

QUESTION 1



Yasmine is finding the slope of the line that passes through $(-1, 6)$ and $(2, 5)$. Determine in which step she made an error. Explain your reasoning.

Yasmine's answer.

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

$$\text{step 2: } = \frac{-1}{-3}$$

$$\text{step 3: } = \frac{1}{3}$$

☐ Step 1; She divided run by rise

☐ Step 3; she did not divide correctly. The answer is -3 .

☒ Step 1; she reversed the order of the x -coordinates in the formula.



☐ Step 2; she did not perform the subtraction process correctly.

QUESTION 2



A line with a slope of 4 passes through the points $(x, 5)$ and $(-1, -7)$.

What is the value of x ?



$$\frac{1}{2}$$



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



$$-2$$



$$2$$



QUESTION 4



A line with a slope of

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

passes through the points $(-6, 2)$ and $(6, y)$. What is the value of y ?

Drag and drop the expressions to correctly complete the equations.

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

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

=

$$\frac{y-2}{6-(-6)} \quad \checkmark$$

$y =$

$$-4 \quad \checkmark$$

12

4

$\frac{1}{2}$

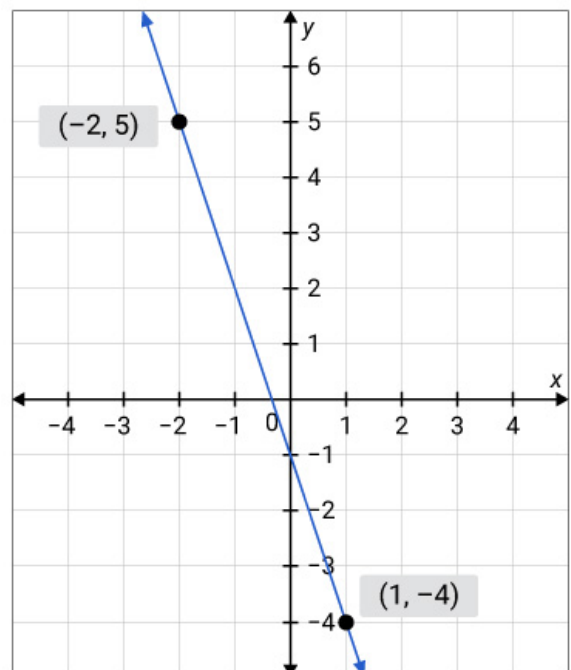
$\frac{6-(-6)}{y-2}$

QUESTION 6



The graph shows two points on a line.

What is the slope of the line?



