1.

Find the slope of the line determined by each pair of points.

a. (1, 7) and (10, 15)

b. (-2, 6) and (5, 7)

c. (-8, -7) and (-2, 4)

d. (5, 4) and (-2, 4)

e. ($\sqrt{3}$, 7) and ($\sqrt{3}$, -9)

f. (5a, 6c) and (2a, -9c)

2.

$\overleftrightarrow{AB}$ has a slope of $1\frac{2}{3}$ and $\overleftrightarrow{CD} \perp \overleftrightarrow{AB}$. What is the slope of $\overleftrightarrow{CD}$?

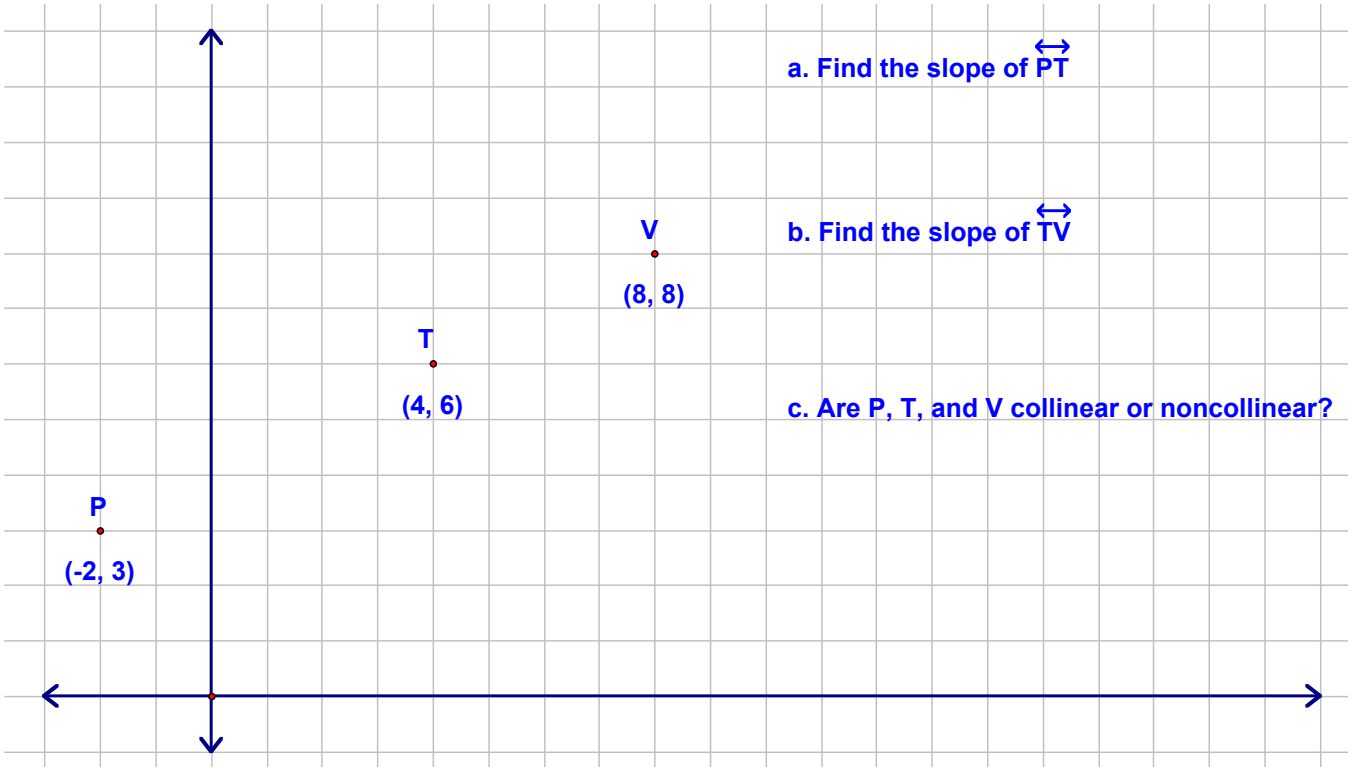
3.

If $\overleftrightarrow{EF} \parallel \overleftrightarrow{GH}$ and $\overleftrightarrow{EF}$ has a slope of -4, what is the slope of $\overleftrightarrow{GH}$?

6.

$\overleftrightarrow{AB}$ has a slope of $2\frac{1}{2}$. If A = (2, 7) and B = (12, k), what is the value of k?

9.



