

The Graph of Linear Functions

1 A line passes through the points $(-3, -6)$ and $(4, 2)$. What is the slope of the line?

A. $-\frac{8}{7}$

B. $-\frac{7}{8}$

C. $\frac{7}{8}$

D. $\frac{8}{7}$

2 A line passes through the points $(3, 3)$, $(3, 5)$. What is the slope of the line?

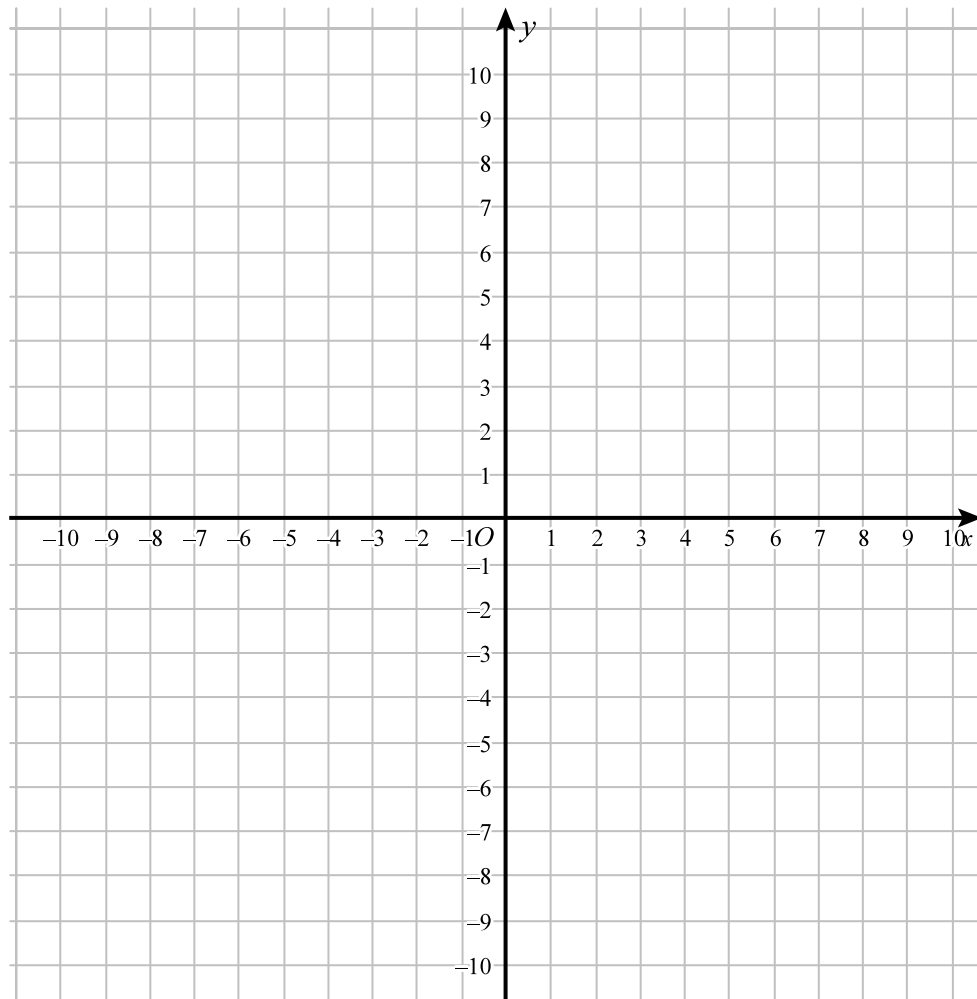
A. 1

B. -1

C. 0

D. Undefined

- 3 Draw the line passing through the points $C(10, 8)$ and $D(4, -4)$. The slope of this line is _____.