-3



☐ 3

☐ $\frac{1}{3}$

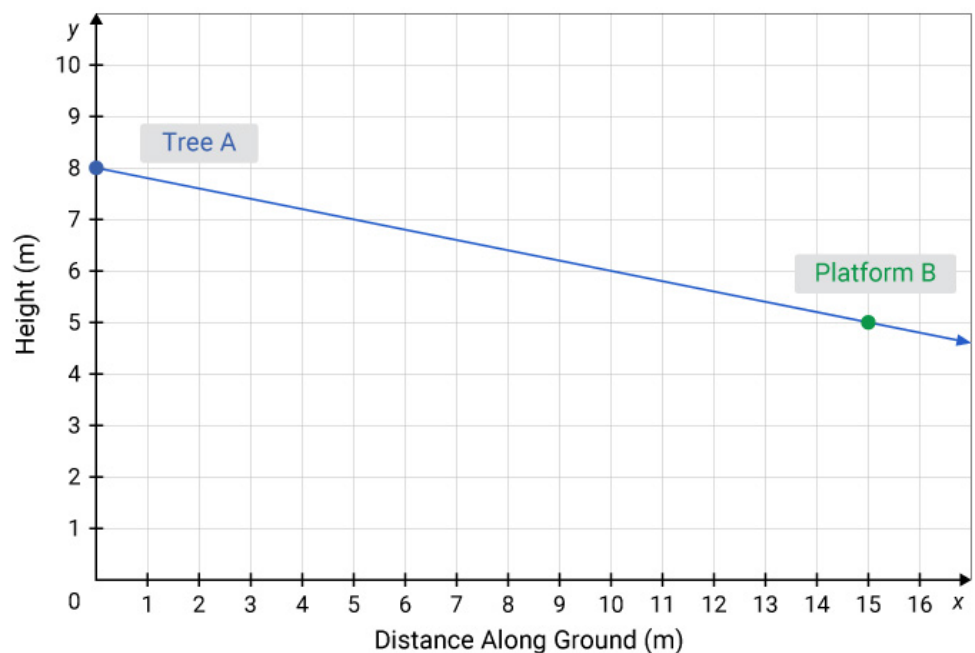
☐ $-\frac{1}{3}$

QUESTION 8



The graph shows a rope stretching between Tree A and Platform B that is 15 meters apart. The rope is tied 5 meters up the Platform B and 8 meters up the Tree A.

Assume the rope is taut so that it forms a straight line. What is the slope of the rope?





5



$\frac{1}{5}$



-5



$-\frac{1}{5}$



QUESTION 15



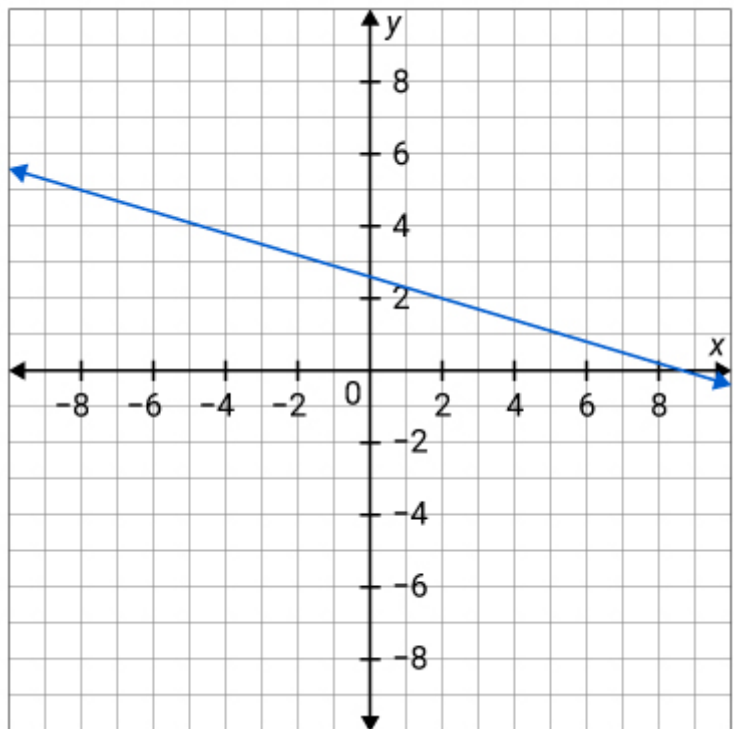
What is the slope of the line shown on this graph?

Select the correct answer from the drop-down menu.

The slope is

$m =$

$-\frac{3}{10}$ ✓ ▼



QUESTION 16



What is the slope of the line shown on this graph?
Drag and drop your answer to correctly complete the sentence.
The slope is
 $m =$

