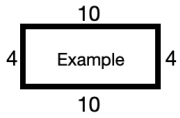
Math II — Zebra Pens Name _____

Carol is coming to your home for a week-long visit.

She comes with a portable fence that is 28 feet long.
The fence protects Carol from wolves in your neighborhood.
The fence also protects Carol from eating your entire lawn.

1) How many different rectangles can you make with 28 feet? _____

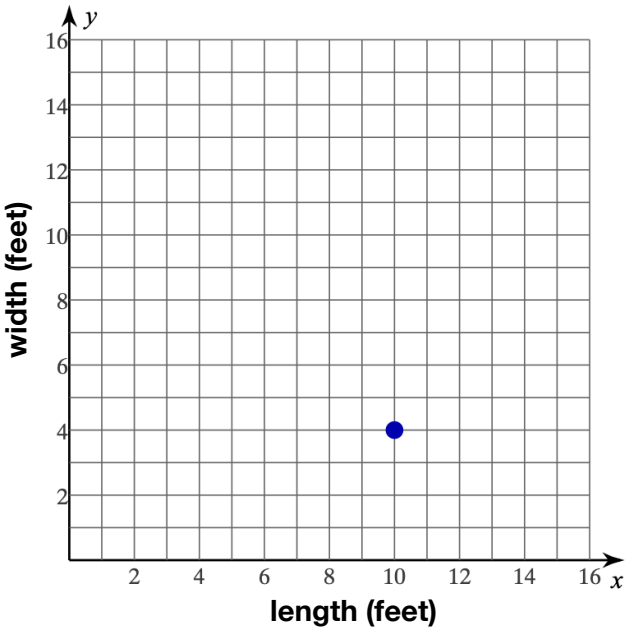
2) Draw four different rectangles with perimeter 28.



3) Complete the table to match your four different rectangles. Try to find a pattern.

4) Is the width pattern linear, exponential, or quadratic?

5) Convert the table to a graph by plotting points.



6) Write an equation to match your graph.

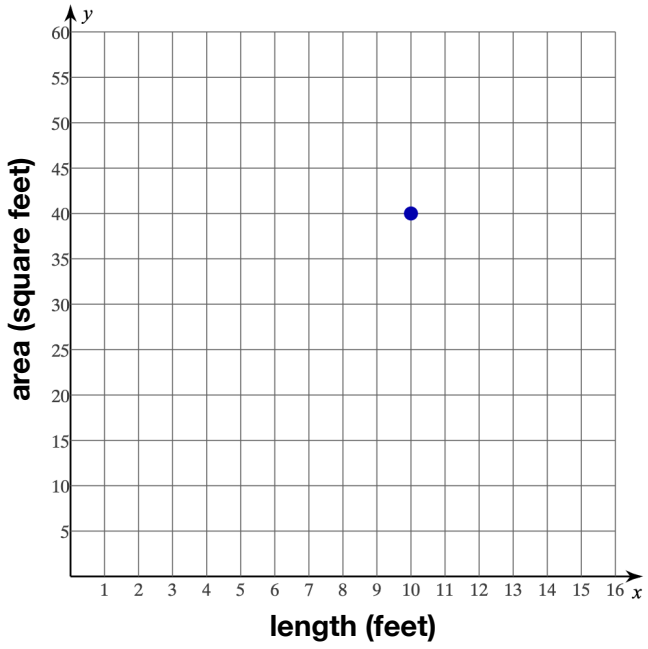
length (feet)	width (feet)
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	4
11	
12	
13	
14	
x	

7) Draw the rectangle that gives Carol the most space. →

8) Complete the table for the **area** of every rectangle.

9) Is the area pattern linear, exponential, or quadratic?

10) Convert the table to a graph by plotting points.



11) Write an equation to match your graph.

length (feet)	area (square feet)
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	40
11	
12	
13	
14	
x	

12) Mixed Bag: Underline the linear things and box the quadratic things.

distances **two-dimensional** **areas** $y = 2 + 3x$

rate of change is constant **straight line** **one-dimensional**

parabolic curve

rate of rate of change is constant

acres **miles** $y = x(15 - x)$