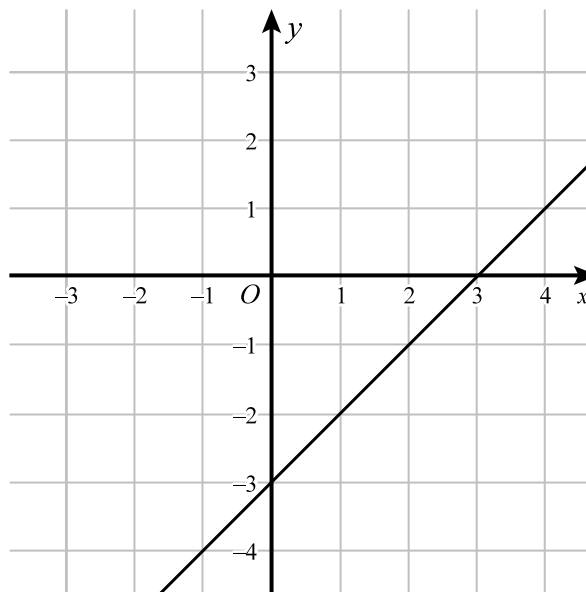
- 4 The table of values shows a linear relationship between x and y .

x	y
-6	16
0	5
3	$-\frac{1}{2}$
6	-6

What is the slope of this linear equation?

- A. $-\frac{11}{6}$ B. $-\frac{6}{11}$ C. $\frac{6}{11}$ D. $\frac{11}{6}$

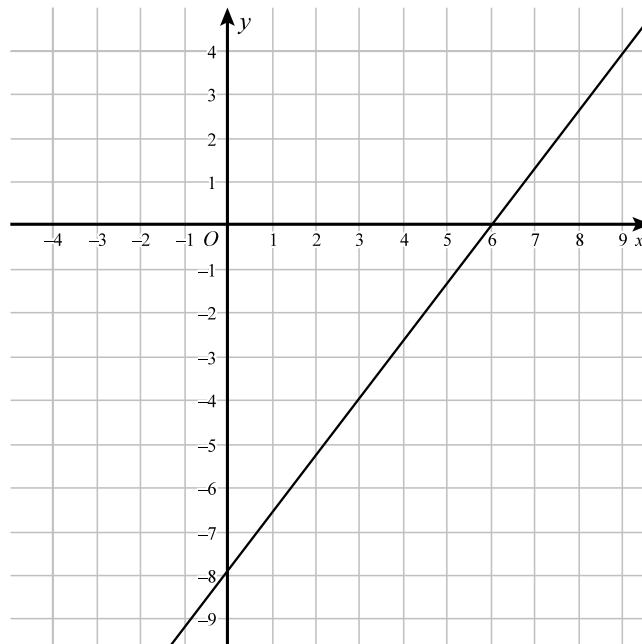
- 5 The graph of a linear function, g , is shown. What is the zero of g ?



- A. -3 B. 0 C. 3 D. 4

6

The graph of a linear function, h , is shown. What is the zero of h ?



A. -8

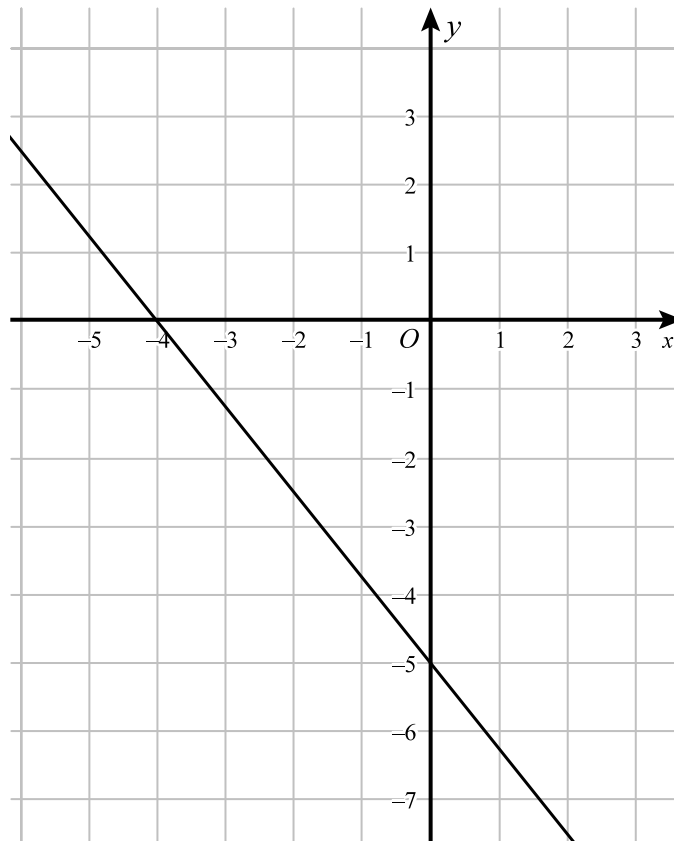
B. 6

C. 8

D. -6

7

The graph of a linear function, g , is shown. What is the zero of g ?



