

Finding Slope

Given two points

OPTION 1: use the slope formula

OPTION 2: graph with rise
and run

OPTION 3: graphing calculator
with linear regression

Given a table,

treat as two points and
use one of the options above.

Find the slope of the line containing
 $(-4, 3)$ and $(2, -1)$.

OPTION 1: slope formula

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad \begin{matrix} x_1, y_1 & x_2, y_2 \\ (-4, 3) & (2, -1) \end{matrix}$$
$$= \frac{-1 - 3}{2 - (-4)} = \frac{-4}{6} = \left(\frac{-2}{3}\right)$$

OPTION 3: linear regression

STAT; 1

L1	L2
-4	3
2	-1

2nd MODE

STAT

→ CALC

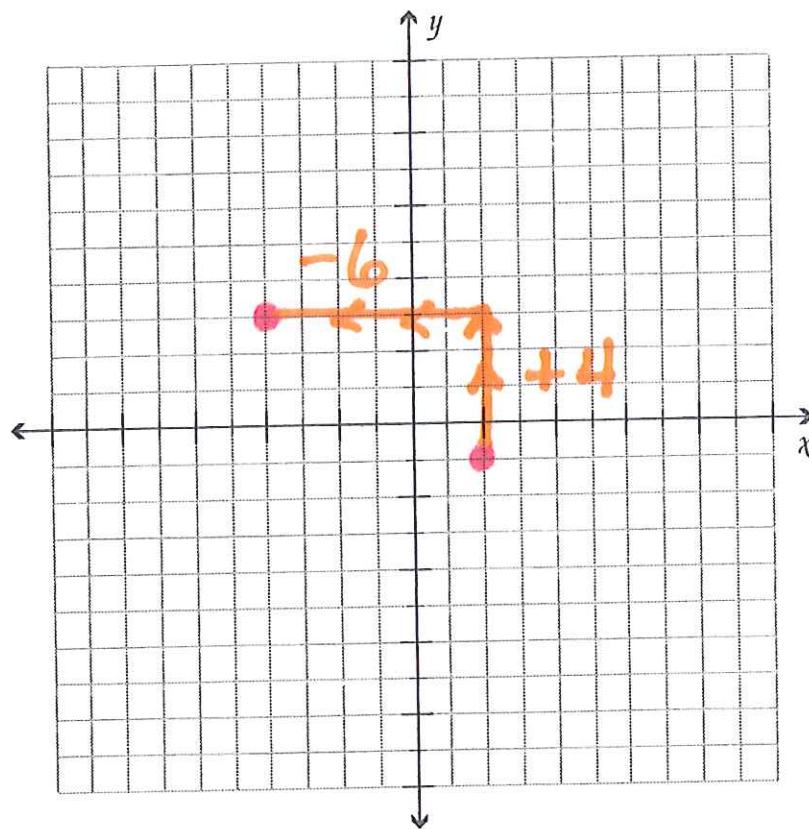
4

ENTER

"a" is
the slope

$$\left(\frac{-2}{3}\right)$$

OPTION 2: graph



$$\text{rise} = +4$$

$$\text{run} = -6$$

$$\frac{4}{-6} = -\frac{2}{3}$$

Finding Slope

Given an equation

1st \rightarrow solve for y

2nd \rightarrow identify x 's coefficient
(This is the slope.)

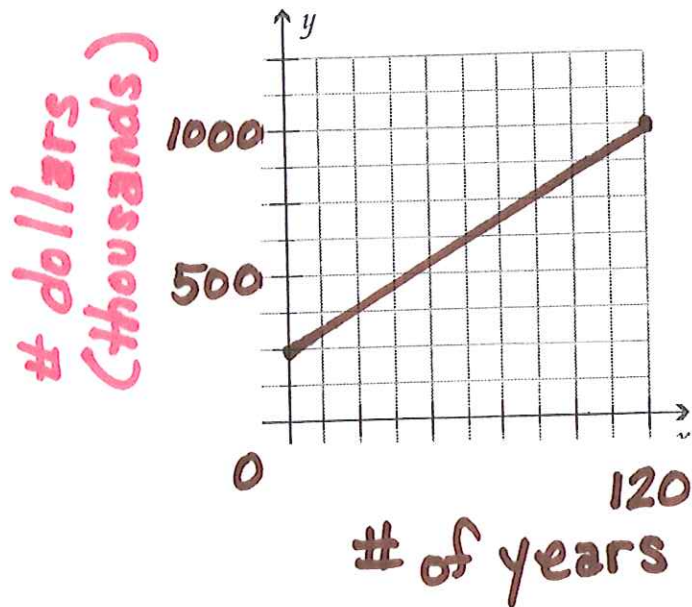
EX What is the slope of
 $y = 4 - 3x$?

