

Math 95; Wiebe

Winter 2016

Disclaimer: The following list is only a rough guideline for material that is fair game for the test on **2/3/2016**. As I have not provided example problems, the responsibility is yours to look through past homework assignments, the study plan on MyMathLab, notes, quizzes, your text, and any other resource you feel may enhance your preparation. *Also, be sure to make a 3 x 5 note card for the exam, and bring a calculator.*

Chapter 7: Polynomial functions and Properties of Exponents

7.1:

- Adding polynomials by combining “like terms”
- Subtracting polynomials by distributing the “- symbol” first

7.2:

- Multiplying polynomial expressions
 - Using the rectangle method OR
 - Using “FOIL”

7.3:

- Powers of Polynomials
 - $(A + B)^2 = (A + B) \cdot (A + B) = A^2 + 2AB + B^2$
 - $(A - B)^2 = (A - B) \cdot (A - B) = A^2 - 2AB + B^2$
- Binomial Conjugates
 - $(A + B) \cdot (A - B) = A^2 - B^2$

7.4:

- Properties of Exponents
 - $x^m \cdot x^n = x^{m+n}$
 - $(xy)^m = x^m y^m$
 - $\frac{x^m}{x^n} = x^{m-n}$
 - $x^0 = 1$
 - $\left(\frac{x}{y}\right)^m = \frac{x^m}{y^m}$
 - $(x^m)^n = x^{m \cdot n}$

Remember, sometimes the hardest part about factoring is remembering what method you need to use. I won't tell you what section each question is from, so make sure you're able to identify how each question is solved/simplified/factored.

Chapter 8: Factoring and Solving Polynomials

8.1:

- Factoring trinomials of the form: $x^2 + bx + c$ using the Diamond problem method
- Difference of squares property: $a^2 - b^2 = (a + b)(a - b)$

8.2:

- Factoring out the GCF (or GCD) of a polynomial
- Knowing when and how to use the “factoring by grouping” method or rectangle method (when you have four terms)

8.3:

- Factoring a trinomial when a (the leading coefficient) is not equal to 1.
 - Using the Rectangle method with the Diamond problem

8.4:

- Sums and Differences of cubes properties
 - Understand when and how to use them
 - $(A^3 + B^3) = (A + B)(A^2 - AB + B^2)$
 - $(A^3 - B^3) = (A - B)(A^2 + AB + B^2)$

8.5:

- Solving polynomial equations by factoring
 - Remember to factor, and then invoke the zero product property to let each set of parenthesis equal 0, then solve each “new” equation.