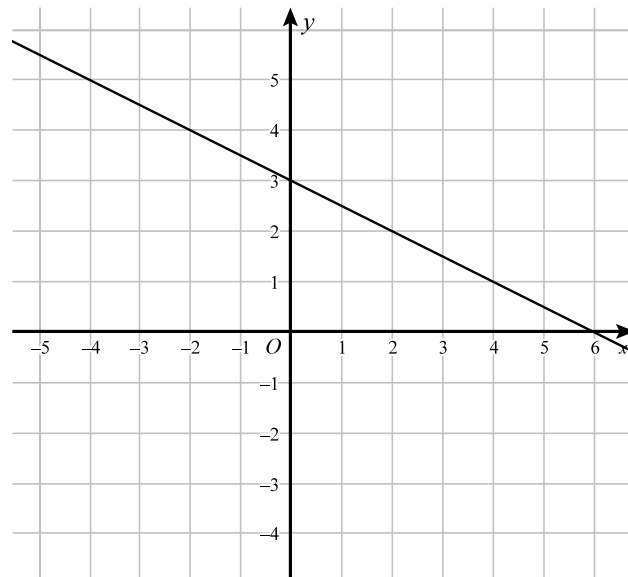
A. -5

B. -4

C. 4

D. 5

- 8 The graph of a linear function is shown on the grid.

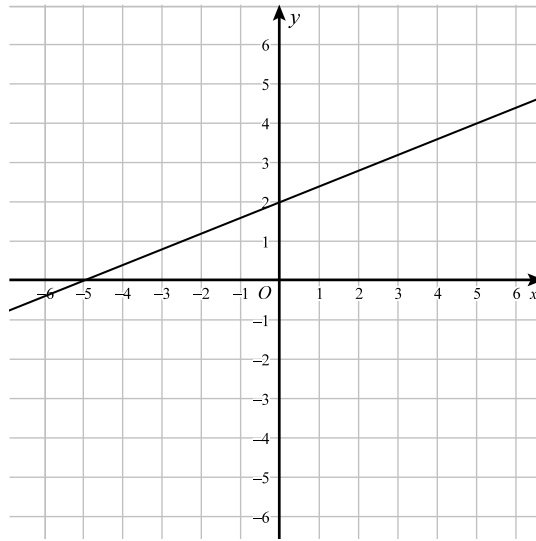


What value best represents the y -intercept of the line?

- A. $\frac{1}{2}$ B. 3 C. 6 D. 12

9

The graph of a linear function is shown on the grid.

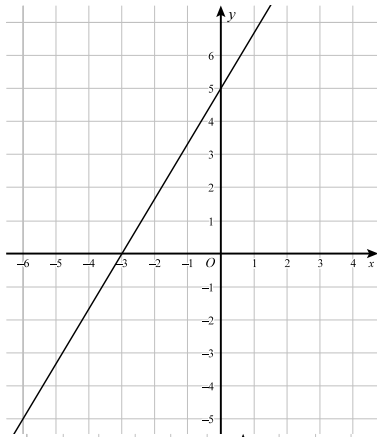


What are the x -intercept and the y -intercept of the line?