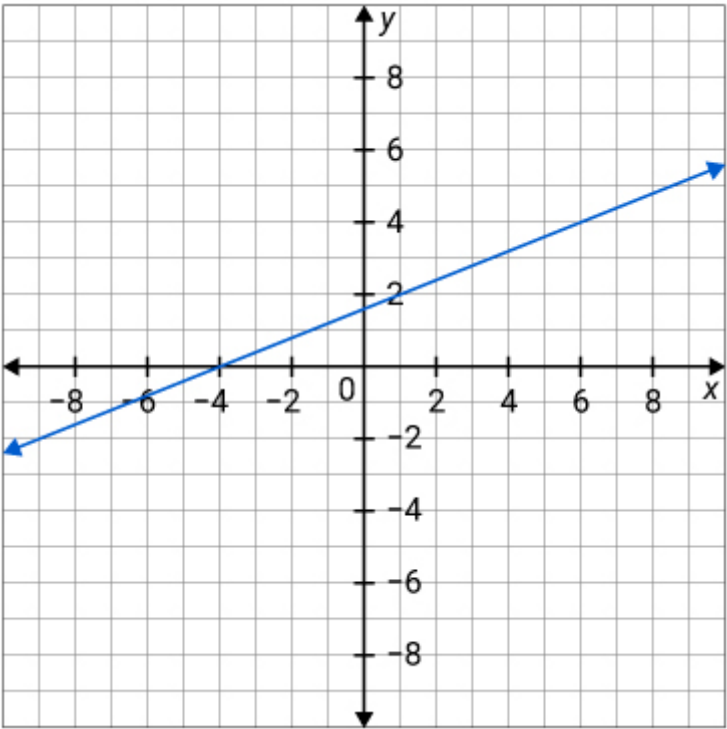
$\frac{2}{5}$

✓

$-\frac{2}{5}$

$\frac{5}{2}$

$-\frac{5}{2}$



QUESTION 17

▶

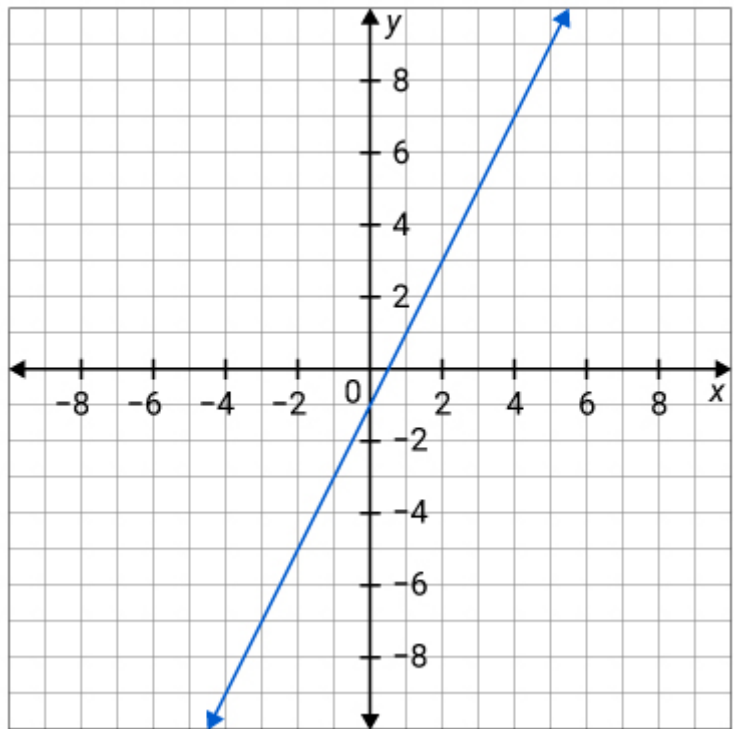
Determine the slope of the line.

Select the correct answer from the drop-down menu.

The slope is
 $m =$

2

✓ ▼



QUESTION 18



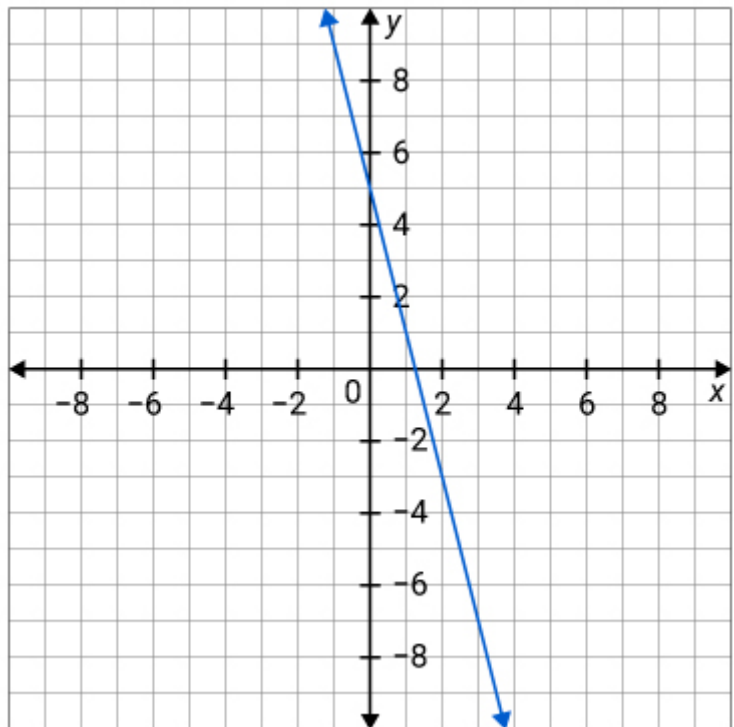
Calculate the slope of the line shown on this graph.

