Check Your Readiness

Unit 4

Is it a function?

a. Decide if the relationship between each pair of input and output can be seen as a function.

	input	output	a function?
A.	month of the year	number of days in the month	
B.	number of days in a month	month of the year	
C.	weight in kilograms	weight in pounds	
D.	weight in pounds	weight in kilograms	
E.	student's age	student's shoe size	
F.	your height in inches	your age	

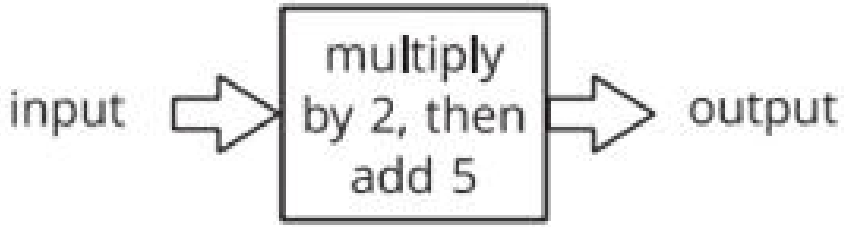
Students, write your response!

Explain

What makes an input/output relationship NOT a function?

Complete the table.

Complete the input-output table for the function machine.



input	output	
-1		A.
0		B.
$\frac{1}{2}$		C.
3		D.

Which points are on the graph?

Which points are on the graph of the function defined by $y = 2x + 3$?

A. $(-4, 3)$

B. $(-1, 1)$

C. $(0, 0)$

D. $(2, 7)$

E. $(3, 9)$

F. $(3, 12)$

G. $(4.5, 12)$

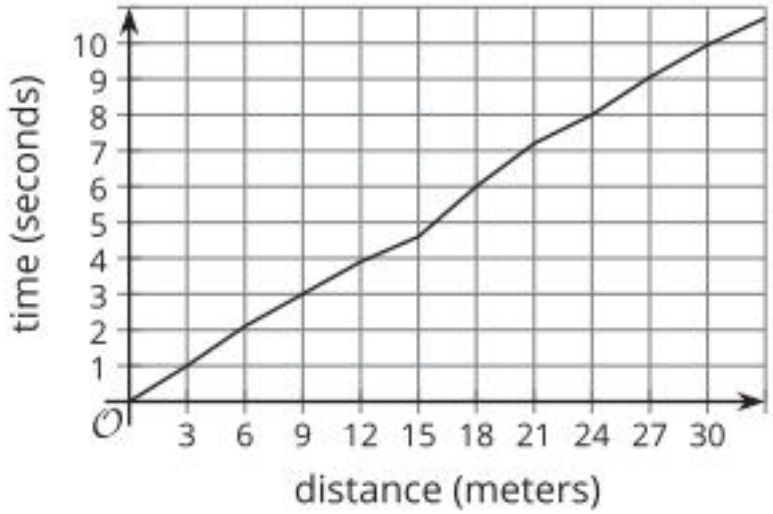
Students, write your response!

Explain

How did you determine if each point is on the graph of the function?

How long? How far? Meaning?

The graph shows the time, t, it took a runner to run different distances, d.



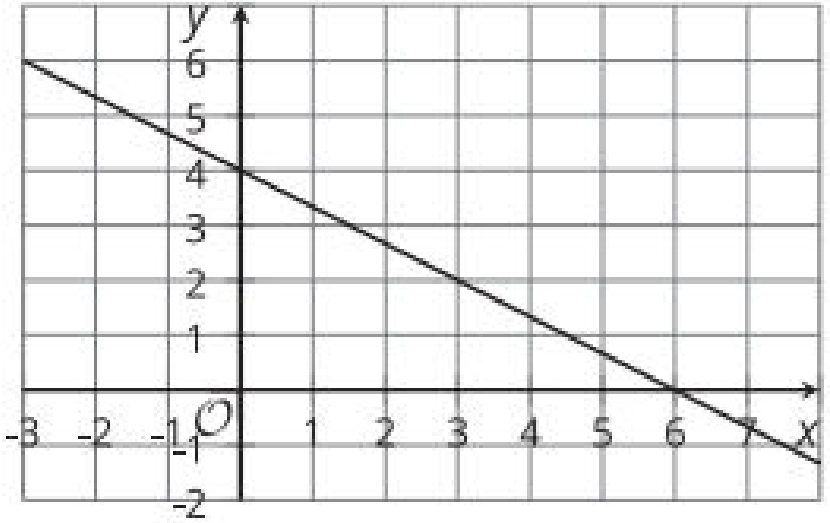
a. How long did it take the runner to run 9 meters?

b. How far did the runner go in 6 seconds?

c. What does the point $(24, 8)$ on the graph mean in this situation?