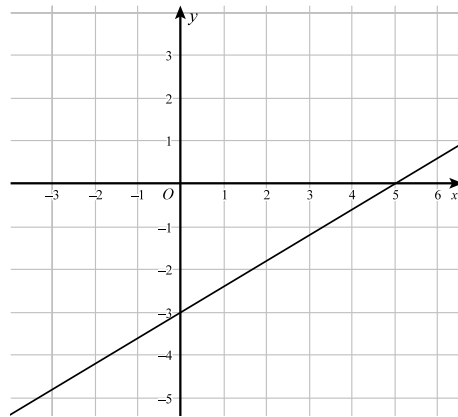
- A. x -intercept: $(-5, 0)$ B. x -intercept: $(-2, 0)$ C. x -intercept: $(2, 0)$ D. x -intercept: $(5, 0)$
- y -intercept: $(0, 2)$ y -intercept: $(0, 5)$ y -intercept: $(0, -5)$ y -intercept: $(0, -2)$

10 Linear function b has a zero of -3 and a y -intercept of 5 . Which graph best represents b ?

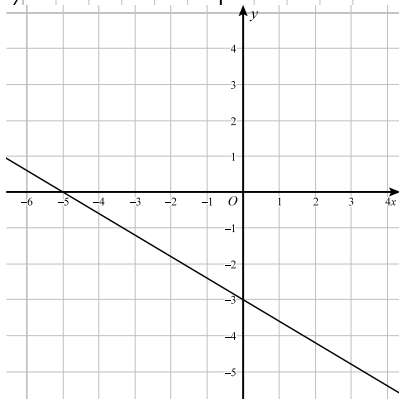
A.



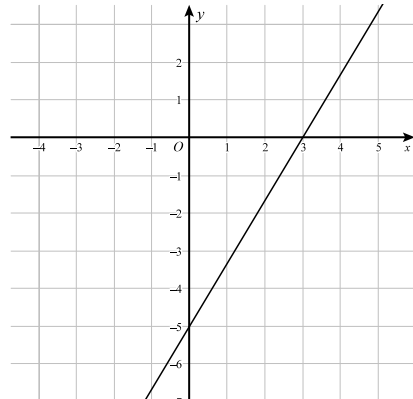
B.



C.



D.



The Graph of Linear Functions

1 A line passes through the points $(-3, -6)$ and $(4, 2)$. What is the slope of the line?

A. $-\frac{8}{7}$

B. $-\frac{7}{8}$

C. $\frac{7}{8}$

D. $\frac{8}{7}$

Answer D

Solution $\text{Slope} = \frac{y_1 - y_2}{x_1 - x_2} = \frac{2 - (-6)}{4 - (-3)} = \frac{8}{7}$

The answer is D.

