

Name:

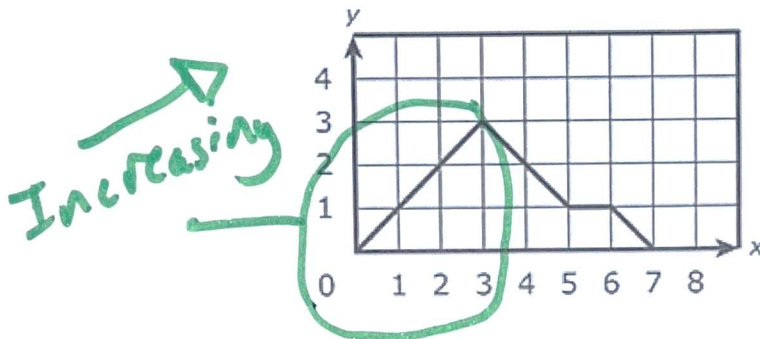
ANSWERS!

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 $x = 6$. → No! Constant
- Ⓑ The function is decreasing from $x = 2$ to $x = 4$. → No! Mix
- Ⓒ The function is increasing from $x = 6$ to $x = 7$. → No! Decreasing
- Ⓓ The function is increasing from $x = 0$ to $x = 3$.

Question 2The 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 ?

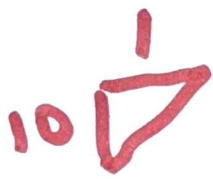
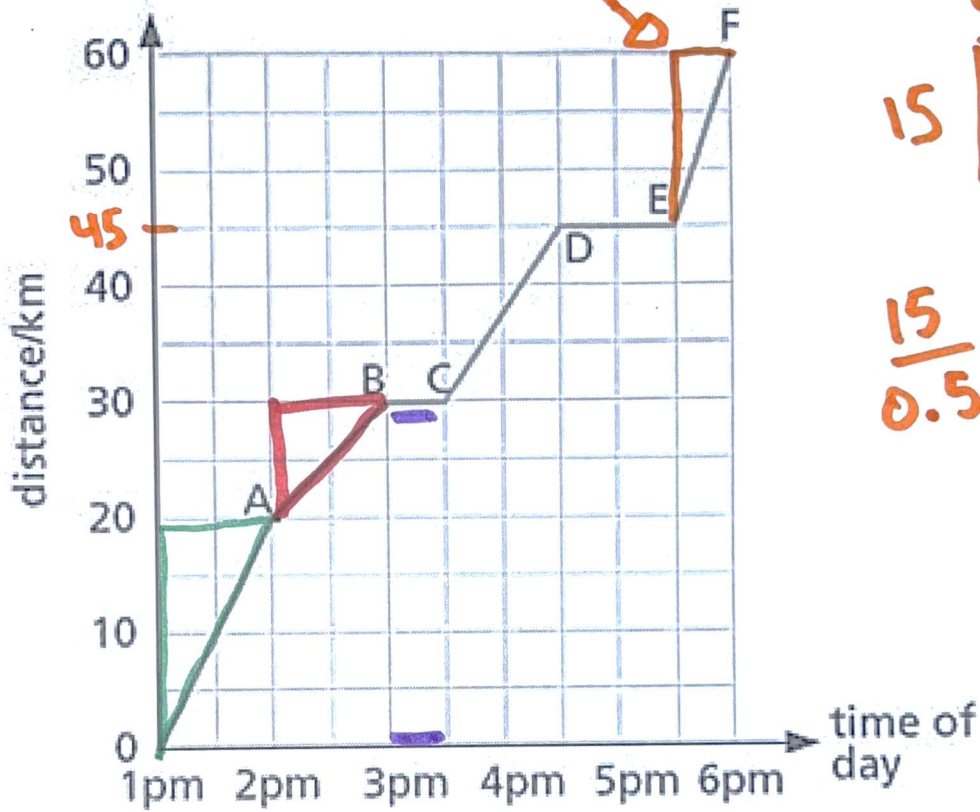
7 or 12

x cannot repeat, so if the missing value is a 7 or 12, it's not a function

Question 3

The graph below shows the distance traveled during a bike ride.

Steepest means fastest!



$$\frac{15}{0.5} = 30$$

Statement	True	False
Between 1pm and 2pm, the cyclist's speed was 20 km per hour.	X	
Between 2pm and 3pm, the cyclist's speed was 30 km per hour.		X
The cyclist was stopped from 3pm to 4pm.		X
The cyclist was stopped from 3pm to 3:30pm.	X	
The cyclist rode the fastest from 5:30pm to 6pm.	X	
The cyclist's fastest speed was 15 km per hour.		X
The cyclist's fastest speed was 30 km per hour.	X	

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?

