Investigation 3.1 Rectangles With Fixed Area

Part A

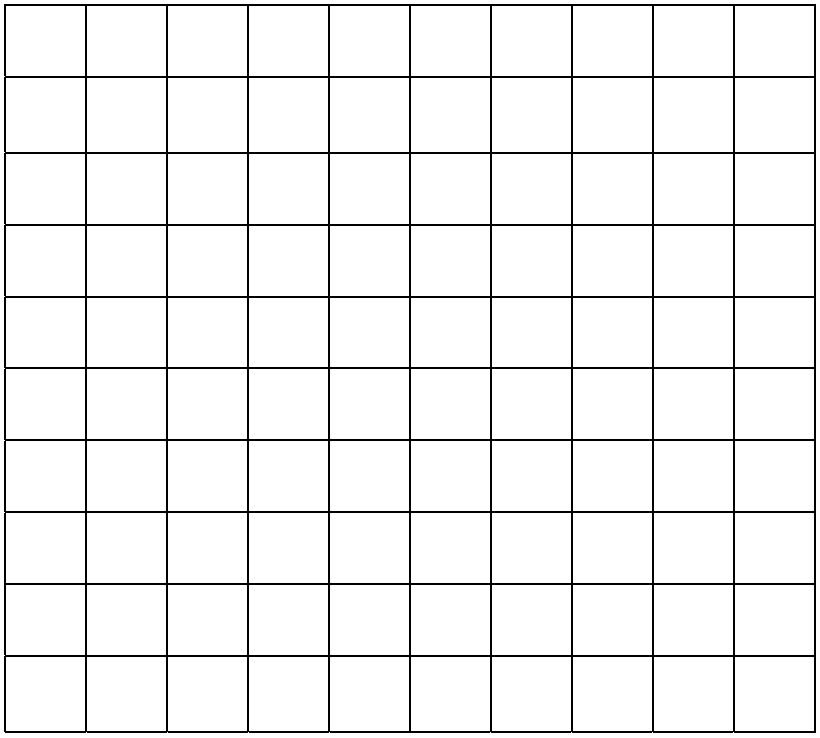
1. Complete this table.

Rectangles With Area 24 in.^{2}

Length (in.)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Width (in.)								

2. Plot your data on the grid below. Then, draw a line or curve that seems to model the pattern.

Rectangles With An Area 24 in.^{2}



3. As the length increases, the width _____.The relationship **is/is not** linear.

4. Write an equation that shows how the **width *w*** depends on the **length *l*** for rectangles with an area of 24 square inches.

_____

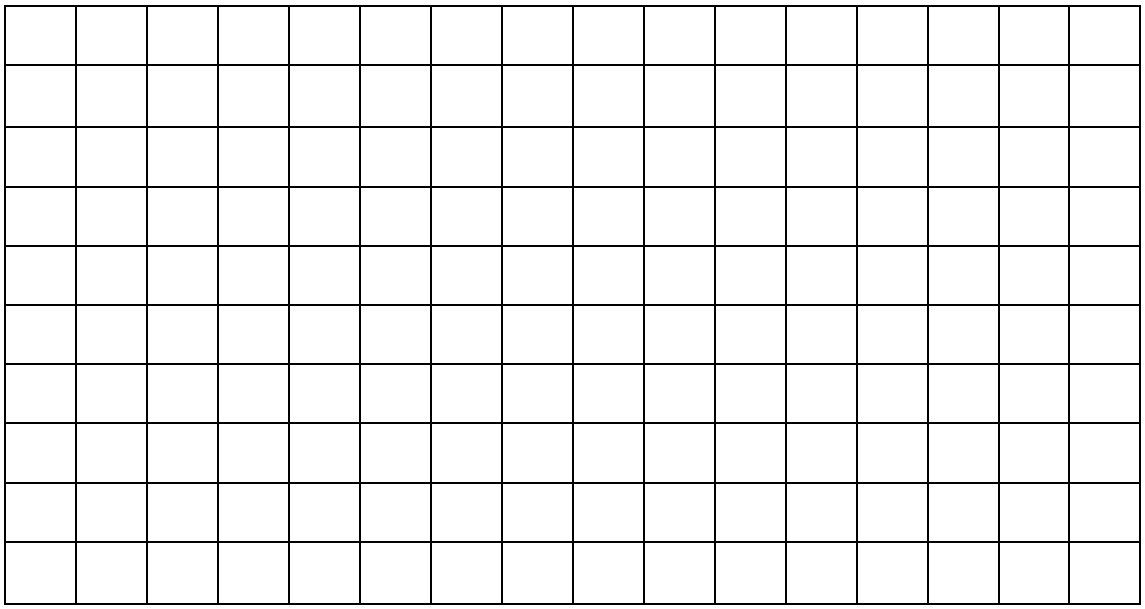
Part B
Now consider rectangles with a area of **32 square inches.**

1. Write an equation for the relationship between **length *l*** and **width *w***.

   _____

2. Graph your equation. Show lengths from 1 to 15 inches.

Rectangles With An Area 32 in.^{2}



Part C Compare your equations.
How is the 1st equation **similar** to the 2nd equation? _____

_____

How is the 1st equation **different** to the 2nd equation? _____

_____

Part D Compare your graphs.

How are they **similar**? _____

_____

How are they **different**? _____

_____