Enter your answer in the space provided.

The slope is

$m =$

- 4



QUESTION 19

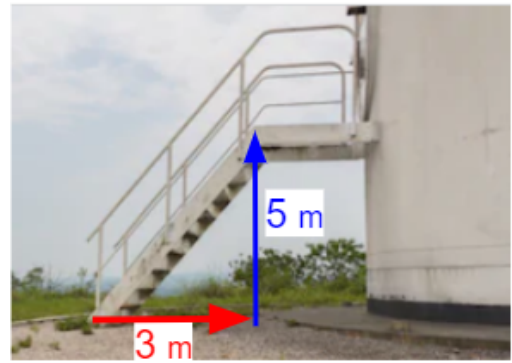


Determine the slope of the stairs.

Select your answer from the drop-down menu.

The slope of the stairs is

$$\frac{5}{3}$$

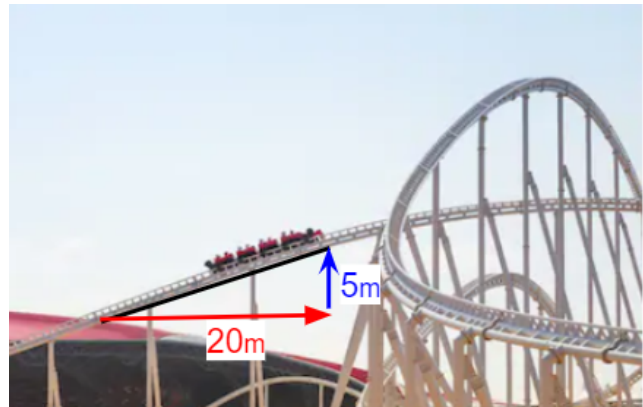


QUESTION 20



Formula Rossa, at Ferrari World in Abu Dhabi, is the fastest roller coaster in the world.

Select two correct statements about the section of the track shown in the picture.

☐

The slope of the track is

$$-4$$

.

☐

The slope of the track is negative.

☒

The slope of the track is positive.

☐

The slope of the track is

$$-\frac{1}{4}$$

.

☐

The slope of the track is

☐

$$\frac{1}{5}$$

☒

The slope of the track is

$$\frac{1}{4}$$



QUESTION 21



Nasser wants to climb **up** the ladder, but he wants to know the slope first.

Select your answer from the drop-down menu.

The slope of the ladder is

11



QUESTION 22



Use the slope formula to find the slope of the line through the points $(-8, 0)$ and $(4, 3)$.

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

- Drag and drop the expressions to correctly complete the equation.
- Drag and drop the simplified slope into the last box.

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

$$\frac{3 - 0}{4 - (-8)} \quad \checkmark$$

=

$$\frac{1}{4} \quad \checkmark$$

8

$$\frac{4 - (-8)}{3 - 0}$$

$$\frac{1}{8}$$

$$\frac{0 - (-8)}{3 - 4}$$

4

QUESTION 23



Ahmed believes that the slope of any vertical line is undefined, because the difference in the y -values is always 0, and multiplying by 0 is undefined.

Is he correct? Explain your reasoning.



He is wrong; the slope of a vertical line is undefined because the difference in the x and y -values is always 0, and dividing 0 by 0 is undefined.



He is wrong; the slope of a vertical line is undefined because the difference in the y -values is always 0, and multiplying by 0 is undefined.



He is wrong; the slope of a vertical line is undefined because the difference in the x -values is always 0, and dividing by 0 is undefined.



