

Algebra: Please clear your desk except for...

- Assignment #17
WS - Chapter 4 Quiz Review
p. 232 Quiz #1-12

- SNB, graph paper, and a ruler

Graph $-3x - 9y = 18$ using a table.

Graph $-x + 3y = 5y - x - 3$ using a table.

Sketch the graph of $-8x - 4y = 16$ using intercepts.

$$\begin{aligned}
 -x + 3y &= 5y + (-x) + (-3) \\
 -x + 3y &\quad -3y \quad -3y \\
 \hline
 -x &= 2y + (-x) + (-3) \\
 +x &\quad +x \\
 \hline
 0 &= 2y + (-3) \\
 +3 &\quad +3 \\
 \hline
 3 &= 2y \\
 \frac{3}{2} &= \frac{2y}{2} \\
 \frac{3}{2} &= y
 \end{aligned}$$

Sep 11-7:34 AM

Types of Lines: Look at what the line does from left to right.

<p>1</p> <p>Decreasing Line as x increases, y decreases</p> <p>Slope = Negative #</p> $m = \frac{\text{chg } y}{\text{chg } x} \begin{matrix} (-) \\ (+) \end{matrix} \text{ or } \begin{matrix} (+) \\ (-) \end{matrix}$	<p>2</p> <p>Increasing Line as y increases, x will increase</p> <p>Slope = positive #</p> $m = \frac{\text{chg } y}{\text{chg } x} \begin{matrix} (+) \\ (+) \end{matrix} \text{ or } \begin{matrix} (-) \\ (-) \end{matrix}$
<p>3</p> <p>horizontal line y stays the same x can increase or decrease</p> $m = \frac{\text{chg } y}{\text{chg } x}$ $m = \frac{0}{\#}$ <p>$m = 0$</p>	<p>4</p> <p>Vertical line x-stays the same, y-increases & decreases can't be read left to right.</p> $m = \frac{\text{chg } y}{\text{chg } x}$ $m = \frac{\#}{0}$ <p>$m = \text{undefined}$</p>

Nov 15-9:23 AM

The slope of a line (rate of change) is the ratio that describes what the line does from left to right.

We use the letter "m" for the slope of a line.

$$m = \frac{\text{change in y-values}}{\text{change in x-values}} = \frac{\Delta y}{\Delta x}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad \odot \quad \star$$

Nov 15-9:29 AM

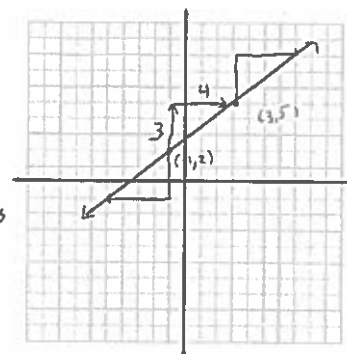
Find the slope of the line containing the following points. Describe the line as increasing, decreasing, horizontal or vertical.

Ex 1: (1, 2) and (3, 5)

increasing line \leftrightarrow Positive Slope

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{3}{4} \quad \uparrow \quad \text{directions}$$



Nov 15-12:34 PM

Find the slope of the line containing the following points.
Describe the line as increasing, decreasing, horizontal or vertical.

Ex 2: (3, 1) and (3, 2)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{-3}{0} \leftarrow \text{No dividing by 0.}$$

$m = \text{undefined}$
Vertical line

Nov 15-12:41 PM

Find the slope of the line containing the following points.
Describe the line as increasing, decreasing, horizontal or vertical.

Ex 3: (1, 2) and (5, 10)

$$m = \frac{-12}{6}$$

$$m = -2 \quad \begin{matrix} -2 \downarrow \\ 1 \rightarrow \end{matrix}$$

Nov 15-12:46 PM

Find the slope of the line that passes through the given points.
Describe the line as increasing, decreasing, horizontal or vertical.

<p>Ex 4: (3, 5) and (6, 1)</p> $m = \frac{\Delta y}{\Delta x}$ $m = \frac{5 - (-1)}{3 - 6}$ $m = \frac{6}{-3}$ <p>$m = -2$ decreasing line</p>	<p>Ex 5: (-2, 4) and (4, 4)</p> $m = \frac{\Delta y}{\Delta x}$ $m = \frac{4 - 4}{4 - (-2)}$ $m = \frac{0}{6}$ <p>$m = 0$ horizontal line</p>
<p>Ex 6: (2, 7) and (6, 21)</p> $m = \frac{\Delta y}{\Delta x}$ $m = \frac{21 - 7}{6 - 2}$ $m = \frac{14}{4}$ $m = \frac{7}{2}$ <p>Increasing line</p>	<p>Ex 7: (-5, -8) and (-5, 0)</p> $m = \frac{\Delta y}{\Delta x}$ $m = \frac{-8 - 0}{-5 - (-5)}$ $m = \frac{-8}{0}$ <p>$m = \text{undefined}$ Vertical line</p>

Sep 28-11:56 AM