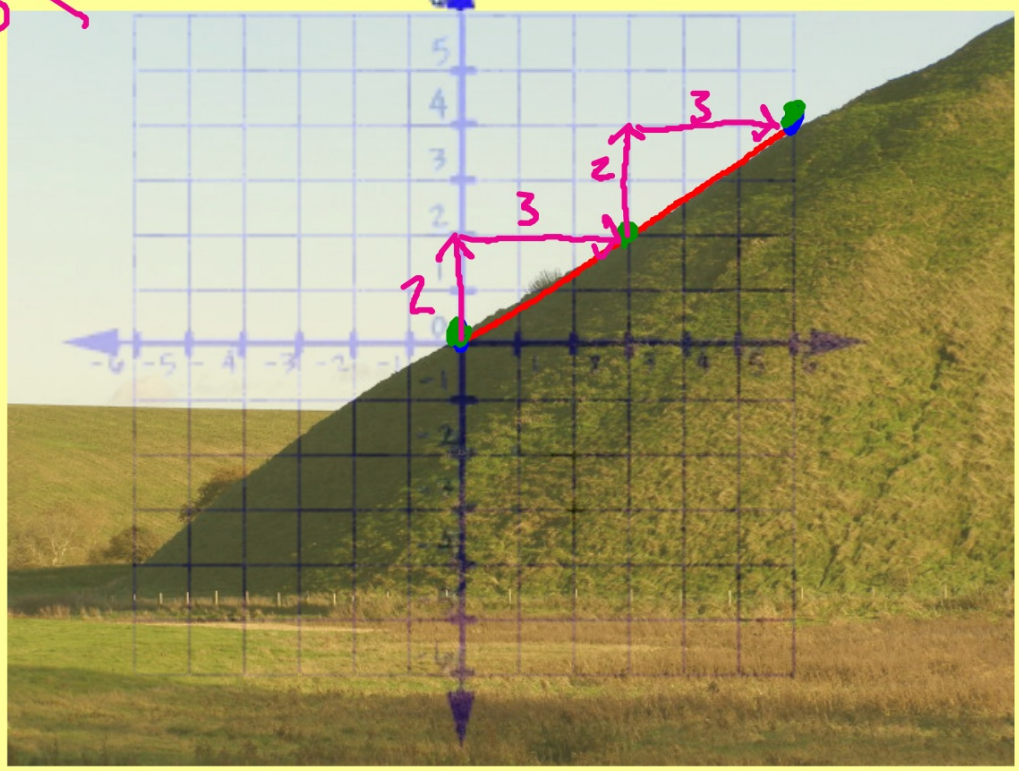
Algebra - January 4, 2012

Lesson 5-1B - Slope/Rate of Change

How steep is the slope of this hill?

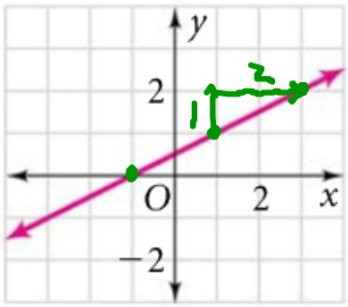
How steep is the slope of this hill?

$\frac{\text{rise}}{\text{run}} = \frac{2}{3}$



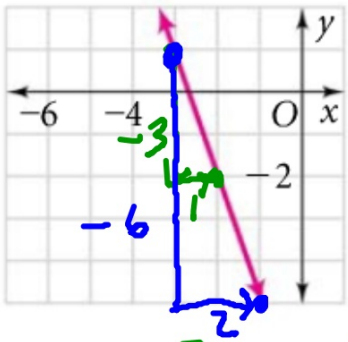
Find the slope of each line.

7.



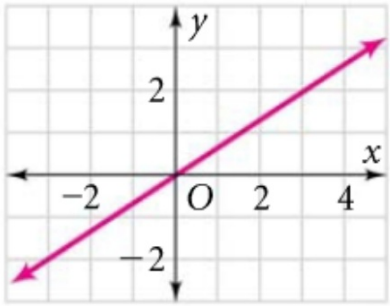
$\frac{1}{2}$

8.



$\frac{-3}{1} \leftarrow \frac{-6}{2}$

9.



$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

rise / run = slope

x_1 y_1 x_2 y_2

(1, 4) (8, 697)

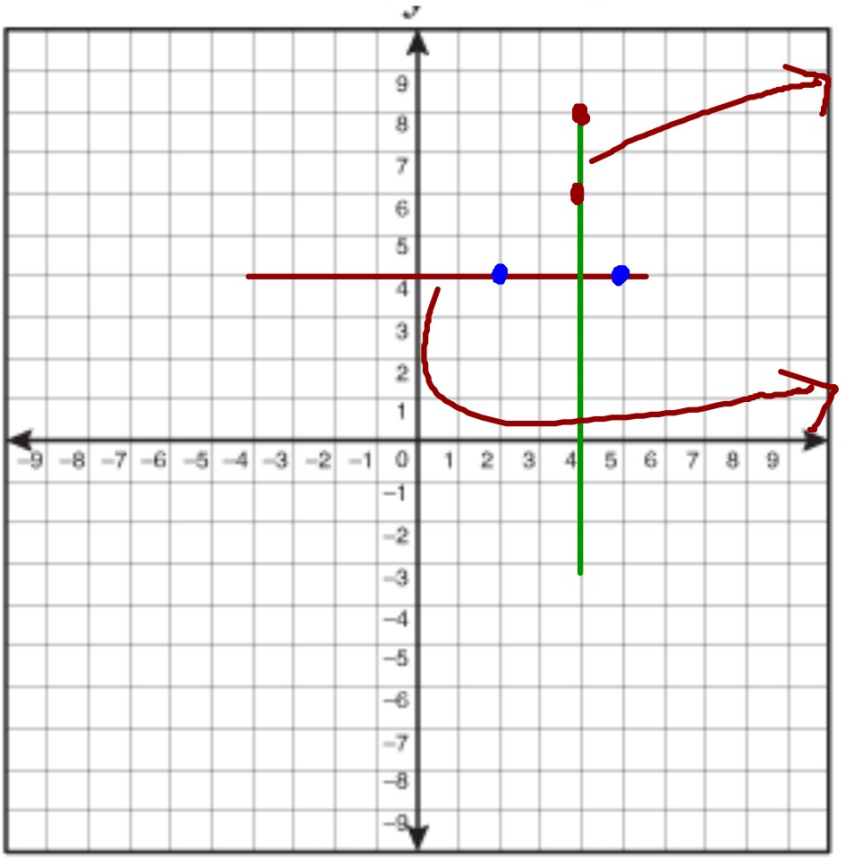
$$\frac{\text{rise}}{\text{run}} = \frac{697 - 4}{8 - 1} = \frac{693}{7} = \boxed{\frac{99}{1}}$$

$$\begin{array}{r|l} 7 & 693 \\ & 63 \\ \hline & 63 \\ & 63 \\ \hline & 0 \end{array}$$

99

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

(1, 4) (8, 697)



rise / run = 2/0 = ?

rise / run = 0/3 = 0

Horizontal = 0

Zero

Vertical = undefine

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

x_1 y_1 $\quad$ x_2 y_2

$(6, 4) \quad (6, -5)$

$$\frac{-5-4}{6-6} = \frac{-9}{0}$$ undefined

1.

Time (hours)	Temperature (°F)
1	−2
4	7
7	16
10	25
13	34

$(4, 7)$ $(7, 16)$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{16 - 7}{7 - 4}$$

$$= \frac{9}{3}$$

$$= \frac{3}{1}$$