2 A line passes through the points $(3, 3)$, $(3, 5)$. What is the slope of the line?

A. 1

B. -1

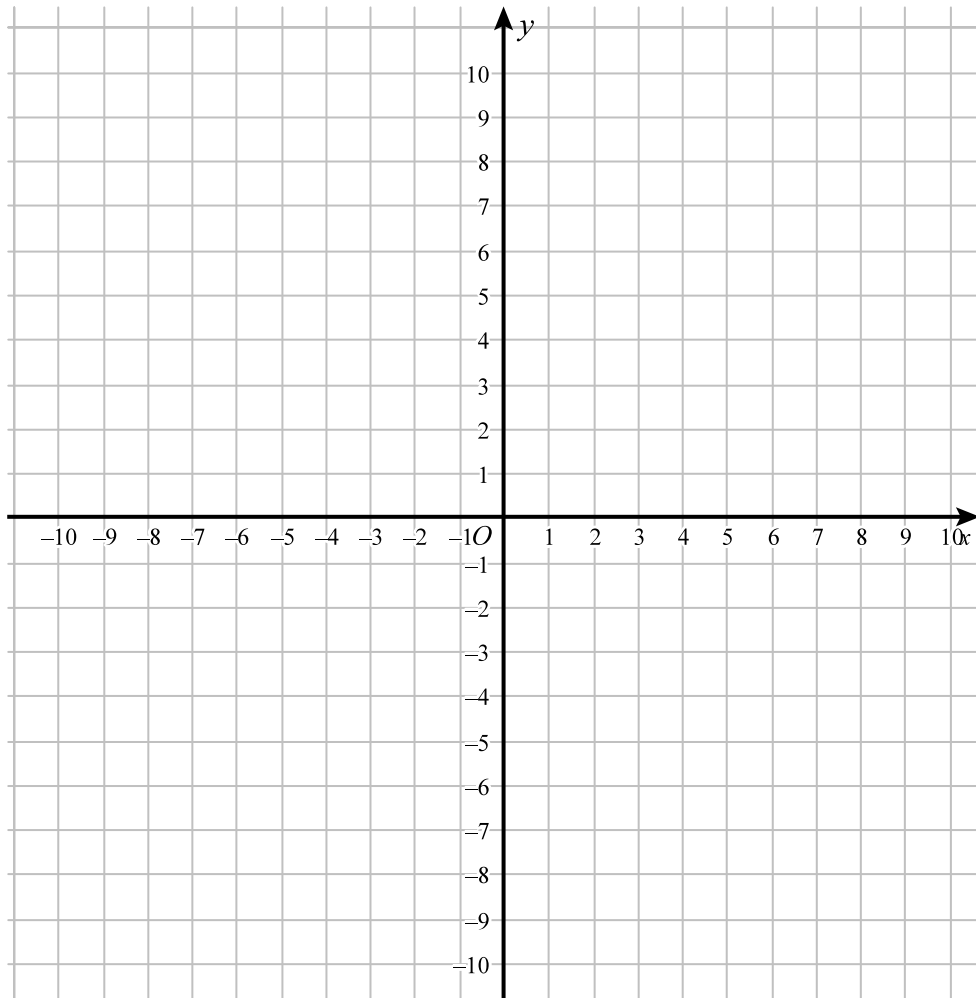
C. 0

D. Undefined

Answer D

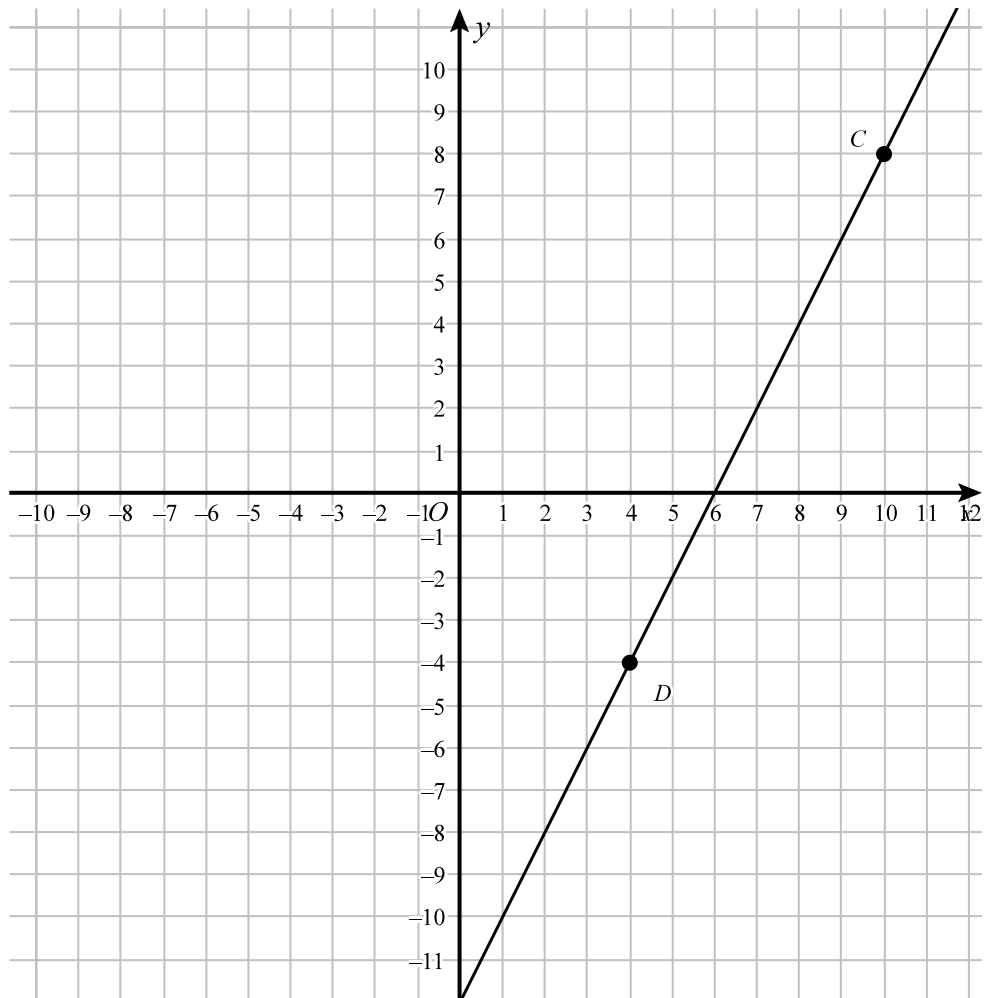
Solution A line passing through the points $(3, 3)$, $(3, 5)$ is $x = 3$. It is perpendicular to the x -axis and the slope is undefined.

