1. Is the relation shown below a function? Use the graph below to justify your answer.
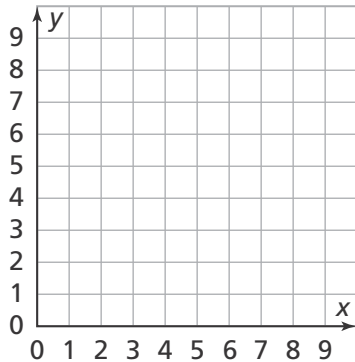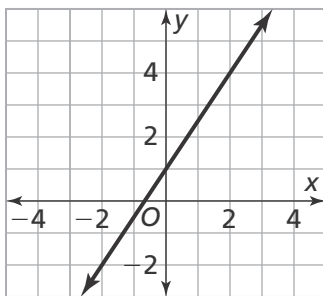
(0, 3), (1, 4), (2, 3), (3, 0), (5, 4)

2. Consider the two functions below. Which one of these functions is linear? What is its equation? Enter any answers to two decimal places.

Function A

Function B

x	1	2	3	4	5
y	1	8	27	64	125

Function _____ is linear.

Its equation is $y =$ _____ $x +$ _____.

3. Which function has a greater rate of change?

Function A
$y = 10x - 3$

Function B

x	1	2	3	4	5
y	20	15	10	5	0

Function A has a rate of change of

_____ and Function B has a rate

of change of _____, so Function

_____ has a greater rate of change.

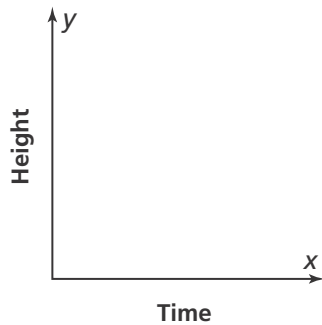**4.** How would you describe the graph of the function in interval 2?

Ⓐ The graph of the function is increasing.

Ⓑ The graph of the function is decreasing.

Ⓒ The graph of the function is constant.

Ⓓ The slope is positive.

5. The graph of a function is a line that passes through the points (0, 1) and (3, 10).
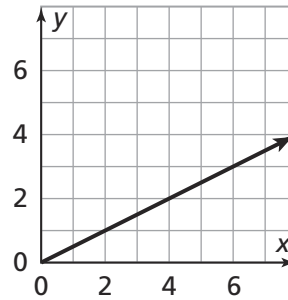
Write an equation in the form $y = mx + b$ for this function.

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6. A kite starts on the ground and slowly ascends into the sky. It flies at the same altitude for about 10 minutes and then quickly drops to the ground. Sketch a graph of the behavior of the kite over time.

7. Raoul says that Function B has a greater initial value. Is Raoul correct? Justify your answer.

Function A

Function B

x	0	2	4	6	8
y	3	6	9	12	15

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8. A hot air balloon descends from an altitude of 2,000 feet at a constant rate of 90 feet per minute. The graph shows the altitude of the balloon over time. Write a linear function in the form $y = mx + b$ to represent the situation.