

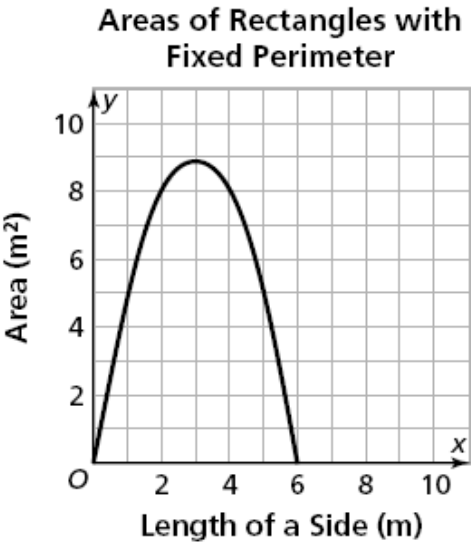
Quadratic Test Part 1 Review Day 2

Standards

- F.IF.7a Graph quadratic functions expressed symbolically
- F.IF.8 Write a function in different but equivalent forms
- F.IF.8a Use the process of factoring (and expanding) in a quadratic function to show zeros (intercepts), extreme values (vertex) and symmetry of the graph

1. The graph shows length and area data for rectangles with a fixed perimeter.

- a. What are the dimensions of the rectangle with this perimeter and an area of 8 square meters?
- b. What is the greatest area possible for a rectangle with this perimeter? What are the dimensions of this rectangle?
- c. What is the fixed perimeter for these rectangles?

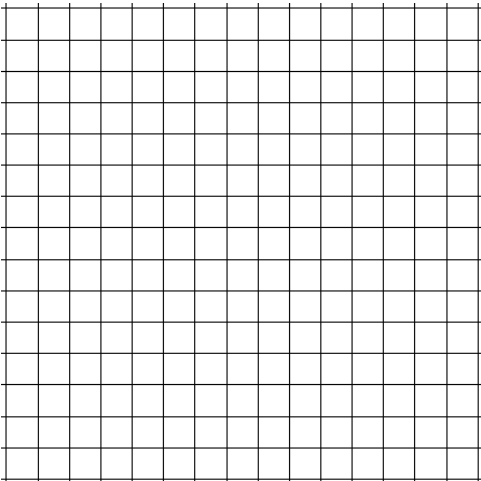


2. A rectangle has a perimeter of 60 meters and a side length of n meters.

- a. Write an equation for the area A of the rectangle in terms of n .
- b. Complete the table below to show how area changes as the length of a side increases. Then graph the relationship between the length of the side and the area for this fixed perimeter.

length (m)	0	5	10	15	20	25	30
area (m ²)							

- c. What is the greatest area possible for a rectangle with this perimeter? What are the dimensions of this rectangle?



Without graphing, find the following for each equation. Show all your work!

3.

$$y = x^2 + 5x + 6$$

Factored Form: _____

x-intercept(s): _____

y – intercept: _____

Line of Symmetry _____

Minimum or Maximum Point _____

4.

$$y = 2x(x - 3)$$

Expanded Form: _____

x-intercept(s): _____

y – intercept: _____

Line of Symmetry _____

Minimum or Maximum Point _____

5.

$$y = (x + 6)(x - 4)$$

Expanded Form: _____

x-intercept(s): _____

y – intercept: _____

Line of Symmetry _____

Minimum or Maximum Point _____

6.

$$y = (x + 2)(x + 2)$$

Expanded Form: _____

x-intercept(s): _____

y – intercept: _____

Line of Symmetry _____

Minimum or Maximum Point _____