Name: _____ Date: _____ Block: _____

Algebra 2 Honors- Week 9 Homework

Monday- Catch up for the week and study for test tomorrow!

Practice Test for Polynomial Unit

Learning Objectives:

A. Simplify expressions using exponents.
B. Identify whether an equation is an identity.
C. Add and subtract polynomial functions.
D. Multiply polynomial functions.
E. Factor polynomials using GCF or grouping.
F. Factor trinomials.
G. Factor a difference of squares.
H. Factor a sum or difference of cubes.
I. Solve a factorable polynomial equation.

Question #	Learning Objective	Know It	Feel Unsure		Right	Wrong	Simple Mistake	Need to Study
1	A							
2	B							
3	C							
4	D							
5	E							
6	E							
7	F							
8	G							
9	H							
10	I							

1. Simplify: $(3x^2yz^3)^2(-4xyz^5)^3$
2. Which of these equations are identities? How do you know?
   a) $(x+3)^2 = x^2+9$ b) $x^2-9=(x+3)(x-3)$ c) $2(x-3)=2x+6$
3. Given $f(x)=5x^4-3x^3+5x-3$ and $g(x)=2x^4+6x^2-7x-3$, find $f(x)+g(x)$ and $f(x)-g(x)$.
4. Given $f(x)=3x+4$ and $g(x)=x^2-3x-7$, find $f(x)\cdot g(x)$.
5. Factor: $3x^2yz^3-12xy^4z^3$
6. Factor: $4x^3-12x^2-5x+15$
7. Factor each trinomial: a) $x^2-3x-88$ b) $3x^2+16x+5$ c) $8x^2-2x-3$
8. Factor: $9x^4-64y^2$
9. Factor: $64x^3+1$
10. Solve the equation: $3x^2+13x=10$

Tuesday- No homework! Test Day!

Name: _____ Date: _____ Block: _____

Wednesday-
Number System Assignment

1. Mark an X for each category that applies.

Number	Real	Rational	Irrational	Integer	Whole	Natural
-6						
62%						
0						
π/2						
2.7						
2/5						
√7						
√25						
1						
½						

Give an example of a number that would satisfy these rules.

2. A number that is an integer but not whole.
3. A number that is whole but not natural.
4. A number that is real but not rational.
5. A number that is an integer but not rational.

ID: 1

Algebra 2 Name_____

Simplifying Radicals

Date_____ Period____

Simplify.

1) $\sqrt{150}$

2) $\sqrt{18}$

3) $\sqrt{75m^3n^3}$

4) $\sqrt{216a^3bc}$

5) $\frac{\sqrt{4}}{\sqrt{3}}$

6) $\frac{4\sqrt{2}}{\sqrt{5}}$

7) $\frac{\sqrt{12}}{\sqrt{15}}$

8) $\frac{3}{2\sqrt{5}}$

Find a decimal approximation (with out using a calculator) for each square root and describe your method.

9) $\sqrt{26}$

10) $\sqrt{50}$

Name: _____ Date: _____ Block: _____

Thursday-

ID: 1

Algebra 2 Name_____

Imaginary Numbers

Date_____ Period____

Simplify.

1) $\sqrt{-63}$

2) $-7\sqrt{63}$

3) $-6\sqrt{175}$

4) $-6\sqrt{-6} \cdot \sqrt{-10}$

5) $4\sqrt{-8} \cdot 2\sqrt{-2}$

6) $-\sqrt{-5} + 2\sqrt{-5}$

7) $-3\sqrt{-6} - \sqrt{-54}$

8) $-\sqrt{-2} + 2\sqrt{-18}$

9) $\frac{7}{5i}$

10) $-\frac{1}{i}$

Identify the value and explain how you came to your solution.

11) i^{25}

12) i^{63}

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Friday-
Simplify each of the following:

1. (3 + 4i) + (19 – 5i)
2. (7 – 3i) + (4 + 8i)
3. (6 – 5i) + (-9 + 3i)
4. (8 - 10i) – (1 + 6i)
5. (10 + 3i) - (-7 + 11i)
6. (5 + 8i) + (12 + 7i) – (3 – 2i)
7. (4 + 2i)(1 – 3i)
8. (6 – 5i)(-4 + 6i)
9. (5i)(1 + 3i)
10. $(4 – 5i)^2$