-3

In applications, pay attention to:

- ① the scale on the x-axis
- ② the scale on the y-axis
- ③ the labels on the x-
and y-axis.

Interpret the slope.



$$\text{rise} \Rightarrow 1000 - 250 = 750$$

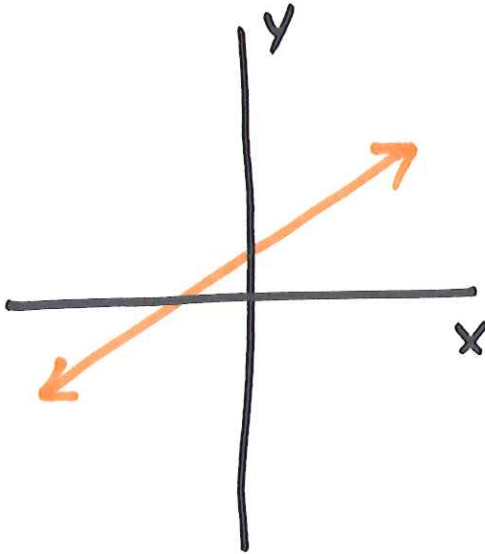
$$\text{run} \Rightarrow 120 - 0 = 120$$

$$\text{slope} = \frac{750,000}{120}$$

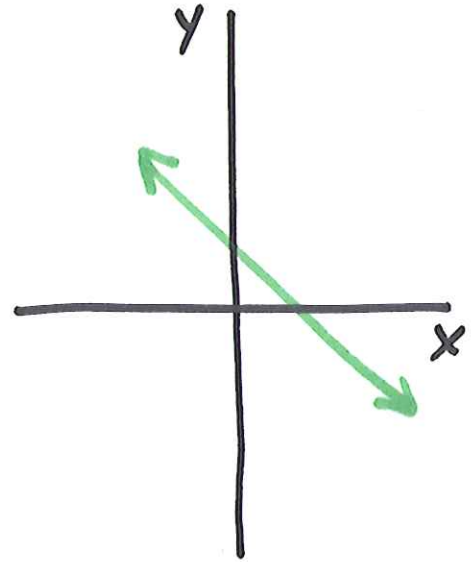
$$= 6250 \text{ dollars per year}$$

Types of Slopes

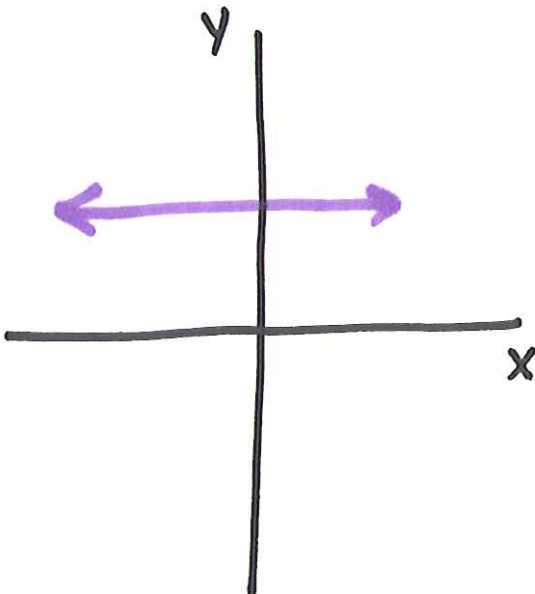
POSITIVE



NEGATIVE



ZERO



UNDEFINED

