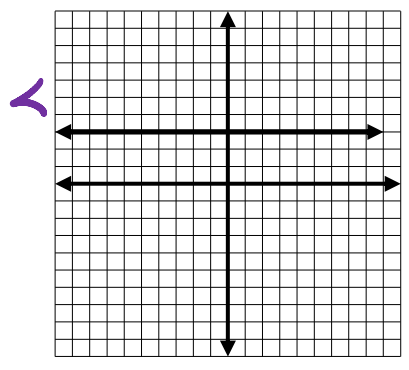


1. Find the slope between: (-3, 2) and (4, 6) $m = \frac{6-2}{4-(-3)} = \frac{4}{7}$

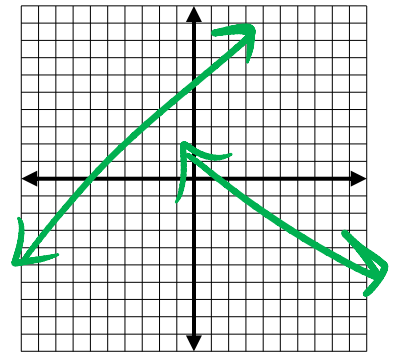
2. Find x when the slope between the two coordinates (5, -3) and (x, 7) is $m = \frac{1}{2}$
 $m = \frac{7-(-3)}{x-5} = \frac{1}{2}$ $\frac{20 = x - 5}{25 = x}$

3. What is the slope of the line graphed at right?

0



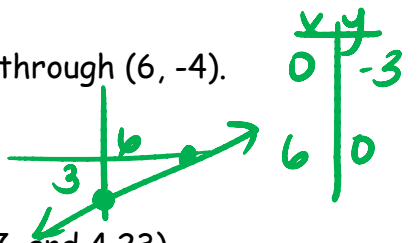
4. Determine 2 points that will yield a positive slope and 2 other points that will yield a negative slope. Graph the two lines.



Slope of $\frac{1}{2}$!

5. Write the equation of a line parallel to $3x - 6y = 18$ and through (6, -4).

$y + 4 = \frac{1}{2}(x - 6)$



6. Write the equation of a line through (8.6, -4.2) and (-3.7, and 4.23).

$y + 4.2 = \frac{-281}{410}(x - 8.6)$ OR $y - 4.23 = \frac{-281}{410}(x + 3.7)$

7. Write the equation of a line perpendicular to $y = \frac{-2}{3}x + 9$ and through the midpoint of a segment with endpoints (8, 4) and (15, -1).

midpt (11.5, 1.5)

$y - 1.5 = \frac{3}{2}(x - 11.5)$

8. Find the equation of the line given in the table below:

X	y
4	-1
8	-3
12	-5
16	-7
20	-9

$$y = -\frac{1}{2}x + 1$$

9. Triangle BAT has vertices located at B (-2, 7), A (3, 3) and T (0, -4).

a. Find the slope of \overline{BA} .

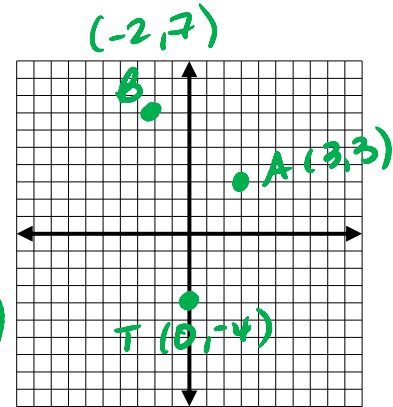
$$-\frac{4}{5}$$

b. Find the equation of the median from A.

Midpt of \overline{BT} (-1, 1.5)

$$m = \frac{3 - 1.5}{3 - (-1)} = \frac{1.5}{4} = \frac{3}{8}$$

$$y - 1.5 = \frac{3}{8}(x + 1)$$



c. Find the equation of the median from T.

Midpt of \overline{BA} ($\frac{1}{2}$, 5)

$$m = \frac{5 - (-4)}{\frac{1}{2} - 0} = \frac{9}{\frac{1}{2}} = 18$$

$$y - 5 = 18(x - \frac{1}{2})$$

d. Find the equation of the altitude from B.

$$m_{\overline{AT}} = \frac{-4 - 3}{0 - 3} = \frac{-7}{-3} = \frac{7}{3}$$

$$y - 7 = -\frac{3}{7}(x + 2)$$

e. Find the equation of the altitude from T.

$$m_{\overline{AB}} = \frac{3 - 7}{3 - (-2)} = \frac{-4}{5}$$

$$y + 4 = \frac{5}{4}(x - 0)$$

f. Find the equation of the line through the midpoints of \overline{BA} and \overline{AT} .

Midpt of \overline{BA} ($\frac{1}{2}$, 5)

Midpt of \overline{AT} (1.5 , $-\frac{1}{2}$)

$$m = \frac{5 - (-\frac{1}{2})}{\frac{1}{2} - 1.5} = \frac{5.5}{-1} = -\frac{11}{2}$$

$$y - 5 = -\frac{11}{2}(x - \frac{1}{2})$$

g. Find the equation of the line parallel to \overline{BA} and through T.

$$y + 4 = -\frac{4}{5}(x - 0)$$