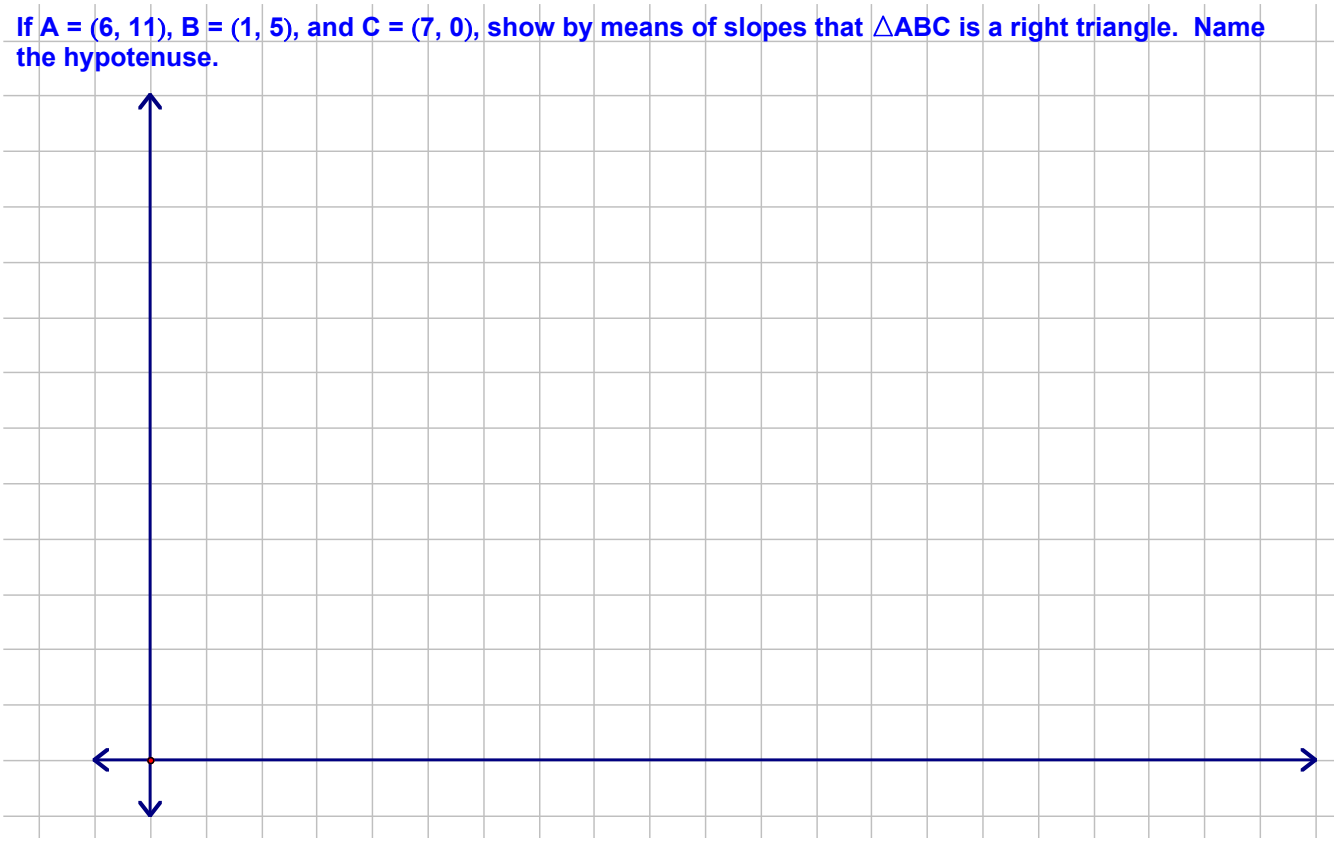
10.

Are (-6, 5), (1, 7), and (15, 10) collinear?

Are (74, 20), (50, 16), and (2, 8) collinear?

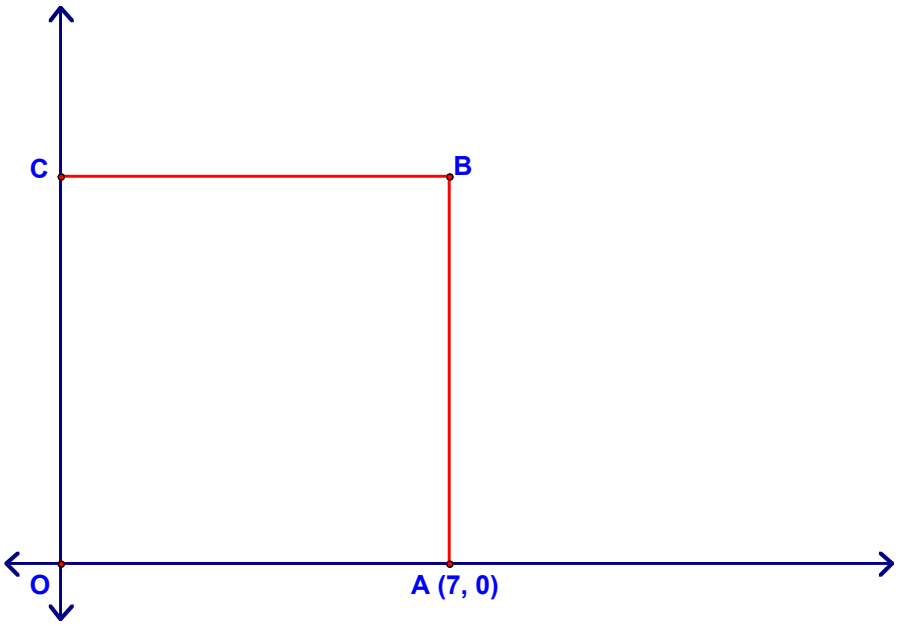
13.

If A = (6, 11), B = (1, 5), and C = (7, 0), show by means of slopes that △ABC is a right triangle. Name the hypotenuse.



15.

If square OABC is rotated 180° clockwise about its center, what will be the new coordinates of O?



17.

△ABC has vertices at A = (2, 1), B = (12, 3), and C = (6, 7). Write an argument to show that the median from C to $\overline{AB}$ is not longer than the altitude from C to $\overline{AB}$.