

# Do I Have to Mow the Whole Thing?

NAME \_\_\_\_\_

DATE \_\_\_\_\_



Imagine you've been asked to mow a rectangular garden that is 24 square yards. In your mind, you probably have an idea of the dimensions of the garden from this description.

1. Sketch a rectangle whose area is 24 square units and label its dimensions:

Length: \_\_\_\_\_

Width: \_\_\_\_\_

2. Sketch another rectangle with the same area but different dimensions:

Length: \_\_\_\_\_

Width: \_\_\_\_\_

3. Find more combinations of lengths and widths that will generate a rectangle with an area of 24 square units.

LENGTH								1.5		0.5		120		0.3
WIDTH									1.5		0.5		120	

4. Graph the data points from the table above, using *length* for your *x*-values and *width* for your *y*-values. (It's reasonable not to graph *all* the points that you've found.)

5. If you were to connect the points, how would you describe the graph of the function?

6. What rule describes the relationship between the length and the width?

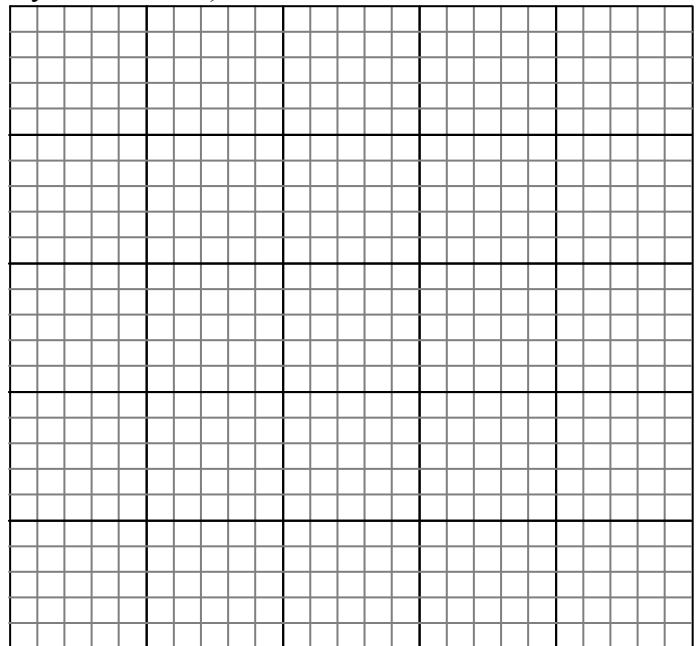
7. Fill in the blanks in the sentences below:

As the length increases, the width \_\_\_\_\_.

As the length \_\_\_\_\_, the width \_\_\_\_\_.

8. What equation represents this relationship? \_\_\_\_\_

If you haven't already done so, solve this equation for *y*:  $y = \underline{\hspace{2cm}}$



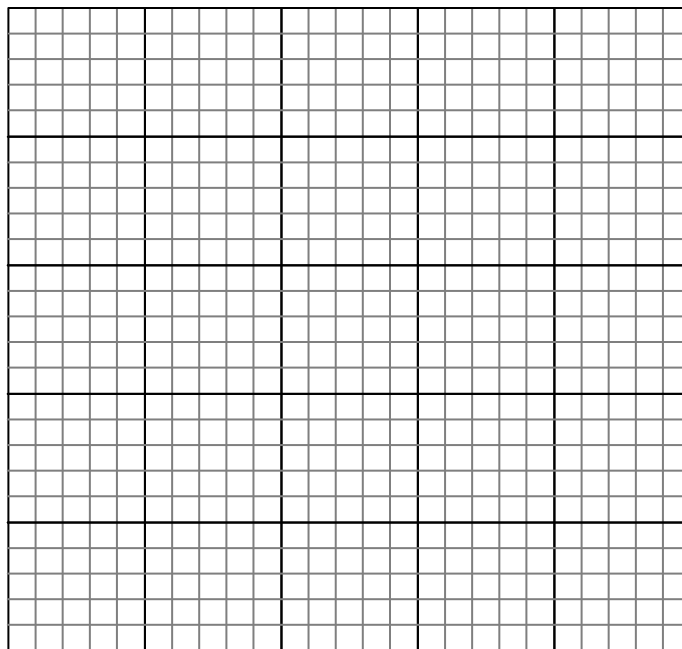


**Professor Jenkins has finished a manuscript that he's written by hand. It will take four typists nine days to type the entire manuscript.**

9. How many days of typing will it take if only two typists are available to type the manuscript?
10. How many days will it take one typist to type the manuscript?
11. How many typists are needed if he needs the manuscript in three days?
12. Fill in the table with as many *typist-days* pairs that you can find.

<b>TYPISTS</b>	4	2	1											
<b>DAYS</b>	9			3										

13. Graph the data points from the table above, using *typist* for your  $x$ -values and *days* for your  $y$ -values. (It's reasonable not to graph *all* the points that you've found.)



14. If you were to connect the points, how would you describe the graph of the function?

15. Fill in the blanks in the sentences below:

As the number of typists increases, the number of days \_\_\_\_\_.

As the number of days \_\_\_\_\_, the number of typists \_\_\_\_\_.

16. What equation represents this relationship? \_\_\_\_\_

If you haven't already done so, solve this equation for  $y$ :  $y = \underline{\hspace{2cm}}$