

1.) Given the points $A(-2, 4)$ and $B(7, -2)$:

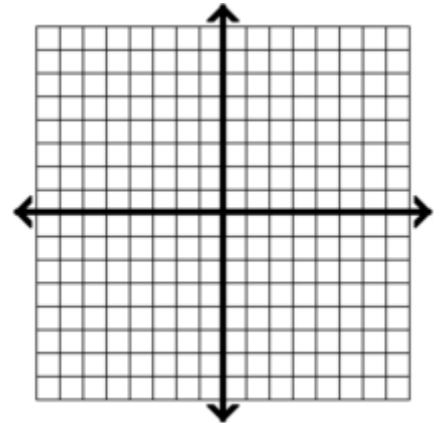
a.) Find the slope of the line passing through points A and B .

b.) Find the midpoint of \overline{AB} .

c.) Find the distance between points A and B .

2.) You are given quadrilateral GEOM with vertices at $G(-3, 4)$ $E(5, 6)$ $O(4, -2)$ $M(-4, -4)$.

a.) Find the slope of all 4 sides.



b.) Find the length of all 4 sides (using the Distance Formula).

c.) Do you observe anything about your answers from (a) and (b)?

3.) You are given line m with a slope of $2\frac{1}{4}$.

a.) What is the slope of a line parallel to line m?

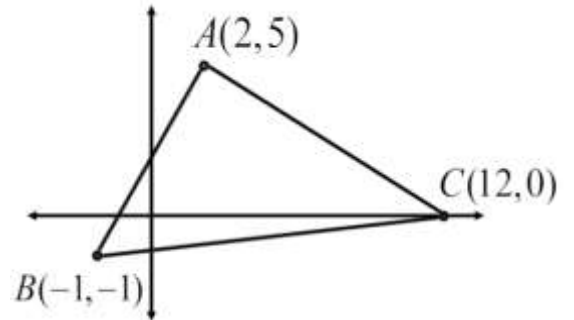
Slope = _____

b.) What is the slope of a line perpendicular to line m?

Slope = _____

Use the diagram to the right for problems (4)-(8)

4.) Find the length of all 3 segments of $\triangle ABC$. Leave your answers in radical form.



5.) Find the slopes of all 3 sides of $\triangle ABC$.

6.) Using your information from (5), is $\triangle ABC$ a right triangle? Briefly explain your answer.

7.) Find the slope of the altitude of $\triangle ABC$ to \overline{BC} .

8.) Find the slope of the median of $\triangle ABC$ to \overline{BC} .