Honors Algebra 2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Exam Review – Part 2

**THIS REVIEW IS PART OF YOUR EXAM GRADE**

**Unit 2: Function Families and Transformations**

1) **NC** Draw a rough sketch and write the equation for each of the parent functions.

|  |  |  |  |
| --- | --- | --- | --- |
| a) Linear  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | b) Absolute Value  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | c) Quadratic  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | d) Square Root  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph |
| e) Cubic  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | f) Cube Root  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | g) Exponential Growth  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph | h) Logarithmic  Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Image result for coordinate graph |

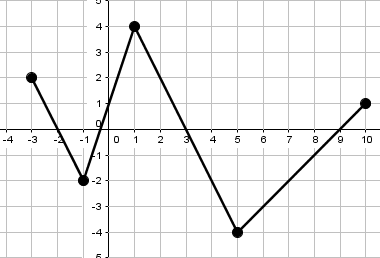
2) **NC** f(x)=a(x - h)2 + k What happens to the function when….

|  |  |  |
| --- | --- | --- |
| |a|>1 | h>0 | k>0 |
| 0<a<1 | h<0 | k<0 |
| a<0 |

3) **NC** Find the requested information for the graph below. Make sure you use the correct parentheses

and/or brackets.

Increasing: Decreasing:



Domain: Range:

4) **NC** For each graph below, list the transformations. Then, write the equation for the graph.

|  |  |
| --- | --- |
| a) Transformations:       New Equation: | b) Transformations:       New Equation: |

5) Find the domain & range for the following 2 functions: (Hint: It might help to draw a rough sketch!)

a) b)



Honors Algebra 2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Exam Review – Part 1

**THIS REVIEW IS PART OF YOUR EXAM GRADE**

**Unit 1: Systems of Equations**

1) **NC** Solve the system by graphing. 2) **NC**  Solve the system using any method.

 5x + 3y = 9 5x + y = 9

x - 3y = 9 10x + 2y = 20

3) Graph the following system of inequalities. 4) Are the points below a solution to

 ?

a. (-2, 10) b. (2, -3) c. (4, 3) d. (1, 1)

5) Amina is hosting a party. She places an order at Pizza Hut for 5 pizzas and 4 orders of breadsticks for

a total of $51.00. Halfway through the party, she realizes that she will need one more pizza and 2

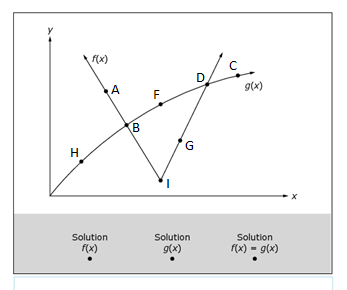
more orders of breadsticks. This time her total is $15.00. Write and solve a system of equations to

find the cost of each pizza and each order of breadsticks.

6) **NC** Mya is selling cookies (x) and brownies (y) at a bake sale. One cookie costs $1.50 and a brownie

costs $2.00. She needs to make at least $50 to make a profit but she only has 20 cookies to sell. Write

system of linear inequalities to model this problem. (You don’t have to solve the system.)

7) The graphs of and are shown.

|  |  |
| --- | --- |
| Solutions for… | List **all** the points marked. |
|  |  |
|  |  |
| (solutions for both) |  |

8) Solve this system of equations. (Where do the graphs intersect?)

Honors Algebra 2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Exam Review – Part 3

**THIS REVIEW IS PART OF YOUR EXAM GRADE**

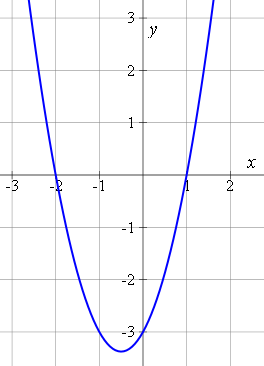
**Unit 3: Quadratics**

1) Which of the following equations shows the minimum or maximum of h(x)? Is it a max or min?

h(x)=2(x+3)(x+1) h(x)=2(x+2)2-2 h(x)=2x2+8x+6

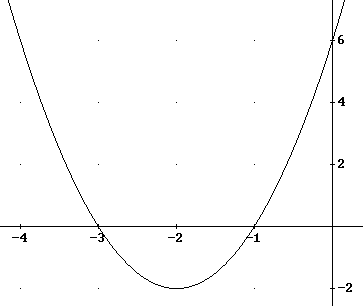
2) Factor to find the x-intercepts.

a) =0 b)

3) **NC** The graph below can be represented by which of the following equations:

1. y = (x – 2)(x + 1)
2. y = (x – 1)(x + 2)
3. y = (x + 1)(x + 2)
4. y = (x – 1)(x – 2)

4) **NC** Select **all** of the functions that can represent the following graph:

1. f(x) = 2x2 + 4x + 3
2. f(x) = 2(x + 3)(x + 1)
3. f(x) = 2(x + 2)2 - 2
4. f(x) = 2(x – 3)(x – 1)
5. f(x) = 2x2 + 8x + 6
6. f(x) = 2(x – 2)2 – 2

5) **NC** Solve the following equations using any method.

a) b) c) =0

6) How many times does each of the following functions intersect the x-axis?

a) b) c)

Honors Algebra 2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Exam Review – Part 4

**THIS REVIEW IS PART OF YOUR EXAM GRADE**

**Unit 4: Rational/Radical**

1) **NC** Simplify: 2) **NC** Simplify:

3) **NC** Convert to radical form: 4) **NC** Convert to exponential form:

5) **NC**  Simplify. Write your answers in 6) Simplify:

simplest **radical form.**

a)

b)

7) **NC** Simplify: 8) **NC** Simplify:

9) **NC**  Solve: 10) Simplify:

Solve each equation. Remember to check for **extraneous solutions**.

11) =7 12) 13)