

To earn full credit for this worksheet, you must follow the MTH 60 Documentation guidelines and do your work in pencil. No late work accepted.

Keep in mind that your homework is part of your "grade application," just as a cover letter and resume are part of a job application. Impressions count. Neatness and completeness make a lasting impression on the instructor (so does turning your homework in on time).

1. Graph $3x + 5y = 15$. Plot at least three points. Use a straight-edge. Be sure to label and scale the axes. Choose appropriate scales.

$$3(0) + 5y = 15$$

$$5y = 15$$

$$y = 3$$

y-intercept: $(0, 3)$

$$3x + 5(0) = 15$$

$$3x = 15$$

$$x = 5$$

x-intercept: $(5, 0)$

check point = $x = -5$

$$3(-5) + 5y = 15$$

$$-15 + 5y = 15$$

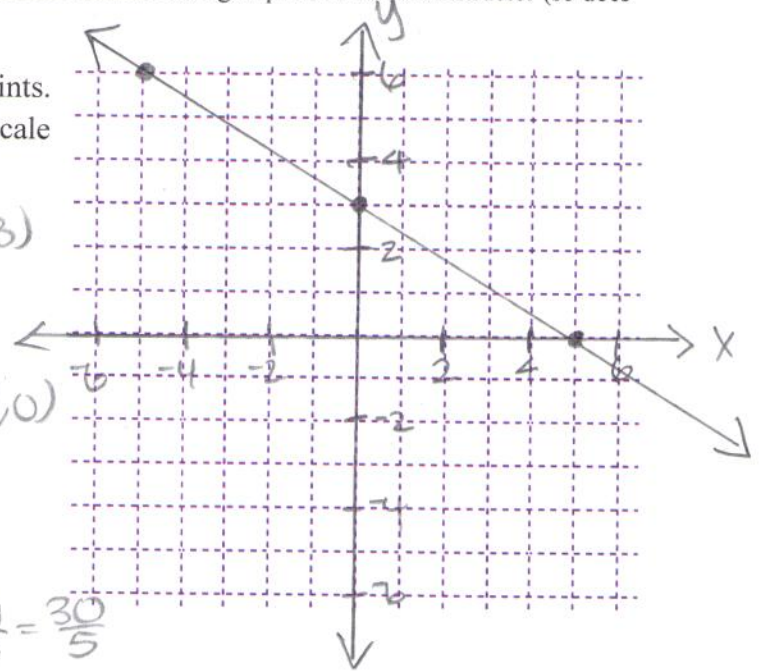
$$-15 + 5y + 15 = 15 + 15$$

$$5y = 30$$

$$\frac{5y}{5} = \frac{30}{5}$$

$$y = 6$$

$(-5, 6)$



2. Graph $n = \frac{2}{3}t - 5$. Plot at least three points. Use a straight-edge. Be sure to label and scale the axes. Choose appropriate scales. Plot t on the horizontal axis.

$$m = \frac{2}{3}$$

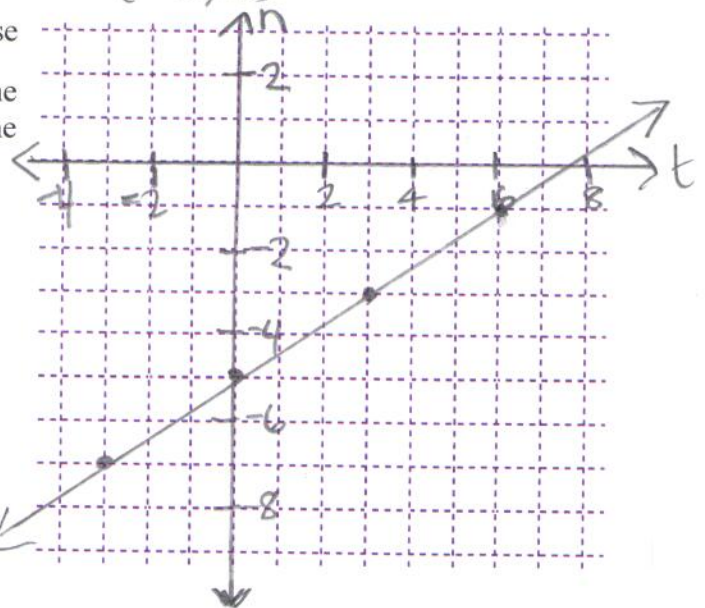
n-intercept: $(0, -5)$

I also plotted $(-3, -7)$, $(3, -3)$ and $(6, -1)$ using

$$m = \frac{\text{rise}}{\text{run}}$$

$$= \frac{2}{3}$$

I can move up 2 and right 3 or
 I can move down 2 and left 3.

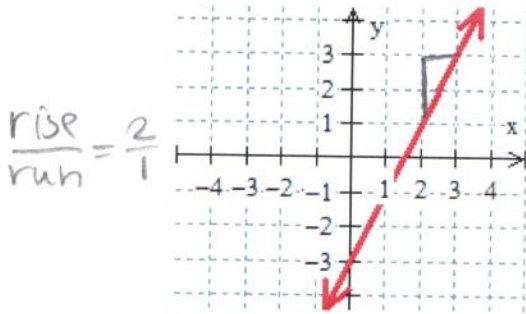


3. Find the slope of the line passing through the points $(-3, 5)$ and $(2, -8)$.

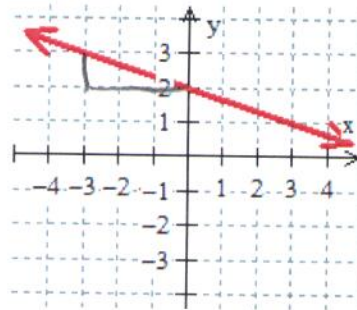
$$\begin{aligned}
 m &= \frac{y_2 - y_1}{x_2 - x_1} \\
 &= \frac{-8 - 5}{2 - (-3)} \\
 &= \frac{-8 + (-5)}{2 + 3} \\
 &= -\frac{13}{5}
 \end{aligned}$$

The slope is $-\frac{13}{5}$.

4. Find the slope of each line or state that the slope is undefined.

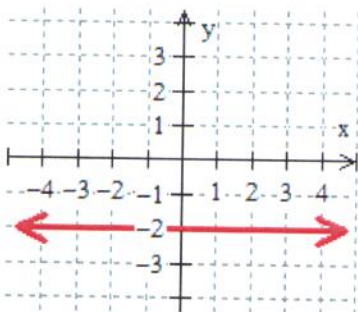


The slope is 2

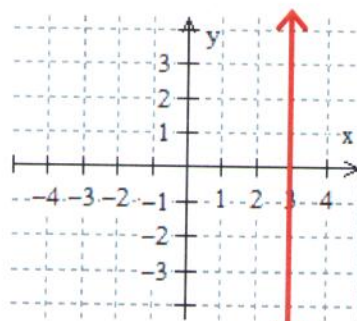


$$\frac{\text{rise}}{\text{run}} = \frac{-1}{3}$$

The slope is $-\frac{1}{3}$



The slope is 0



The slope is undefined