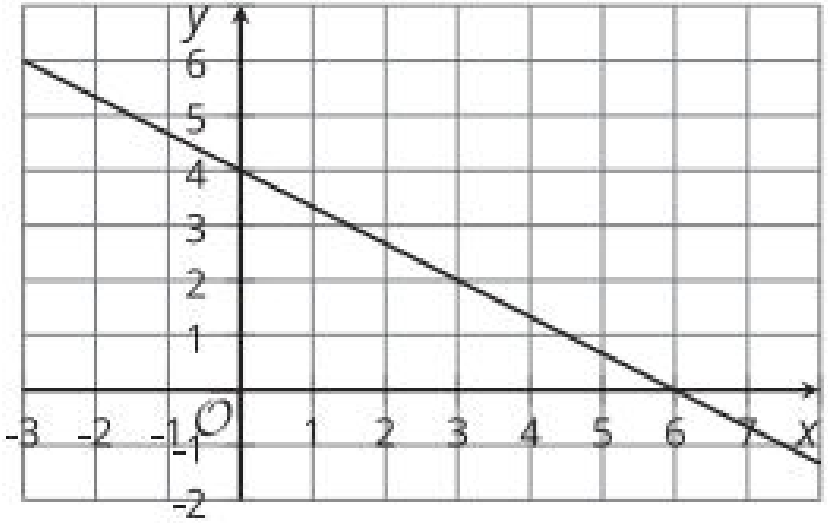
How is the line changing?

Find the slope of the line.



How is the line changing?

Find the slope of the line.



Mark up the graph to show how you see the slope!

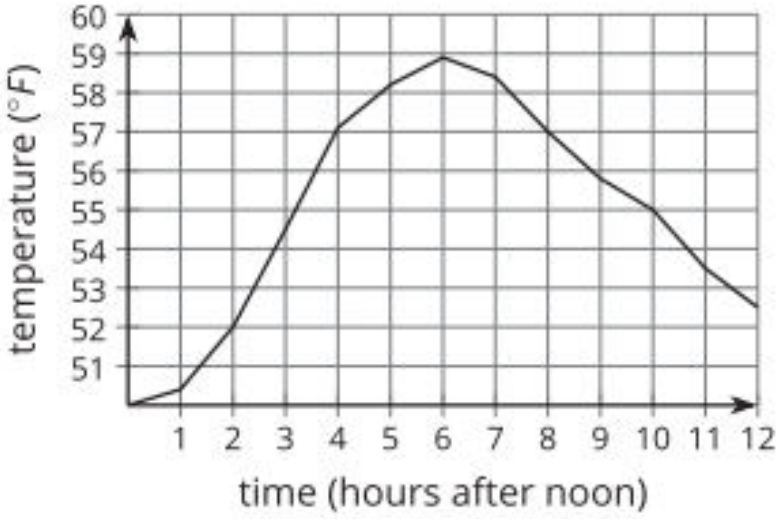
What temperature? When?

The graph shows the temperature between noon and midnight one day in a certain city.

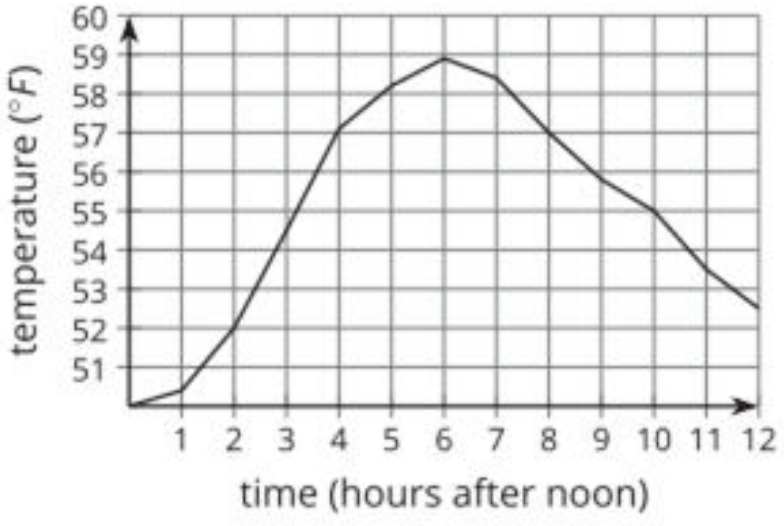
a. What was the temperature at 9 p.m.?

b. When was the temperature increasing?

c. When was the temperature 55 degrees?



