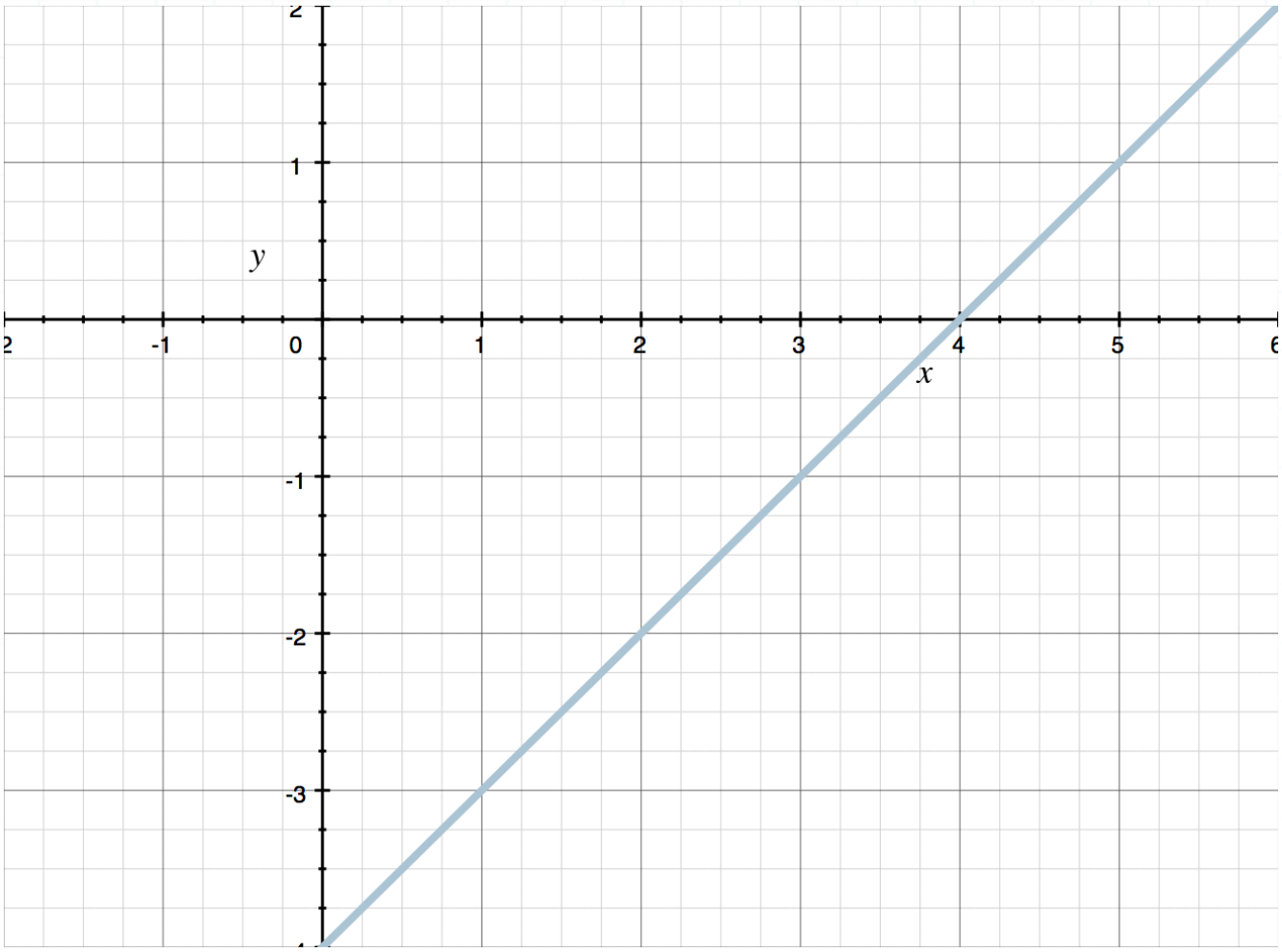
Topic: Slope

Question: What is the slope of the line?



Answer choices:

