Name: _____ Date: _____ Block: _____

Algebra 2 Honors- Week 12 Homework

Monday- Catch up on homework from last week and study for test tomorrow!

Practice Test for Radical Functions Unit

Learning Objectives:
- A. Graph a quadratic equation using transformations.
- B. Graph a radical function using transformations.
- C. Identify the domain and range of a radical function.
- D. Solve radical equations.
- E. Use a graph to find the solution to a radical equation.
- F. Identify extraneous solutions in a radical function.

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	F							

1. Graph each quadratic function:

   a. $f(x) = (x + 2)^2 - 4$ b. $f(x) = 3(x - 4)^2$ c. $f(x) = -\frac{1}{2}(x + 4)^2 + 2$

2. Graph: $f(x) = -2\sqrt{x + 1} + 3$
3. Identify the domain and range of the function in problem 3.
4. Solve:

   a. $2 + \sqrt{x + 5} = 3$ b. $\sqrt{5x + 14} = x$ c. $\sqrt{3x + 5} = \sqrt{x + 1}$
5. Graph this equations to solve: $\sqrt{x - 2} + 2 = 4$
6. Write a radical equation with an extraneous solution. Prove why it has an extraneous solution.

Tuesday- Test Day! (No Homework)

Wednesday- No class! No homework! Catch up on previous work!

Thursday

Algebra 2   Name_____

Polynomial Long Division Assignment
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Date_____ Period____

Divide using polynomial long division.

1) $(n^3 - 2n^2 + 2n + 6) \div (n + 1)$

2) $(8a^3 + 24a^2 - 88a + 50) \div (8a - 8)$

3) $(24k^3 - 50k^2 - 12k + 50) \div (6k - 8)$

4) $(x^3 - 6x^2 - 9) \div (x - 6)$

5) $(x^4 - 7x^3 - 2x^2 - x - 5) \div (x + 1)$

6) $(5n^4 - 9n^3 - 53n^2 - 72n - 39) \div (5n + 6)$

7) $(64n^4 - 32n^3 - 5n^2 - 3) \div (8n + 1)$

8) $(x^3 + 5x^2 - 3x + 7) \div (x^2 + 2x + 1)$

9) $(x^4 + 3x^2 - 4x - 1) \div (x^2 + 3x + 1)$

10) $(x^4 - 1) \div (x^2 - 1)$

11) a) Divide: $1457 \div 13$
     b) Divide: $(x^3 + 4x^2 + 5x + 7) \div (x + 3)$
     c) Explain how a) and b) are similar and different.

Friday-

Algebra 2   Name_____

Assignment
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Date_____ Period____

Divide using synthetic division.

1) $(3n^3 - 5n^2 - 35n + 29) \div (n - 4)$

2) $(5r^3 + 17r^2 + 16r + 20) \div (r + 3)$

3) $(x^3 - 11x^2 + 23x + 43) \div (x - 7)$

4) $(x^4 - x^3 - 7x + 11) \div (x - 1)$

5) $(9n^3 + 63n^2 - 2) \div (n + 7)$

6) $(4k^3 + 13k^2 - 13k - 8) \div (4k + 1)$

7) $(7n^3 - 39n^2 + 69n - 25) \div (7n - 4)$

8) $(20n^4 + 70n^3 - 2n - 3) \div (2n + 7)$

Determine k so that the first polynomial is a factor of the second.

9) $x + 2, \ 2x^3 + 3x^2 + k$