

Name _____

TH #6

1. Label each statement as
A Formal definition
B description
C other: there are three undefined terms in Geometry!

- _____ A plane is a thin surface that extends indefinitely in all directions
- _____ A point is a location
- _____ A line is a series of points that extends indefinitely in both directions
- _____ An isometry is a rigid motion that preserves lengths and angles.
- _____ Congruent shapes are exactly the same size, though they might be turned, slid, or flipped.

3. Are the lines parallel, perpendicular or neither? Support your answer by finding the slope of each line:

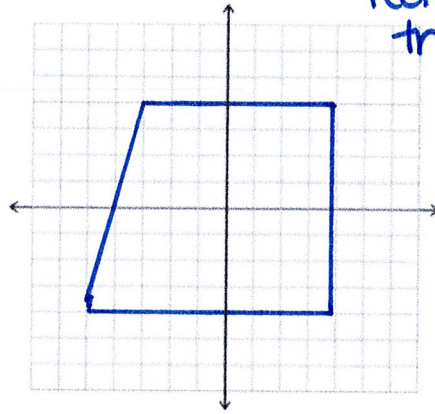
line A: (2, 5) and (4, 2)

line B: (2, 1) and (5, 3)

slope slide
example:
 $\begin{array}{r} (2, 5) \\ - (4, 2) \\ \hline -2 \quad 3 \\ -2 \end{array}$
 $m = -3/2$

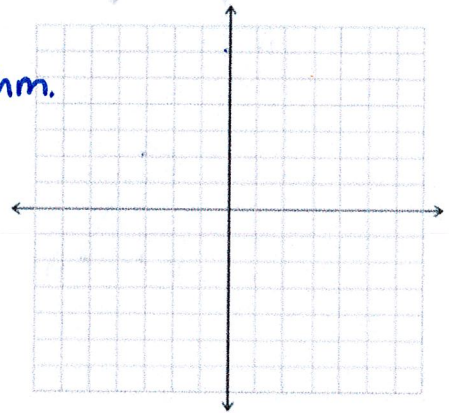
2. find the area of the figure

hint:
rectangle area = $b \cdot h$
triangle area = $\frac{1}{2} \cdot b \cdot h$

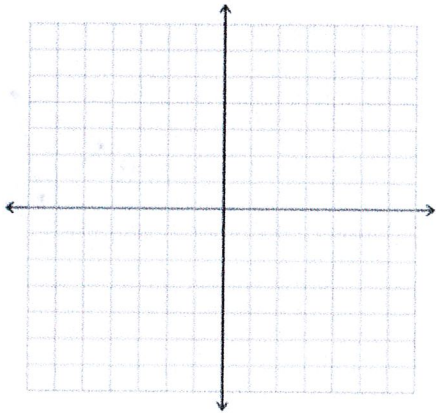


4. plot (-3, 2) (1, 2) and (-1, 6) and find the perimeter of the triangle.

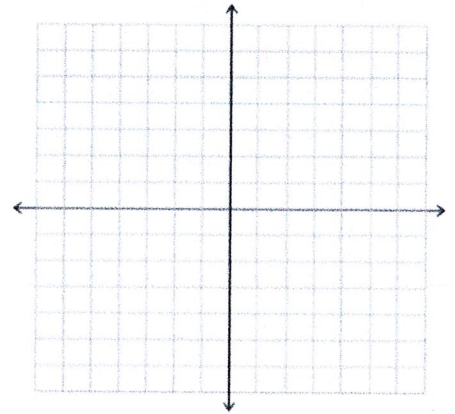
hint: you need pyth. thm. twice!



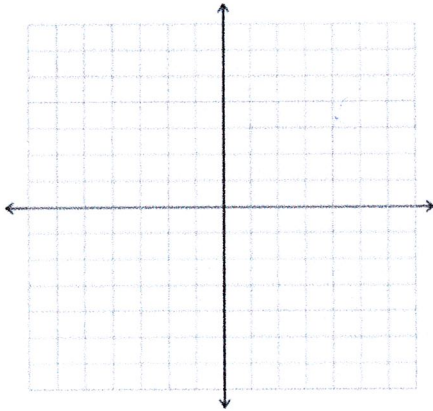
5. Plot A at (-2, 1) rotate 90° counterclockwise about the origin. A' _____



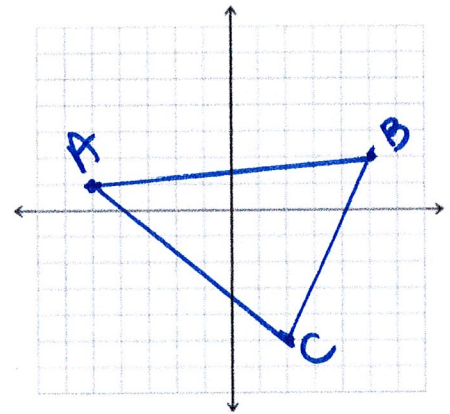
6. Plot A at (4, 2) reflect over the line $x = 1$. A' _____



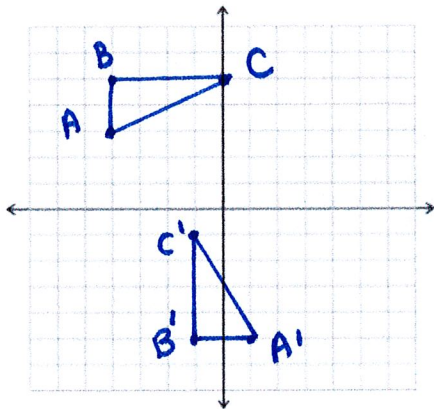
7. plot A at (-4, -2) then (5, 6) A' _____



8. Find the midpoint of segment AB



9.



_____ Which of the following combination of transformation proves $\triangle ABC \cong \triangle A'B'C'$?

- A. rotate 90° counterclockwise about the origin, then reflect over the x-axis
- B. $\langle 4, -1 \rangle$ then rotate 180°
- C. rotate 90° counterclockwise about the origin, then reflect over the y-axis
- D. rotate 90° counterclockwise about the origin, then $\langle 4, -1 \rangle$

10. A rectangle with dimensions 4 ft by 9 feet undergoes a dilation with scale factor 3

A. What is the area of the original rectangle?

B. What are the dimensions of the new rectangle?

C. What is the area of the new rectangle?

11. reflect over $y = 1$

Name the coordinates:

A' _____

B' _____

C' _____

