

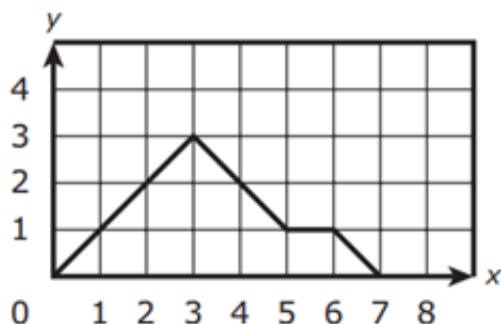
Name:

Class:

Grade 8, Unit 5: Practice Summative Assessment

Question 1

The graph of a function is shown.



Which of the following statements describes an interval of the function?

- Ⓐ The function is decreasing from $x = 5$ to $x = 6$.
- Ⓑ The function is decreasing from $x = 2$ to $x = 4$.
- Ⓒ The function is increasing from $x = 6$ to $x = 7$.
- Ⓓ The function is increasing from $x = 0$ to $x = 3$.

Question 2

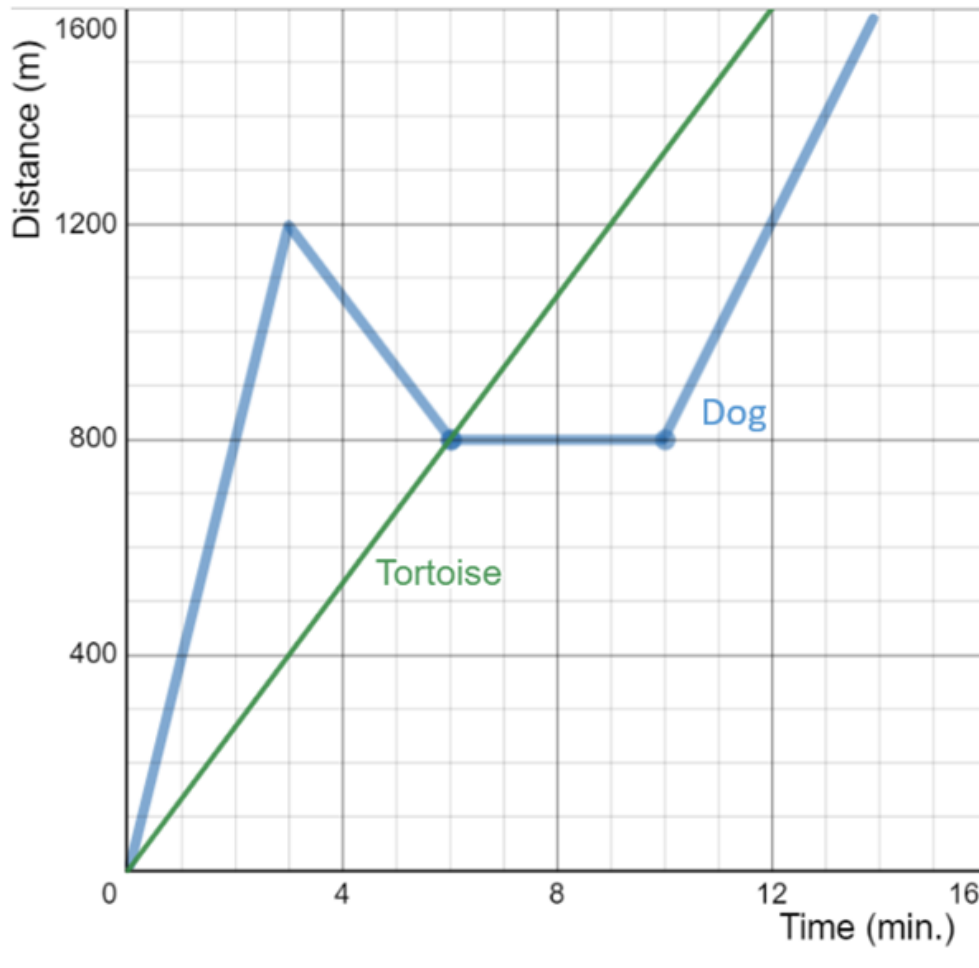
The relationship between the x and y values in this table is not a function. One of the values of x is missing from the table, as shown.

x	7	12	?
y	-6	-1	8

What is **one** value of x that could replace the missing value in the table to show that y is **not** a function of x ?

Question 3

As shown below, a Dog and a Tortoise were having a race.



Statement	True	False
For the Dog, the graph shows distance as a function of time.		
For the Dog, the graph shows time as a function of distance.		
The Dog's top speed is 400 meters per minute.		
At 12 minutes, the Dog is moving at 100 meters per minute.		
The Dog crossed the 1000 meter mark 3 times during the race.		
The Dog took a 4 minute nap during the race.		

Question 4

A certain investment portfolio increases at a rate of 10% every year. If \$200,000 is invested, the portfolio will hold \$220,000 after 1 year, will hold \$242,000 after 2 years, will hold \$266,200 after 3 years, and so on.

