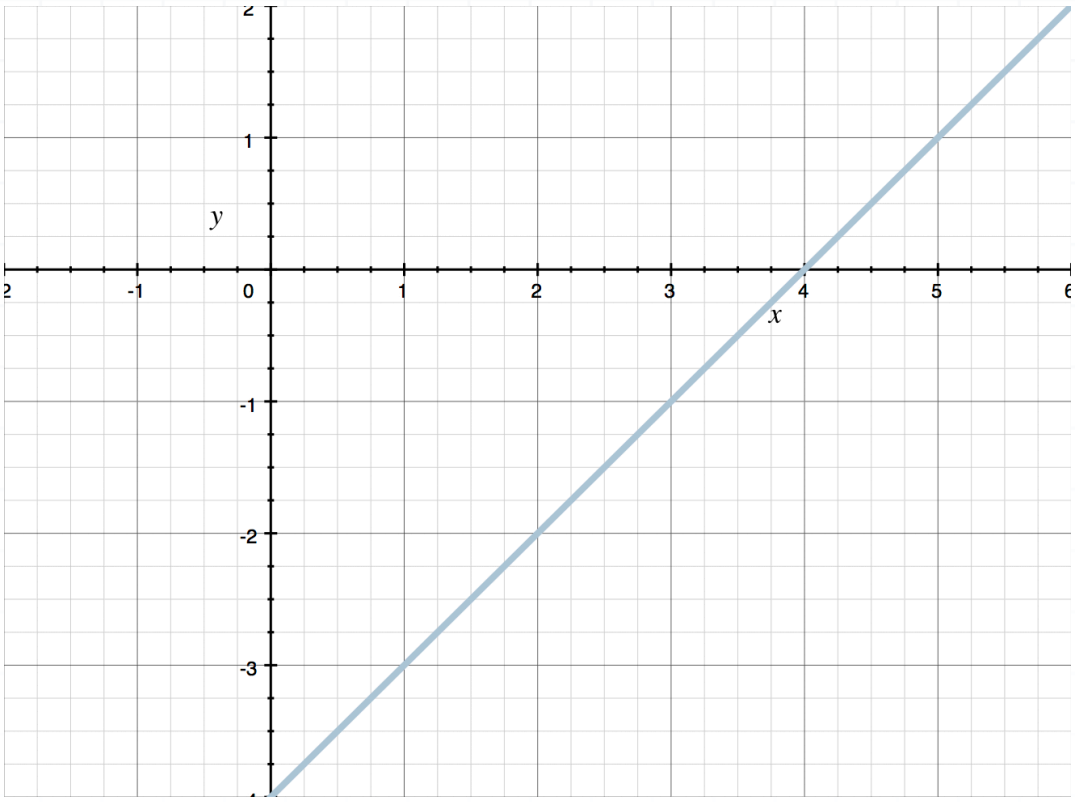
Topic: Slope

Question: What is the slope of the line?



Answer choices:

A 1

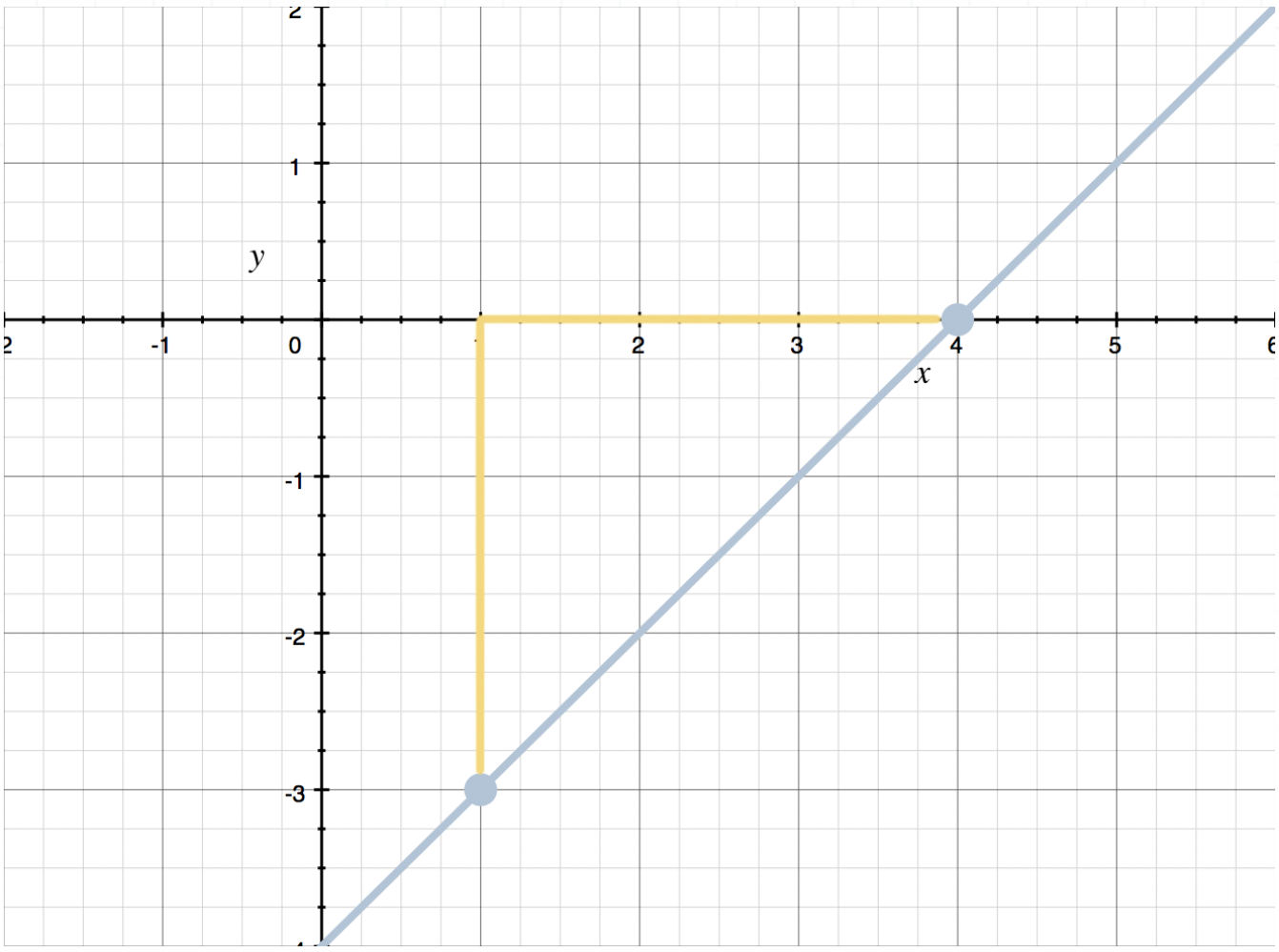
B 1.5

C 2

D 3

Solution: A

Any two points on the line can be used to find the slope. If we use the two points $(1, -3)$ and $(4,0)$, we'll 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 passes through the points $(3, -2)$ and $(-7,3)$?

Answer choices:

A 1

B -1

C $\frac{1}{2}$

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

Solution: D

Plug the given points into the slope equation,

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

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

then simplify.

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

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

Topic: Slope

Question: If each answer choice gives a pair of points on a line, which line has 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

The slope between the points in answer choice A is

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

The slope between the points in answer choice B is

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

The slope between the points in answer choice C is

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

The slope between the points in answer choice D is

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

The slope is largest in answer choice C, which means the line that passes through those points is steeper than the lines given in any of the other answer choices.