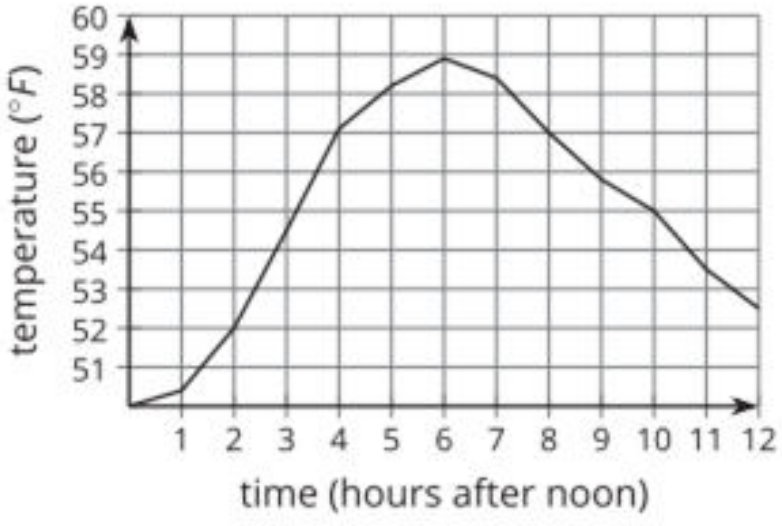
Is it a function?



Is temperature a function of time?

Students, write your response!

Is it a function?



Is time a function of temperature?

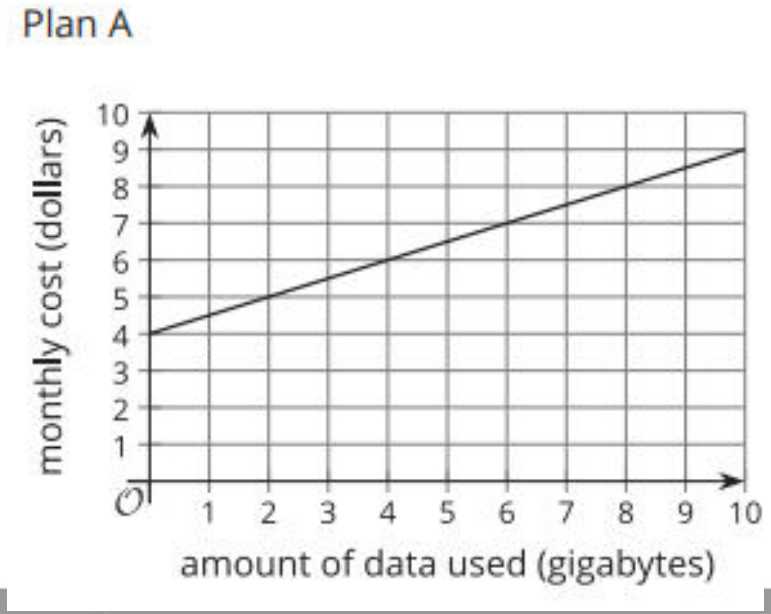
Write an equation to model the relationship.

Jada opens a 5-kg bag of dog food and fills her dog's dish with 0.25 kg of the content once a day. Write an equation for the amount of dog food left in the bag, W (kg), after she fills her dog's dish n times.

Students, write your response!

The graph shows the monthly cost for a video-streaming service.