Yes! It is a function. An investment portfolio can only hold 1 amount of money at a certain time.

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

No! Not linear.

	x	y	
	0	200,000	
+1	1	220,000	+20,000
+1	2	242,000	+22,000
	3	266,200	

There is not
a uniform
CHANGE in y
CHANGE in x

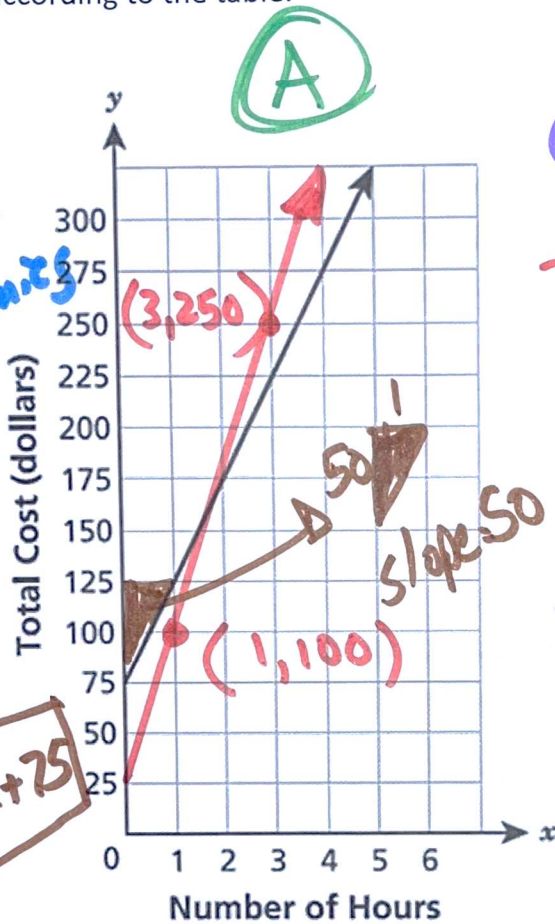
To solve, get

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.

As a check, probably easiest to graph out Company B

$y = mx + b$ for both companies



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

(B)

(25)

-1

-75

+2

+150

+2

+150

+5

+375

$\frac{150}{2} = 75$

slope = 75

$y = 75x + 25$

Show your work answering the questions below!

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

Company A

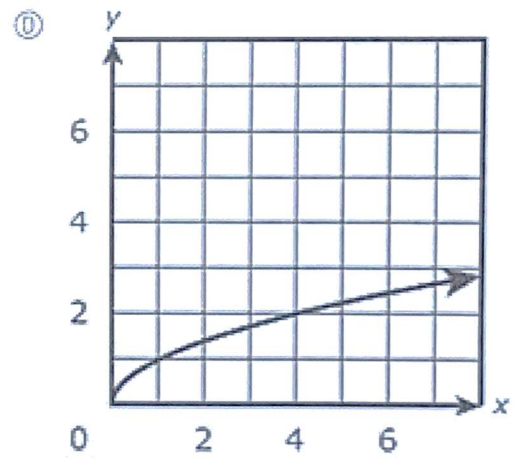
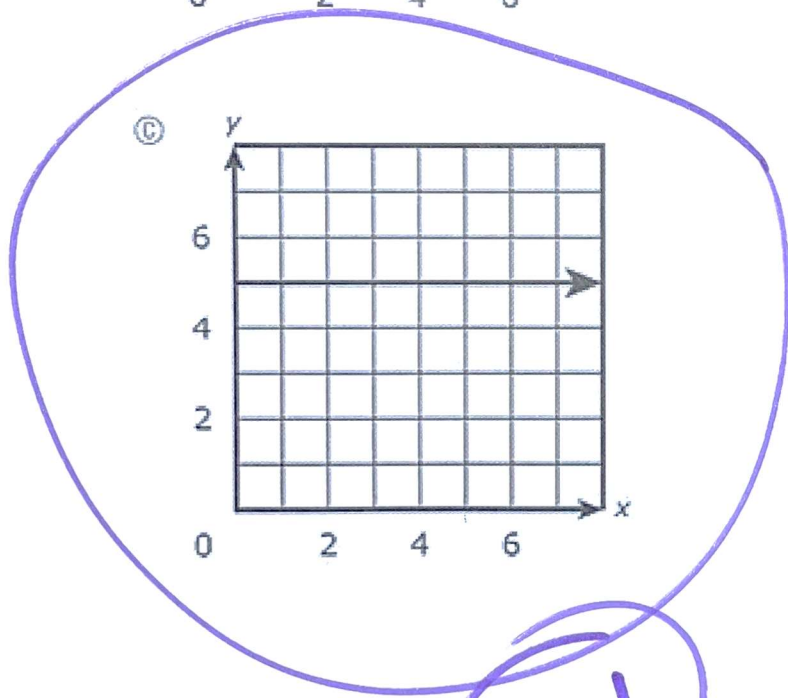
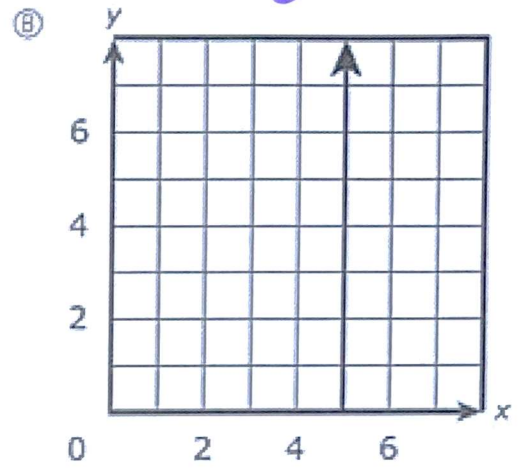
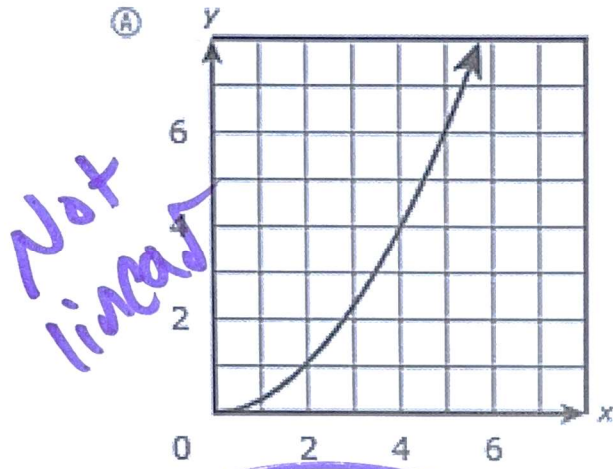
Part 2 Which company has the higher hourly rate?

