 1 \\ y \leq 3 \end{cases}$$

Chapter 5 - Factoring polynomials

- All exercises done in class
- Handout Chapter 5
- Homework Chapter 5 – All homework problems

Examples of types of questions on the test:

6) Solve all quadratic equations by factoring AND using the quadratic formula. Solve all polynomial equations of degree 3 or higher by factoring.

a) $t(t-3)=18$ b) $(x-1)(x+4)=14$ c) $x^3+4x^2-25x-100=0$ d) $9x^2=100$

7) Several factoring questions like exercises done in class, Handout Chapter 5, and Textbook (see below).

Textbook Chapter 5:

Page 364 – exercises 19 – 30
Page 400 – exercises 66 – 90
Page 402 – exercises 16 – 40

8) Operations with polynomials – exercises similar to 5 – 10 on Handout 5.1 and 5.2