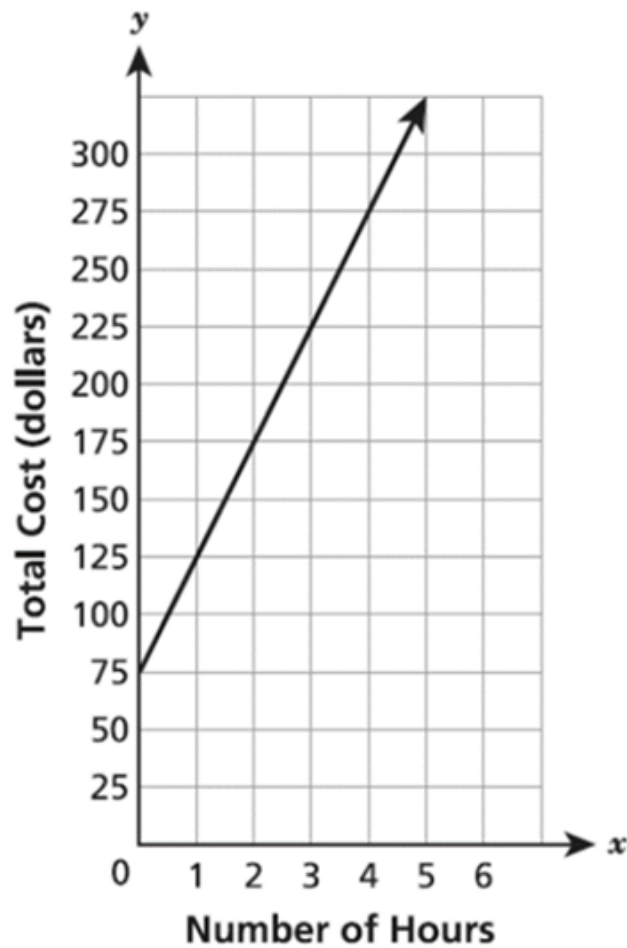
Show your work answering the questions below!

Part 1 Is the amount of money in the portfolio a function of the number of years the investment is held?

Part 2 If so, is it linear? Explain your reasoning.

Question 5

Two painting companies charge an hourly rate, plus a one-time fee. Company A charges according to the graph and Company B charges according to the table.



Number of Hours	Total Cost (\$)
1	100
3	250
5	400
10	775

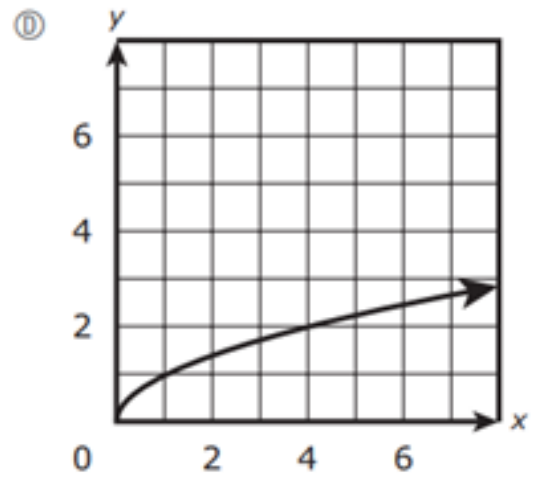
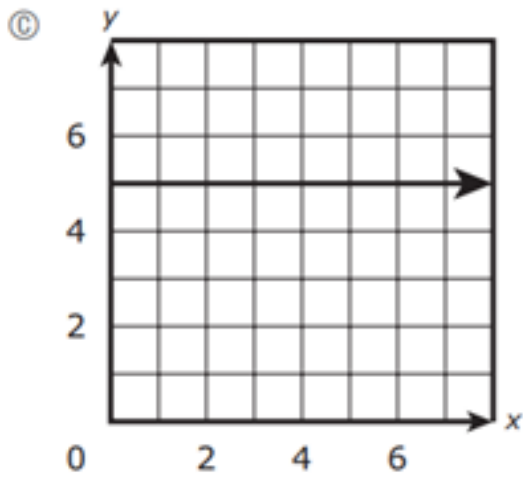
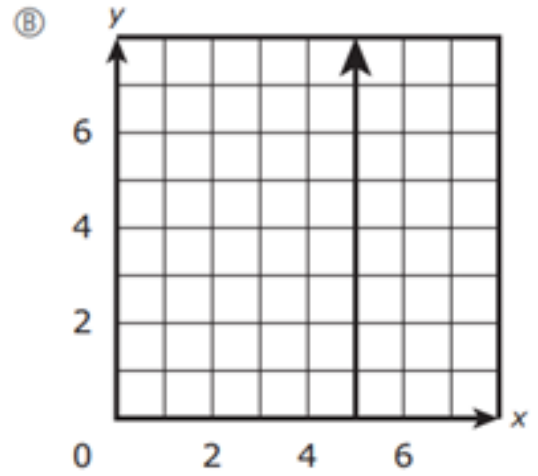
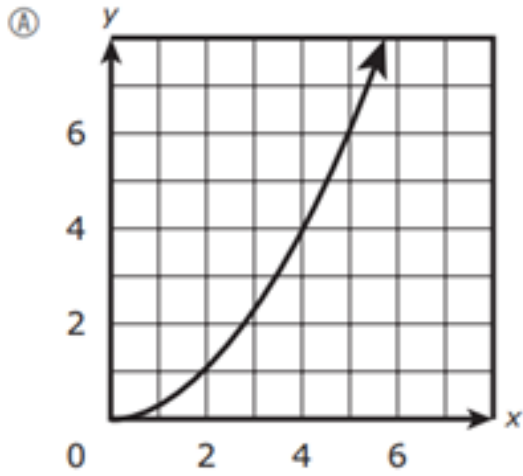
Show your work answering the questions below!

Part 1 Which company has the greater one-time fee?

Part 2 Which company has the higher hourly rate?

Question 6

Which of the following graphs shows a linear function?



Question 7

Which of the following is **not** a function?