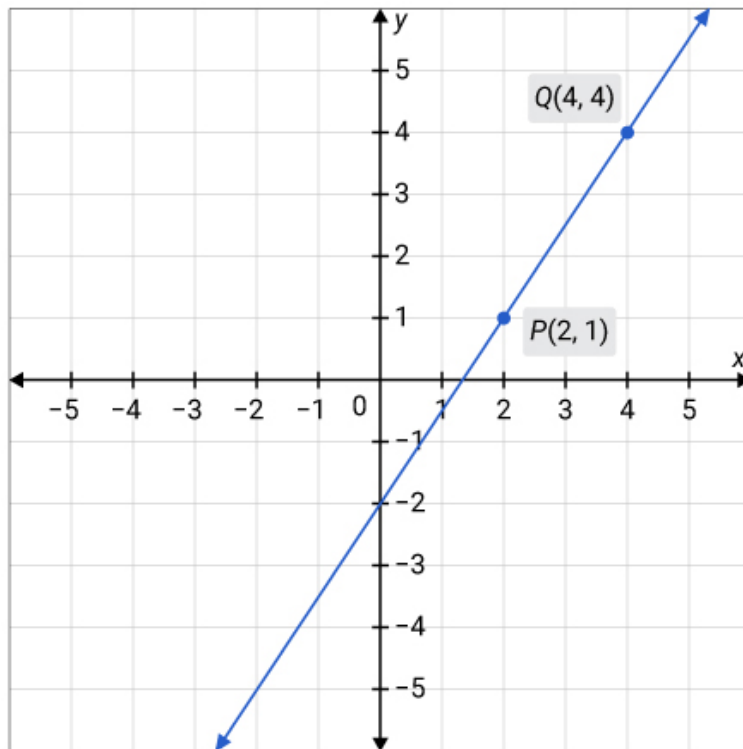


He is correct; the slope of a vertical line is undefined, because the difference in the y -values is always 0, and dividing 0 by any number gives an undefined value.

QUESTION 28



What is the slope of the line graphed on the coordinate plane?



$$\frac{3}{2}$$



$$-\frac{2}{3}$$



$$3$$

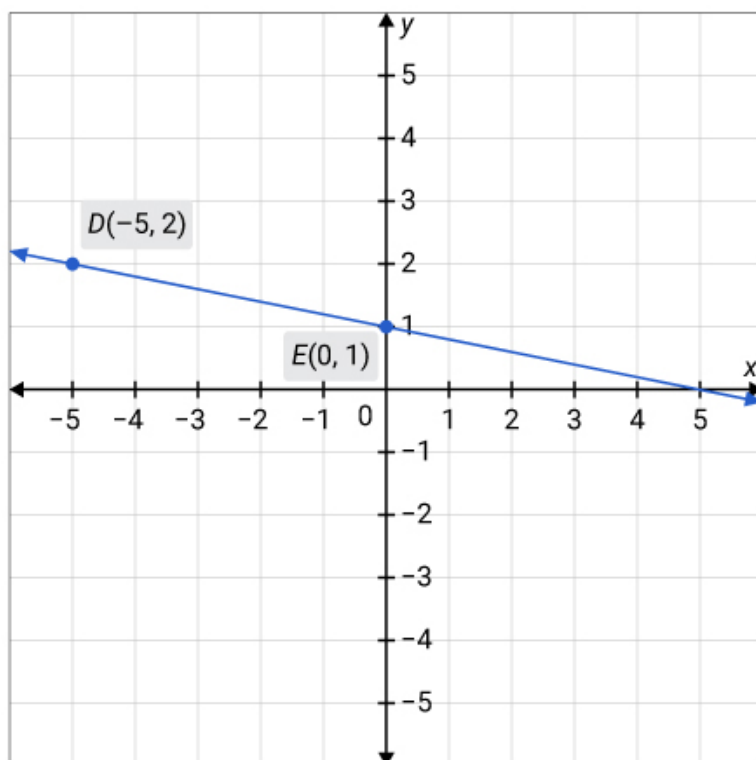
☐ $-\frac{1}{2}$

☐ $\frac{2}{3}$

QUESTION 29



What is the slope of the line graphed on the coordinate plane?



