

# Topic No. 05



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## Question 1

Madison created two functions.

For Function A, the value of  $y$  is two less than four times the value of  $x$ .

The table to the right represents Function B.

Function B

$x$	$y$
-3	-9
-1	-5
1	-1
3	3

In comparing the rates of change, which statement about Function A and Function B is true?

- A Function A and Function B have the same rate of change.
- B Function A has a greater rate of change than Function B has.
- C Function A and Function B both have negative rates of change.
- D Function A has a negative rate of change and Function B has a positive rate of change.

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### Question 2

The table below represents a linear function.

Which function has a greater slope and a greater *y*-intercept than the linear function represented in the table?

<i>x</i>	<i>y</i>
-1	5
1	9
3	13
5	17

**A**  $y = 2x + 8.5$

**B**  $y = 3x + 7.5$

**C**  $y = 5x + 6.5$

**D**  $y = 10x + 5.5$

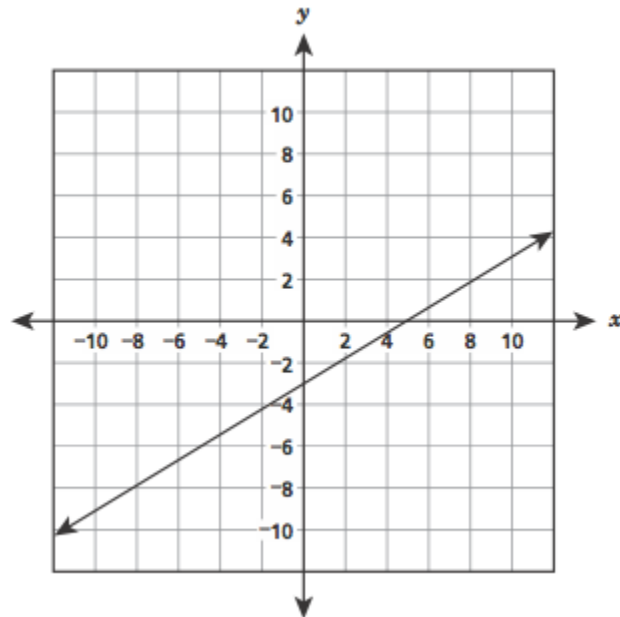
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### Question 3

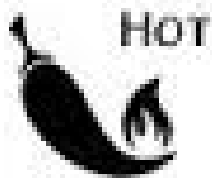
Function 1 is defined by the equation  $y = \frac{3}{4}x + 1$ , and function 2 is represented by the graph below.



Which statement about the functions is true?

- A Function 1 has the greater rate of change and the greater *y*-intercept.
- B Function 2 has the greater rate of change and the greater *y*-intercept.
- C Function 1 has the greater rate of change, and function 2 has the greater *y*-intercept.
- D Function 2 has the greater rate of change, and function 1 has the greater *y*-intercept.

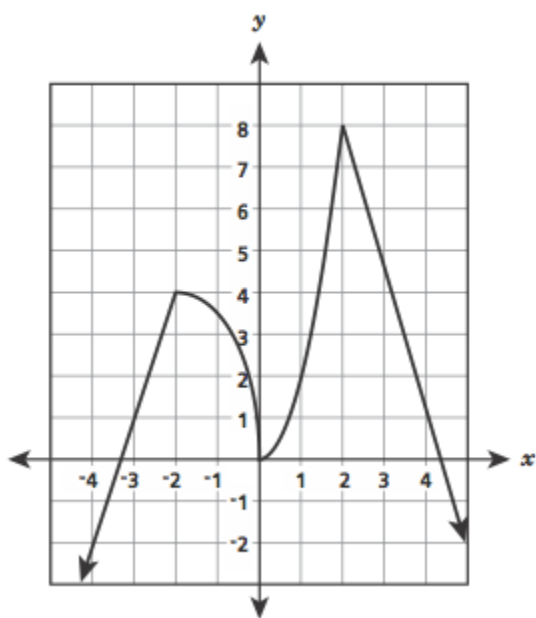
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### Question 4

The graph of a function is shown below.



For which interval of  $x$  is the function decreasing and nonlinear?

- A between  $-4$  and  $-2$
- B between  $-2$  and  $0$
- C between  $0$  and  $2$
- D between  $2$  and  $4$