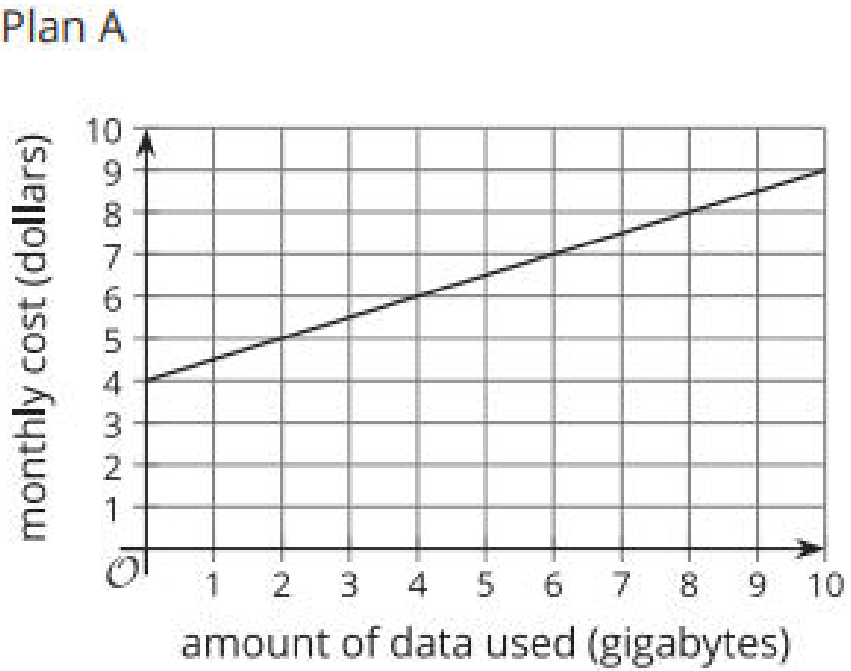
Describe how the cost is related to the amount of data used.



Students, write your response!

How cost is related to the amount of data used

Mark up the graph to show what you see!



The table shows the monthly cost for a video-streaming service.

Describe how the cost is related to the amount of data used.

Plan B

amount of data used (gigabytes)	monthly cost (dollars)
0	0
2	2.60
4	5.20
6	7.80
8	10.40

Students, write your response!

How cost is related to the amount of data used

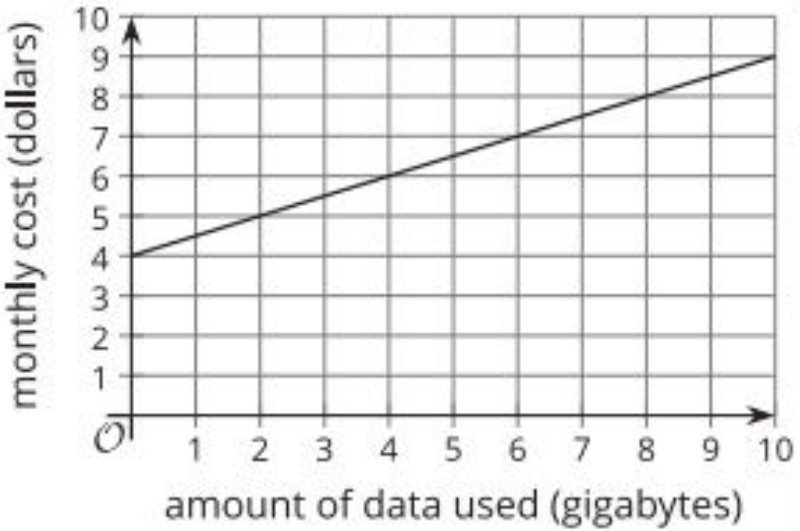
Mark up the table to show what you see!

Plan B

amount of data used (gigabytes)	monthly cost (dollars)
0	0
2	2.60
4	5.20
6	7.80
8	10.40

Which would you choose? Why?

