

Find the slope

$$\left(\overset{x}{2}, \overset{y}{8}\right) \quad \left(\overset{x}{-3}, \overset{y}{4}\right)$$

$$\frac{\Delta y}{\Delta x} = \frac{4-8}{-3-2} = \frac{-4}{-5} = \left(\frac{4}{5}\right)$$

$$\frac{8-4}{2-(-3)} = \left(\frac{4}{5}\right)$$

$$\left(\overset{x}{11}, \overset{y}{-8}\right) \quad \left(\overset{x}{11}, \overset{y}{2}\right)$$

$$\frac{\Delta y}{\Delta x} = \frac{2-(-8)}{11-11} = \frac{10}{0}$$

Undefined

$$\left(\overset{x}{-1}, \overset{y}{0}\right) \quad \left(\overset{x}{6}, \overset{y}{-2}\right)$$

$$\frac{\Delta y}{\Delta x} = \frac{0-(-2)}{-1-6} = \left(\frac{2}{-7}\right)$$

$$\left(\overset{x}{0}, \overset{y}{8}\right) \quad \left(\overset{x}{-23}, \overset{y}{8}\right)$$

$$\frac{\Delta y}{\Delta x} = \frac{8-8}{-23-0} = \frac{0}{-23} = \boxed{0}$$

Finding Slope from Tables

1.

x	y
-2	8
0	0
2	-8
4	-16

$2 \left(\begin{array}{l} -2 \\ 0 \end{array} \right) \left. \begin{array}{l} 8 \\ 0 \end{array} \right\} -8$
 $2 \left(\begin{array}{l} 0 \\ 2 \end{array} \right) \left. \begin{array}{l} 0 \\ -8 \end{array} \right\} -8$
 $2 \left(\begin{array}{l} 2 \\ 4 \end{array} \right) \left. \begin{array}{l} -8 \\ -16 \end{array} \right\} -8$

$$\frac{\Delta y}{\Delta x} = \frac{-8}{2} = \frac{-4}{1}$$

2.

x	y
2	14
5	35
7	49
10	70

$3 \left(\begin{array}{l} 2 \\ 5 \end{array} \right) \left. \begin{array}{l} 14 \\ 35 \end{array} \right\} 21$
 $2 \left(\begin{array}{l} 5 \\ 7 \end{array} \right) \left. \begin{array}{l} 35 \\ 49 \end{array} \right\} 14$
 $3 \left(\begin{array}{l} 7 \\ 10 \end{array} \right) \left. \begin{array}{l} 49 \\ 70 \end{array} \right\} 21$

$$\frac{\Delta y}{\Delta x} = \frac{21}{3} = \frac{7}{1}$$

$$\frac{\Delta y}{\Delta x} = \frac{14}{2} = \frac{7}{1}$$

$$M = \frac{7}{1}$$

3. Find the slope from the information in the table below. What does the slope mean in context of this situation?

Number of Photos Printed	Total Cost, in dollars
10	2
20	4
30	6
40	8

10 ()
10 ()
10 ()

) 2
) 2
) 2

$$\frac{\Delta Y}{\Delta X} = \frac{\text{Cost}}{\text{Photo}} = \frac{\$2}{10}$$
$$= \frac{\$1}{5}$$

every 5 photos cost \$1