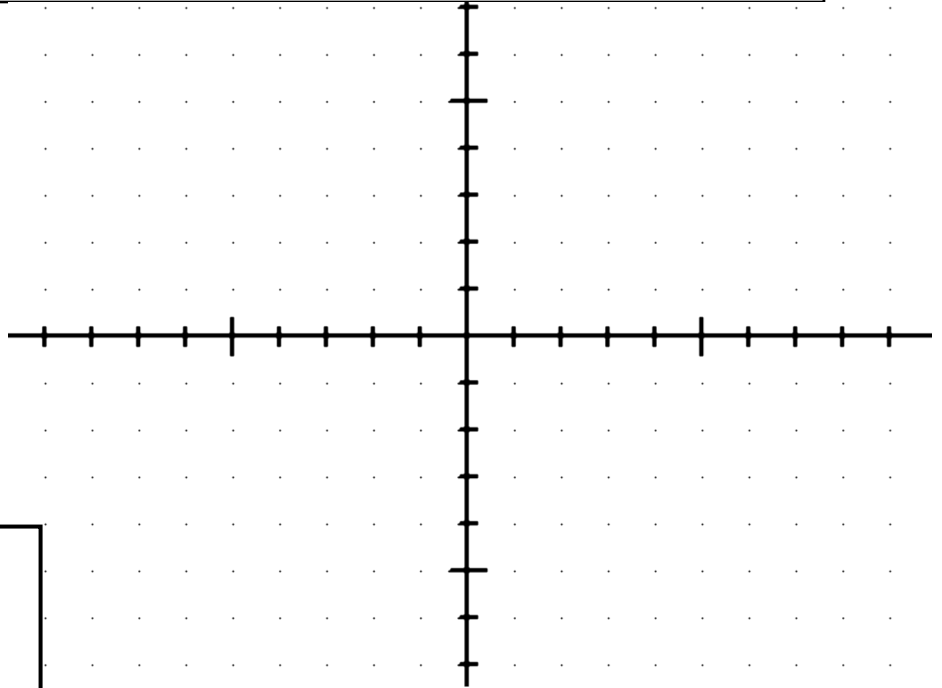


## Midsegment Activity G.GPE

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per: \_\_\_\_\_

1.

Plot 3 points (each in a different quadrant). **NO vertical or horizontal lines!** Label the points as  $A$ ,  $B$ , and  $C$ . Connect them to form a triangle.



2.

What is the midpoint formula?

3.

Use the midpoint formula to find the midpoint of  $AB$  and  $AC$ . Graph the midpoints and label them as  $X$  and  $Y$ . Connect  $X$  and  $Y$ .

4.

What is the formula for slope ?

5.

Use the slope formula to find the slope of  $\overline{XY}$  and  $\overline{BC}$ .

6.

What do you notice about the slopes? What does that mean?

7. What is the distance formula?



8. Use the distance formula to find the distance of  $\overline{XY}$  and  $\overline{BC}$ ?

9. What is the relationship between  $\overline{XY}$  and  $\overline{BC}$ ?

10. Find the  $m\overline{AC}$  and the  $m\overline{AB}$ .

11. Based on the measurements of  $\overline{AB}$ ,  $\overline{AC}$ , and  $\overline{BC}$ , list the angles of  $\triangle ABC$  in order from the smallest to the largest.