Plan A

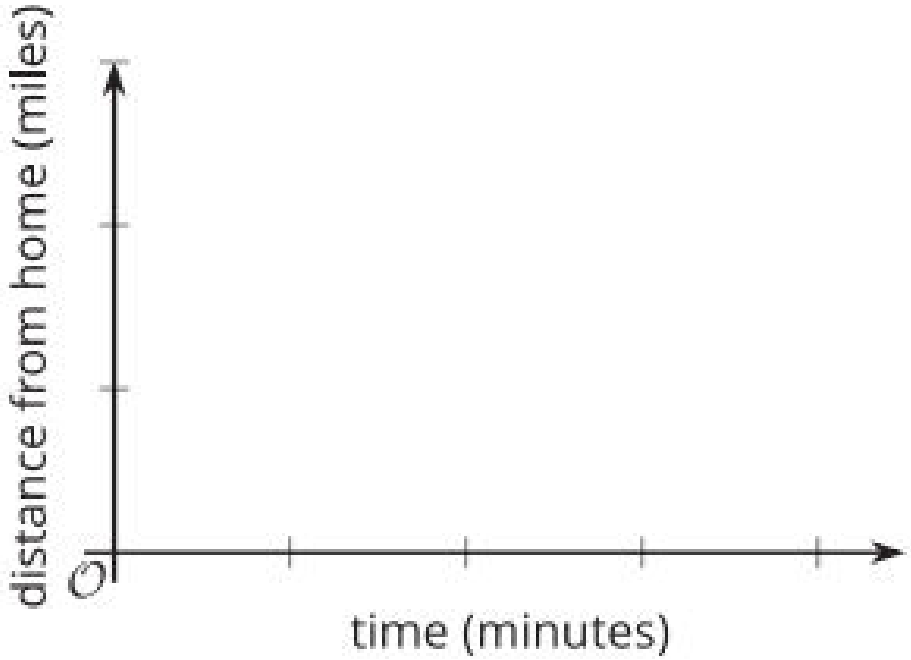


Plan B

amount of data used (gigabytes)	monthly cost (dollars)
0	0
2	2.60
4	5.20
6	7.80
8	10.40

Mai is going for a walk. She walks at a constant speed for 20 minutes. She takes a break for 5 minutes before turning around and walking back home. She walks faster than she did before.

Sketch a graph that represents Mai's distance from home (miles) as a function of time (minutes).

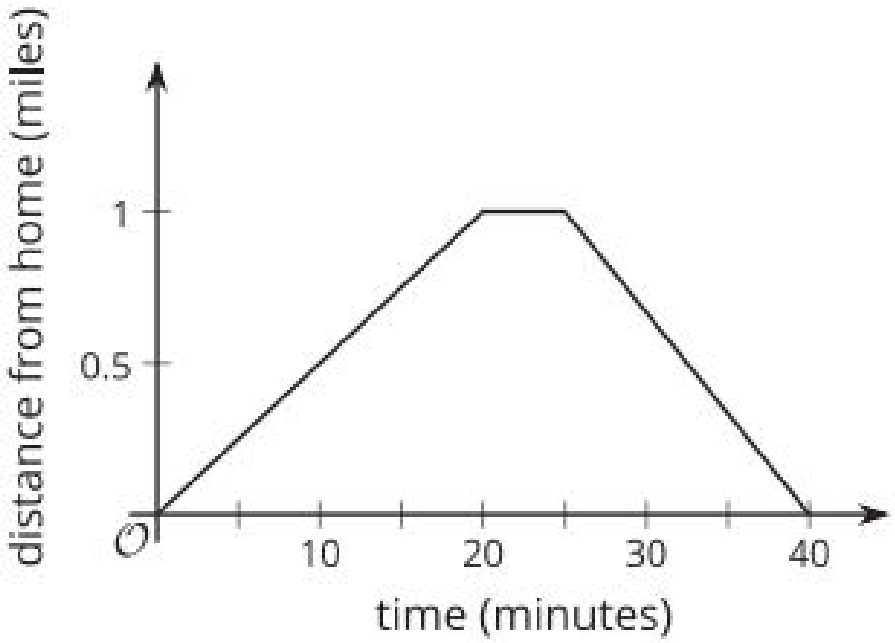


Students, draw anywhere on this slide!