Company B → steeper!

Question 6

Which of the following graphs shows a linear function?

Not a function

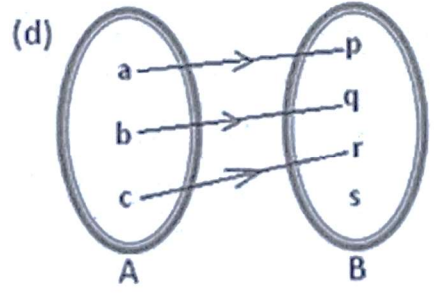
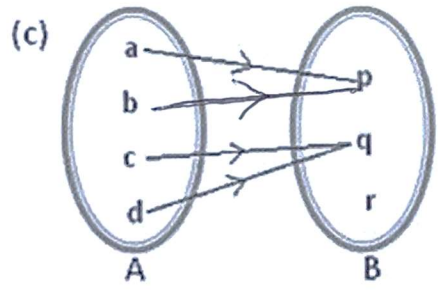
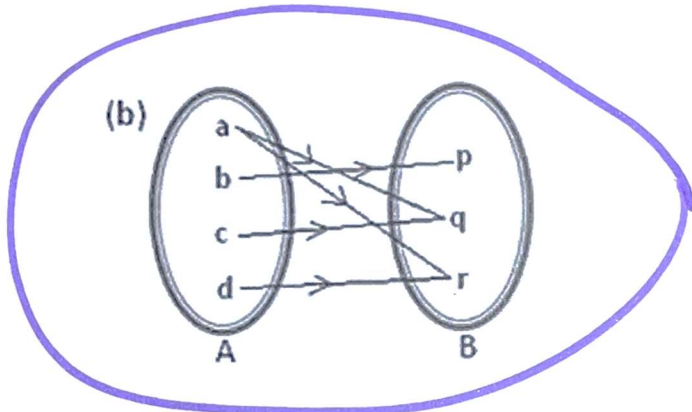
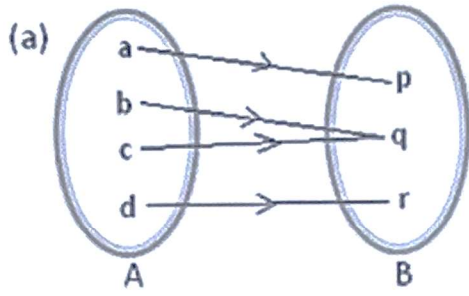


Yes!

Not linear

Question 7

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



does Not work
"a" cannot lead to both
"p" and "r"