

Name _____

Period _____ Date _____

Quadratic Review Homework

1) Graph and describe the function $y = x^2 - 2x - 15$.

Your graph MUST include and label: 1) the x-intercepts, 2) vertex, and 3) line of symmetry.

Space to solve for the zeros or make a table

Description

Domain:

Range:

Interval of increasing:

Interval of decreasing:

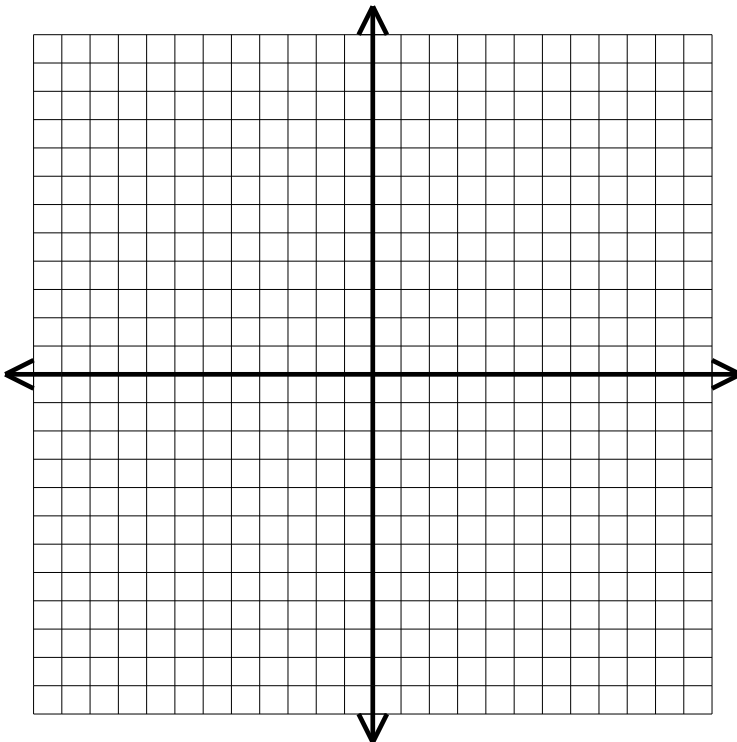
Interval of constant:

Minimum/Maximum:

Vertex:

Zeros:

Equation of line of symmetry:



2. Imp was not happy with his showing in the water balloon contest. He wants to see if he can launch his water balloon higher or farther than anyone else. Below is a table of his data. Remember he is on a football field and the x-value represents distance from the goal line and the y-value represents the height of the water balloon. Using the table, answer the questions on the right.

Imp's Data:		<p>How far did Imp's water balloon travel?</p> <p>What was the maximum height of Imp's water balloon?</p> <p>Develop a function to describe the flight of Imp's balloon (show your work):</p>
Yard line	Height	
5	0	
6	2	
7	8	
8	18	
9	32	
10	50	
11	32	

3. Using the table below write an equation that models the data.

x	-4	-3	-2	-1	0	1	2	3	4
y	16	0	-12	-20	-24	-24	-20	-12	0

Solve each of the following equations. Leave your answers in exact form (no decimals).

4. $(x - 4)^2 = 32$

5. $2(x + 5)^2 - 4 = 96$