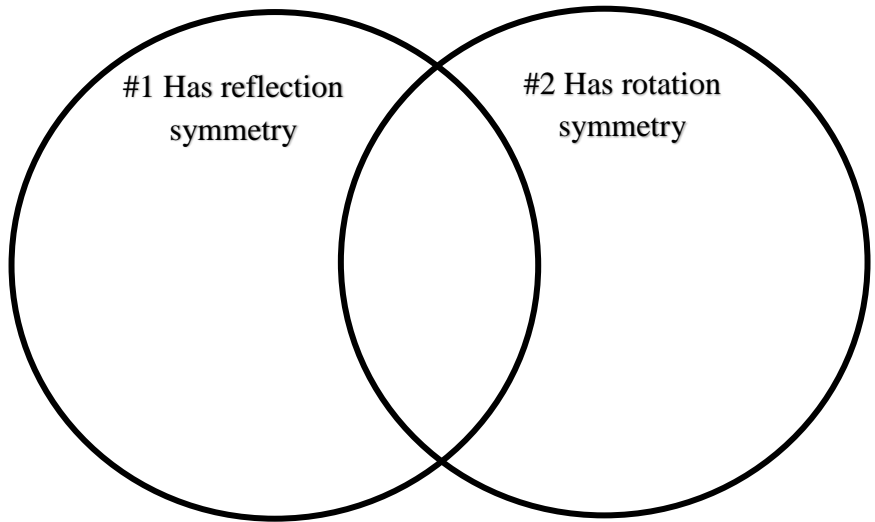


Homework 1.1.1

1. Place each capitalized letter of the alphabet below into your Venn diagram based on its type of symmetry.

A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z



2. On the graph on the right, graph line \overleftrightarrow{MU} for $M(-2, -5)$ and $U(4, 4)$.

a) Calculate the slope of \overleftrightarrow{MU} and find the y-intercept.

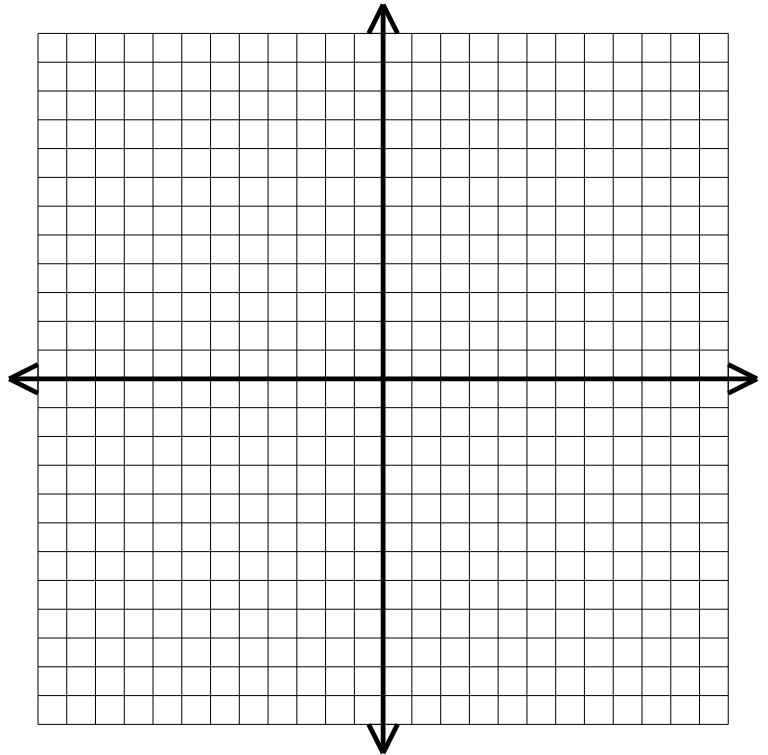
Slope =
y-intercept =

b) Write the equation of the line.

c) Calculate the distance from M to U. (Hint: use the distance formula or Pythagorean Theorem)

d) Are there any similarities to the calculations used to find the slope and distance?

Any differences?

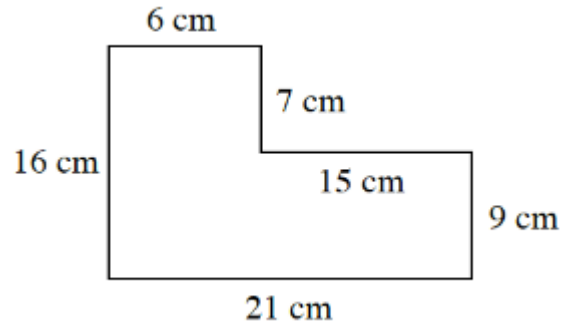


3) Solve each equation then check your solutions.

a) $\frac{x}{6} = \frac{5}{10}$	b) $\frac{4}{6} = \frac{8}{x}$	c) $\frac{12}{4} = \frac{x}{10}$	d) $\frac{x}{10} = \frac{12}{15}$
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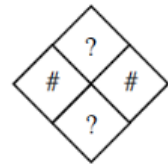
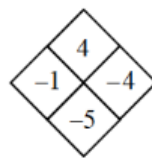
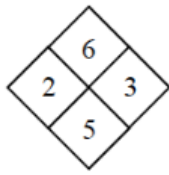
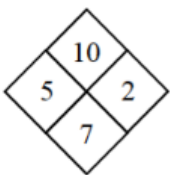
4) Angela has a rectangular piece of paper and cuts a rectangle out of a corner as shown at right.

What are the area and perimeter of the resulting shape?



5) Finding and using a pattern is an important problem-solving skill necessary for your study of mathematics. The patterns in Diamond Problems are used later in the course to solve other types of algebraic problems.

Look for a pattern in the first three diamonds below. For the fourth diamond, explain how to find the missing numbers (?) if you know the two numbers (#).



Use the pattern you discovered above to complete each Diamond Problem below