3 Draw the line passing through the points $C(10, 8)$ and $D(4, -4)$. The slope of this line is _____.



Answer **2**

Solution



The slope is **2**.

- 4 The table of values shows a linear relationship between x and y .

x	y
-6	16
0	5
3	$-\frac{1}{2}$
6	-6

What is the slope of this linear equation?

- A. $-\frac{11}{6}$ B. $-\frac{6}{11}$ C. $\frac{6}{11}$ D. $\frac{11}{6}$

Answer A

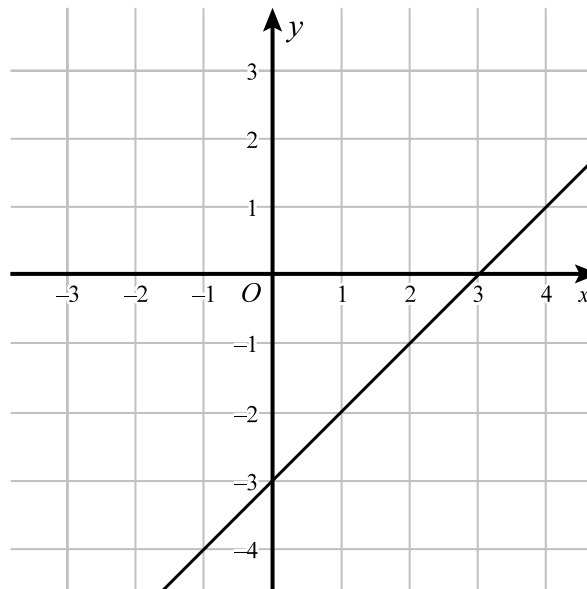
Solution

By selecting any two points from the table, the equation of the line is $y = -\frac{11}{6}x + 5$.

Therefore, the slope is $-\frac{11}{6}$.

The answer is **A**.

5 The graph of a linear function, g , is shown. What is the zero of g ?



A. -3

B. 0

C. 3

D. 4

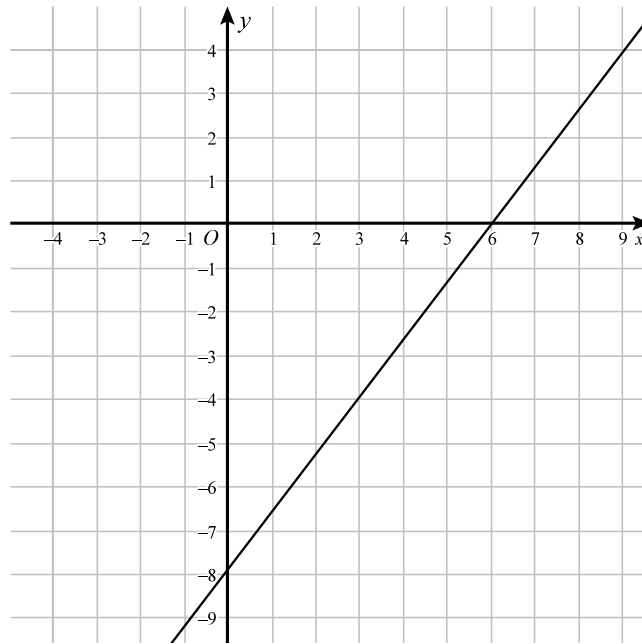
Answer C

Solution Line g intersects the x -axis at $(3, 0)$.

Thus, the zero of g is 3.

The answer is **C**.