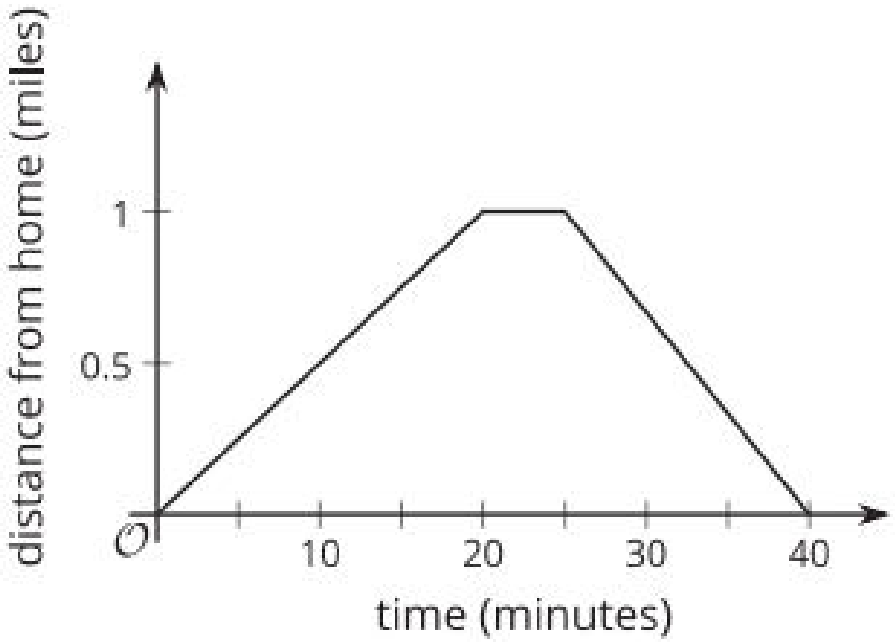
Explain

Describe the process of drawing your graph.

Based on this graph, what does the point (20,1) mean?



Based on this graph, what does the point (40,0) mean?



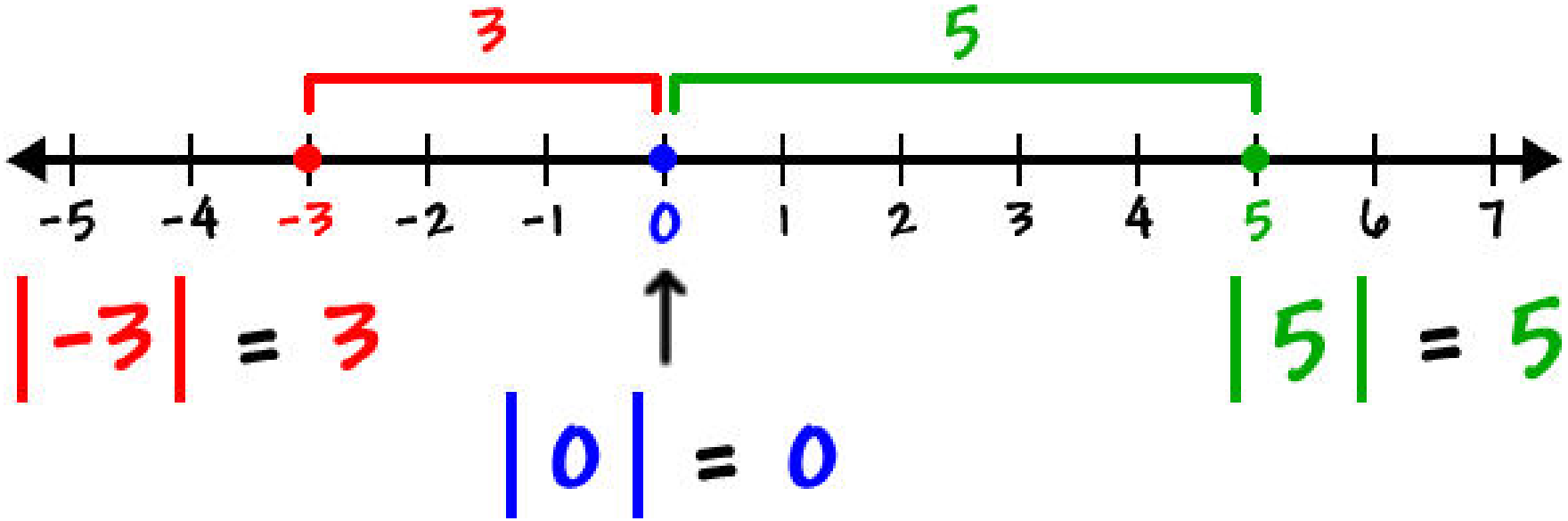
Students, write your response!

Absolute Value

Determine whether each statement is true or false.

1. $|-4| = \frac{1}{4}$
2. $|-4| = 4$
3. $|-4| = -4$
4. $|-4| = |4|$
5. $|4| = -4$

Absolute Value - Refresh



Practice Problems (HW)