☒ $-\frac{1}{5}$



☐ -5

☐ $\frac{1}{5}$

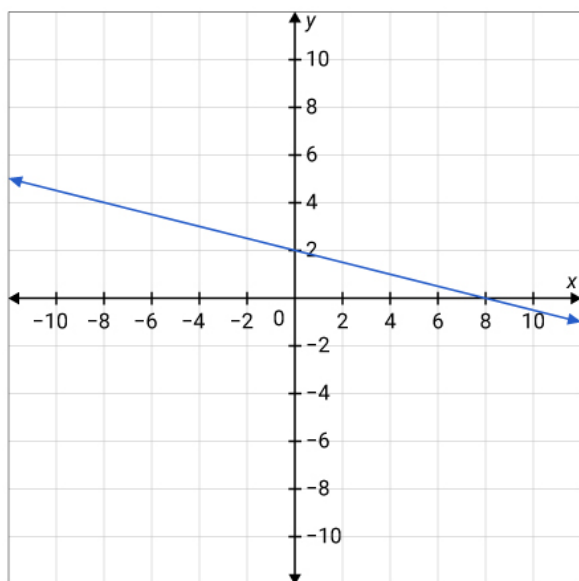
☐ 5

QUESTION 30



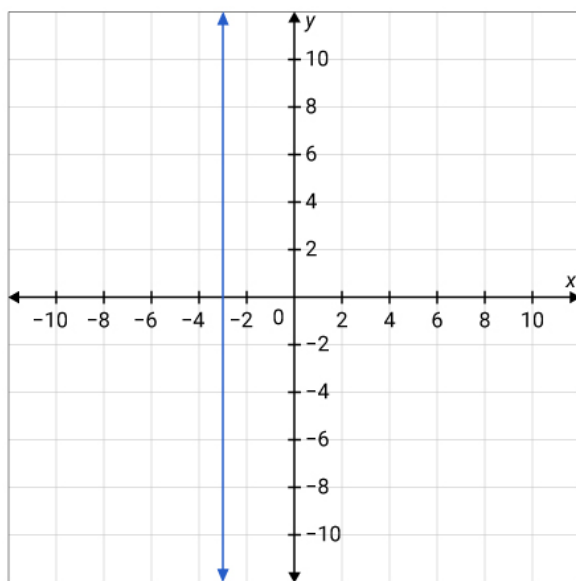
Identify each slope as positive, negative, zero, or undefined.

Drag and drop the answers to correctly complete the sentences.



The slope is

negative



The slope is

undefined



positive

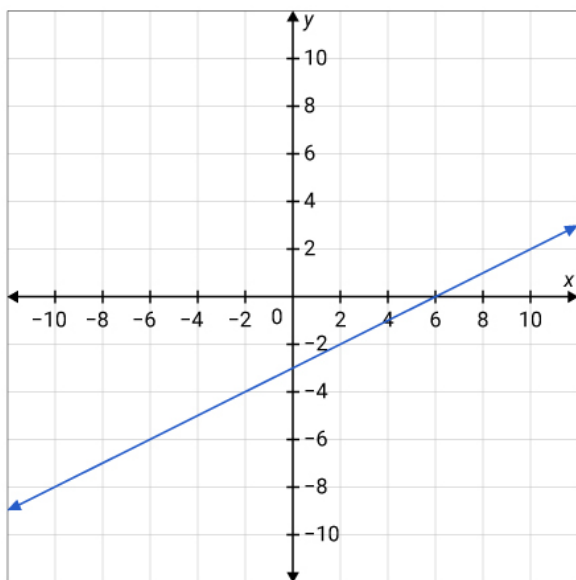
zero

QUESTION 31



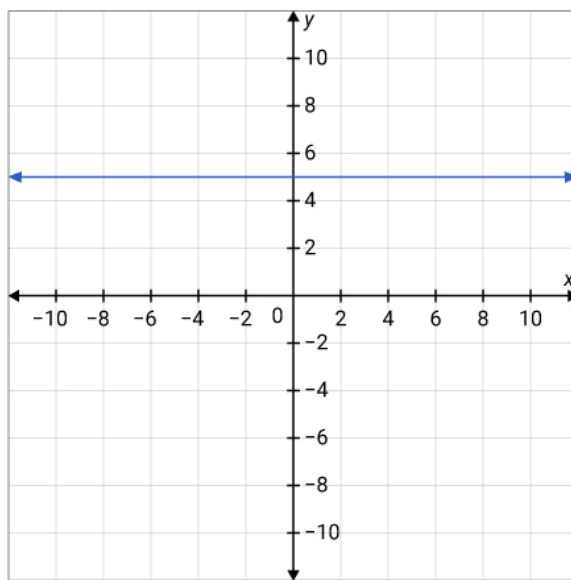
Identify each slope as positive, negative, zero, or undefined.

Drag and drop the answers to correctly complete the sentences.



The slope is

positive



The slope is

zero



negative

undefined