6 The graph of a linear function, h , is shown. What is the zero of h ?



A. -8

B. 6

C. 8

D. -6

Answer B

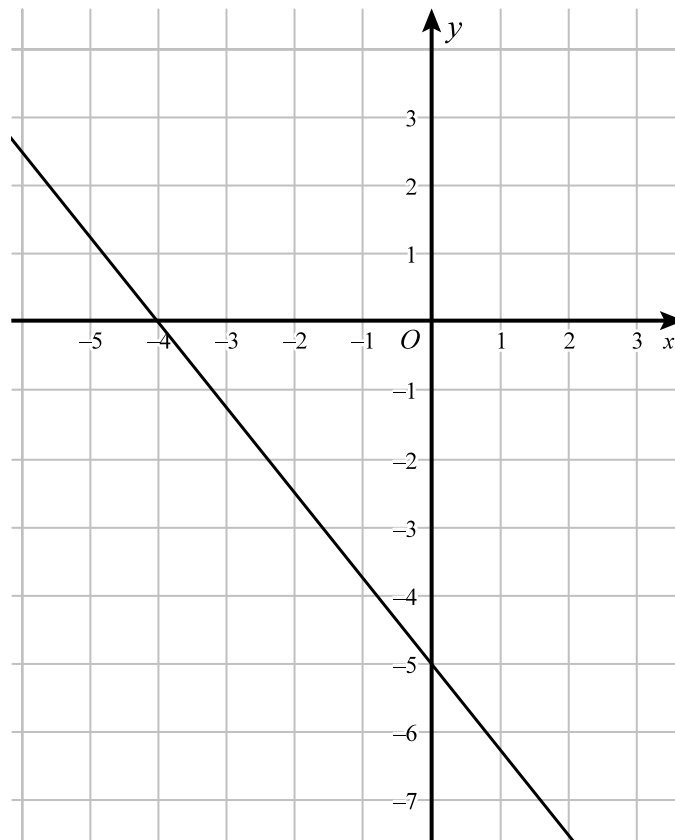
Solution Line h intersects the x -axis at $(6, 0)$.

Thus, the zero of h is 6 .

The answer is **B**.

7

The graph of a linear function, g , is shown. What is the zero of g ?



A. -5

B. -4

C. 4

D. 5

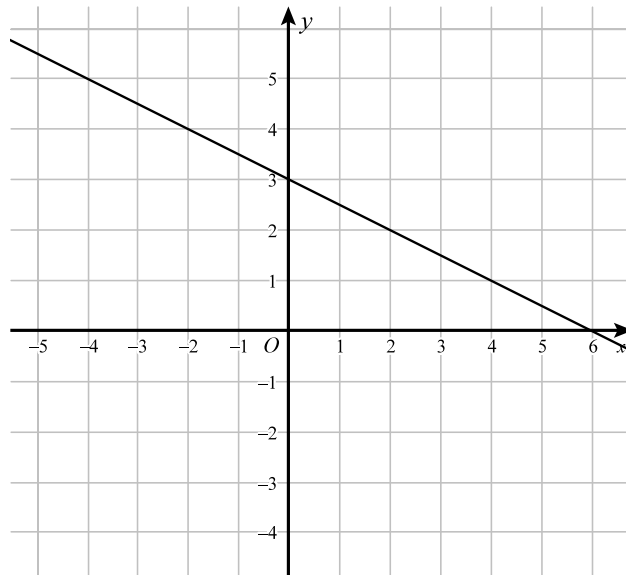
Answer B

Solution Line g intersects the x -axis at $(-4, 0)$.

Thus, the zero of g is -4 .

The answer is **B**.

8 The graph of a linear function is shown on the grid.



What value best represents the y -intercept of the line?

