HW #5 – Due Tuesday, 9/15:
5.1 #63-85 odd

HW #6 – Due Wednesday, 9/16:
5.2 #3-7odd, 15-25odd, 35-49odd

HW #7 – Due Tuesday, 9/22:
5.3 #25-29odd, 43-51odd, 61-67odd, 89-97odd, 109-117odd

HW #8 – Due Friday, 9/25:
5.4 #19-25 odd; 27-43 odd; 55-61 odd
5.5 #21-47 odd

HW #9 – Due Tuesday, 9/29:
5.5 #99-125 odd
5.6 #3-131 odd

~~5.7 #35-49 odd, 51-57 odd, 61-75odd~~

Test 3 - Tuesday, 9/29

Ch 5 - Exponential Expressions & Polynomials

5.1 – Exponential Expressions
5.2 – Intro to Polynomials
5.3 – Multiplying Polynomials
5.4 – Dividing Polynomials
5.5 – Factoring
5.6 – Special Factoring
~~5.7 – Solving Equations by Factoring~~

Practice Problems for Test #3

Review:

1. Solve the system of equations. If it exists, give your solution as an ordered pair (x, y).

$$\begin{cases} 3x + 2y = 5 \\ 2x - 3y = -14 \end{cases}$$

2. Find the equation of the line that is parallel to the line $2x - 3y = 2$ and passes through the point $(6, -4)$.

3. Find the equation of the line that has slope 0 and passes through the point $(-4, 7)$.

4. Solve. Write the solution set in **interval notation**. $4 - 3x > -5 \quad or \quad -3 \leq 2x + 1$

5. Simplify the exponential expression.

$$\left(\frac{xy^3z^{-2}}{x^{-2}y^{-1}z^4}\right)^{-3}$$

6. Simplify the exponential expression.

$(x^{-1}y^2)^2(x^2y^{-4})^{-3}$

7. If the function is a polynomial, identify the lead term, leading coefficient, degree, and constant term.

$f(x) = -5x^3 + 2x^4 - 4x^6 + 7 - 6x + 9x^2$

lead term:

leading coefficient:

degree:

constant term:

8. Evaluate the polynomial for the given value.

$P(x) = -2x^2 - x + 10, \qquad evaluate\ P(-3).$

9. Subtract the polynomials and simplify. Give your answer in descending order.

$(4x^3 - 5 + 2x^2) - (3x + x^2 - 2x^3)$

10. Multiply the polynomials and simplify. Give your answer in descending order.

$(2x^2 - 4x)(x^2 + 3x - 2)$

11. Divide the polynomials. Give the quotient and the remainder.

$(3x^3 + 10x^2 + 6x - 3) \div (x + 2)$

quotient:

remainder:

12. Completely factor the polynomial.
$3x^6 - 15x^4 - 18x^2$

13. Completely factor the polynomial.
$27x^3 + 8$

14. Completely factor the polynomial.
$30a^2 + 85ab + 60b^2$