A 1

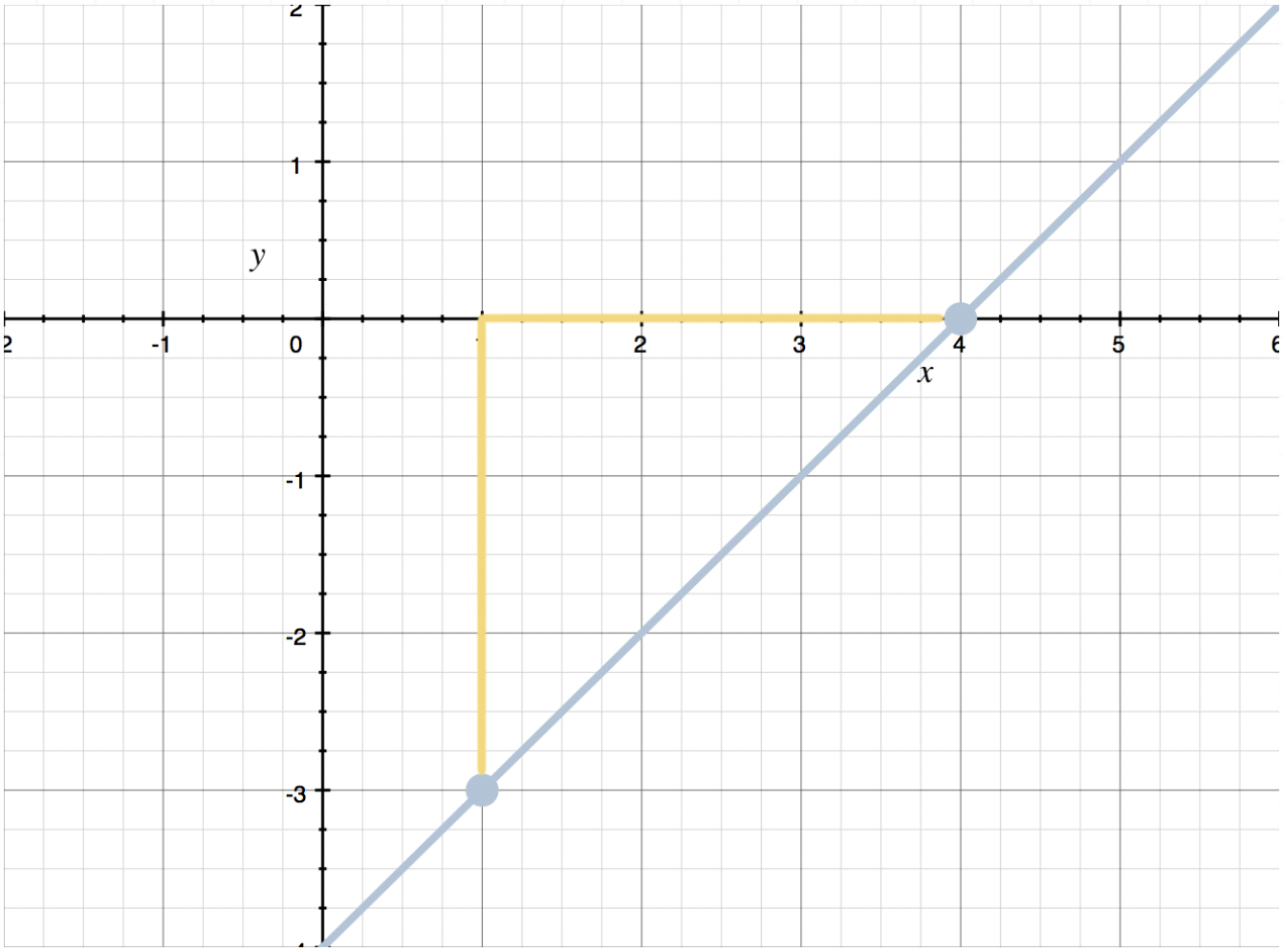
B 1.5

C 2

D 3

Solution: A

Any two points on the line can be used. If you use the two points shown, you will get a rise of 3 and a run of 3, for a slope of $3/3 = 1$.



Topic: Slope

Question: What is the slope of the line that goes through the points $(3, -2)$ and $(-7,3)$?

Answer choices:

A 1

B -1

C $\frac{1}{2}$

D $-\frac{1}{2}$

Solution: D

Use the equation

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

Plug in the given points.

$$m = \frac{-2 - 3}{3 - (-7)}$$

$$m = \frac{-5}{10}$$

$$m = -\frac{1}{2}$$

Topic: Slope

Question: Suppose a different line goes through each pair of points. Which pair of points would give the steepest slope?

Answer choices:

A $(3, -4)$ and $(7,0)$

B $(5,1)$ and $(6,4)$

C $(4,5)$ and $(3,0)$

D $(6,2)$ and $(1,1)$

Solution: C

You could plot each pair on a graph or you could calculate each slope. Here is the calculation method.

Use the equation

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

For answer choice A,

$$m = \frac{-4 - 0}{3 - 7} = \frac{-4}{-4} = 1$$

For answer choice B,

$$m = \frac{1 - 4}{5 - 6} = \frac{-3}{-1} = 3$$

For answer choice C,

$$m = \frac{5 - 0}{4 - 3} = \frac{5}{1} = 5$$

For answer choice D,

$$m = \frac{2 - 1}{6 - 1} = \frac{1}{5}$$

The steepest slope is 5, answer choice C.