- A. $\frac{1}{2}$ B. 3 C. 6 D. 12

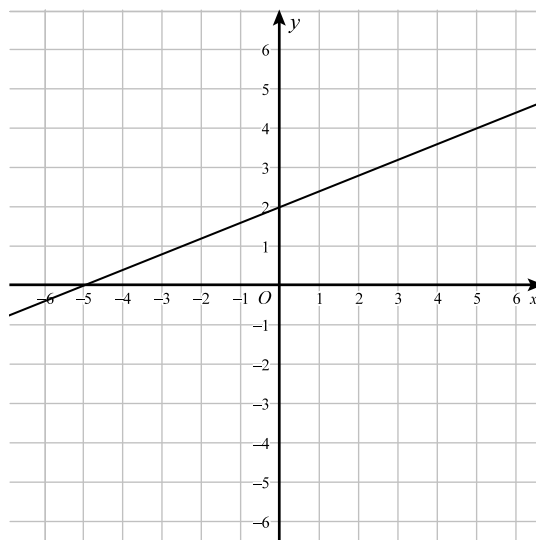
Answer B

Solution The line intersects the y -axis at the point $(0, 3)$.

Thus, the y -intercept of the line is 3.

The answer is B.

9 The graph of a linear function is shown on the grid.



What are the x -intercept and the y -intercept of the line?

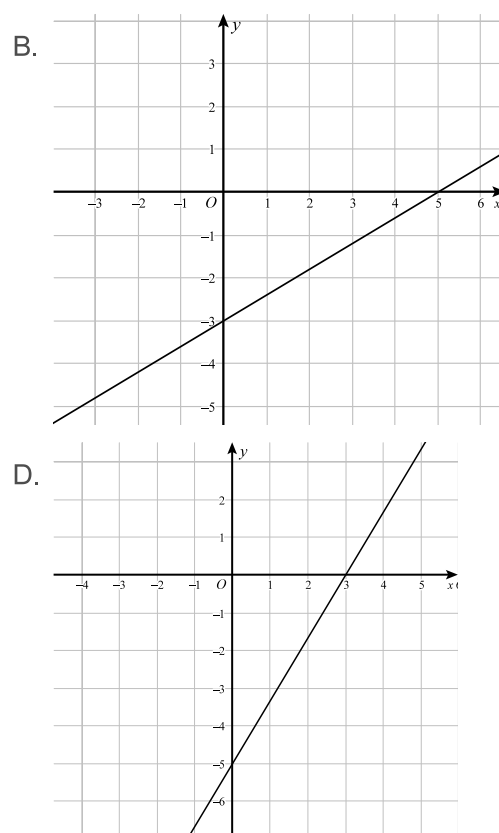
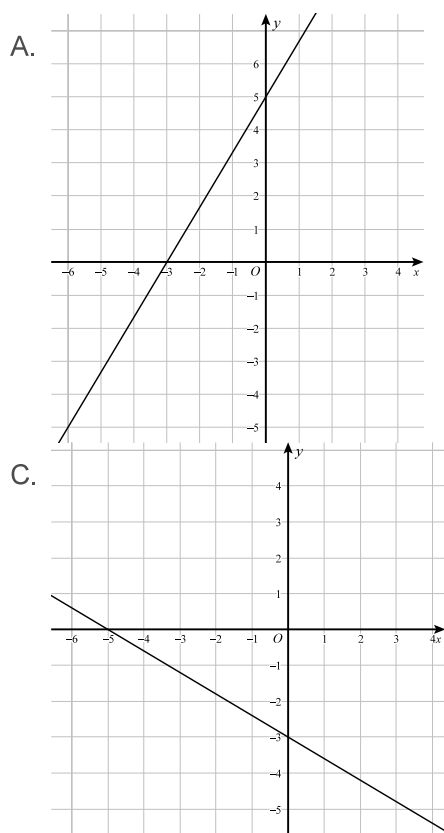
- A. x -intercept: $(-5, 0)$ B. x -intercept: $(-2, 0)$ C. x -intercept: $(2, 0)$ D. x -intercept: $(5, 0)$
- y -intercept: $(0, 2)$ y -intercept: $(0, 5)$ y -intercept: $(0, -5)$ y -intercept: $(0, -2)$

Answer A

Solution The line intersects the x -axis at $(-5, 0)$, and the y -axis at $(0, 2)$.

The answer is **A**.

- 10 Linear function b has a zero of -3 and a y -intercept of 5 . Which graph best represents b ?



Answer A

Solution A zero of -3 means the line is passing $(-3, 0)$;

A y -intercept of 5 means the line is passing $(0, 5)$;

The answer is **A**.