Released Assessment Questions, 2019

ANSWERS

Grade 9 Assessment of Mathematics • Applied

DIRECTIONS

Answering Multiple-Choice Questions

Answer all multiple-choice questions. If you fill in more than one answer to a question, or leave a question blank, the question will be scored zero. Incorrect answers will also be scored zero.

Answering Open-Response Questions

Do all of your work for each question in the space provided for the question **only.**

Write your solutions, including all calculations, clearly and completely.

ATTENTION:

There are more open-response questions in this booklet than in a regular booklet.

Record ALL your answers to multiple-choice and open-response questions in this booklet.

Education Quality and Accountability Office

EQAO

You are now ready to start.

Please read the questions in the *Question Booklet*; then fill in your answers below.

To indicate your answer, **use a pencil to fill in the appropriate circle below completely.**

Like this: ●

Not like this: ⊗ ☑ ◖ ◉

Cleanly erase your answer if you wish to change it and fill in the circle for your new answer.

Fill in only **one** circle for each question.

1 (a) (b) (c) (d)

2 (a) (b) (c) (d)

3 (a) (b) (c) (d)

4 (a) (b) (c) (d)

5 (a) (b) (c) (d)

6 (a) (b) (c) (d)

7 (a) (b) (c) (d)

8 (a) (b) (c) (d)

9 (a) (b) (c) (d)

10 (a) (b) (c) (d)

11 (a) (b) (c) (d)

12 (a) (b) (c) (d)

13 Picking Pumpkins

Joey works at a farm picking pumpkins. He gets paid an hourly rate of $13 and 10¢ for every pumpkin he picks.

The equation below represents his total earnings, *E,* which depends on the number of hours worked, *n,* and the number of pumpkins picked, *p.*

$$E = 13n + 0.10p$$

Determine how many pumpkins he picked if he worked 6 hours and earned $93.

Show your work.

Joey picked _____ pumpkins.

14 Turning Tiles
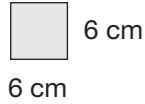
Ryder lays out **identical** square tiles.

Diagram 1   **Diagram 2**   **Diagram 3**

6 cm

6 cm

He continues to add one additional tile to get the next diagram.

Complete this table of values using Ryder's pattern.

Diagram number, n	Perimeter, P (cm)
1	
2	36
3	
4	
5	

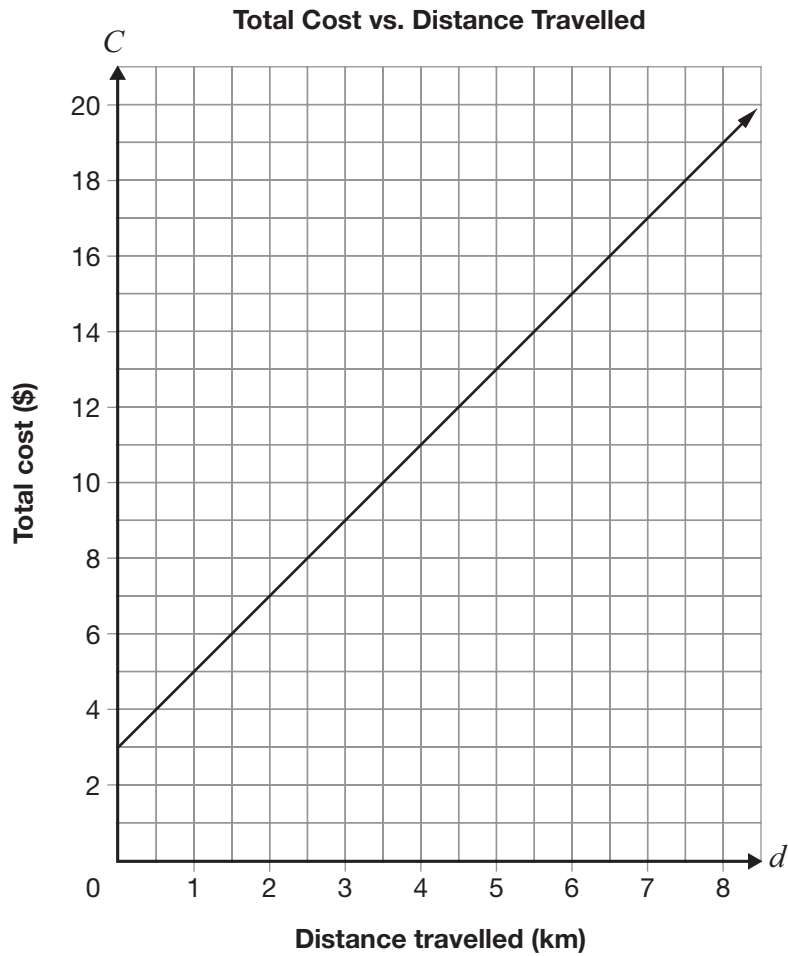Is the relationship between the perimeter and diagram number linear or non-linear?

Circle one: Linear   Non-Linear

Justify your answer. You have the option of using the grid as part of your answer.

Perimeter vs. Diagram Number

P

Perimeter (cm)

0   1   2   3   4   5 n

Diagram number
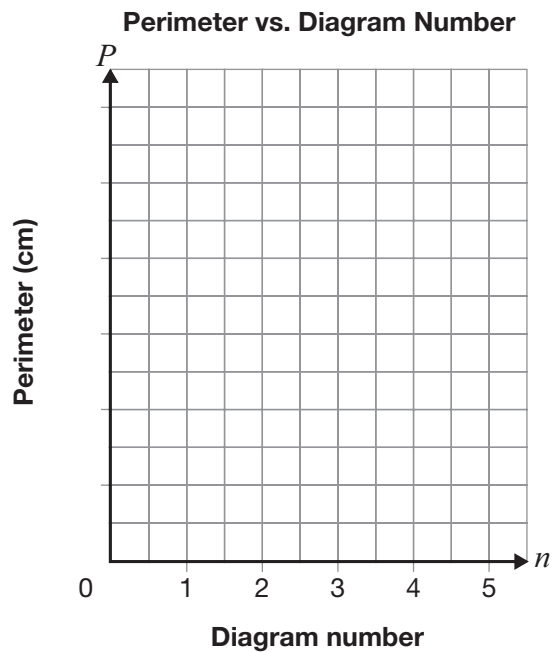
⓯ Taxi Rider

This graph represents the relationship between the total cost of a taxi ride, *C*, in dollars, and the distance travelled during the ride, *d*, in kilometres.

Total Cost vs. Distance Travelled

C

Total cost ($)

20

18

16

14

12

10

8

6

4

2

0   1   2   3   4   5   6   7   8   *d*

Distance travelled (km)

Complete this table with information about this relationship.

	Meaning of rate of change in this situation:
Rate of change: _____	
Initial value: _____	**Meaning of initial value in this situation:**

16 Fitness Club Visits

The total cost for a month at a fitness club is made up of a fixed fee and a cost per visit. Information about the total cost, C, in dollars, for n visits is shown below.

Total Cost vs. Number of Visits
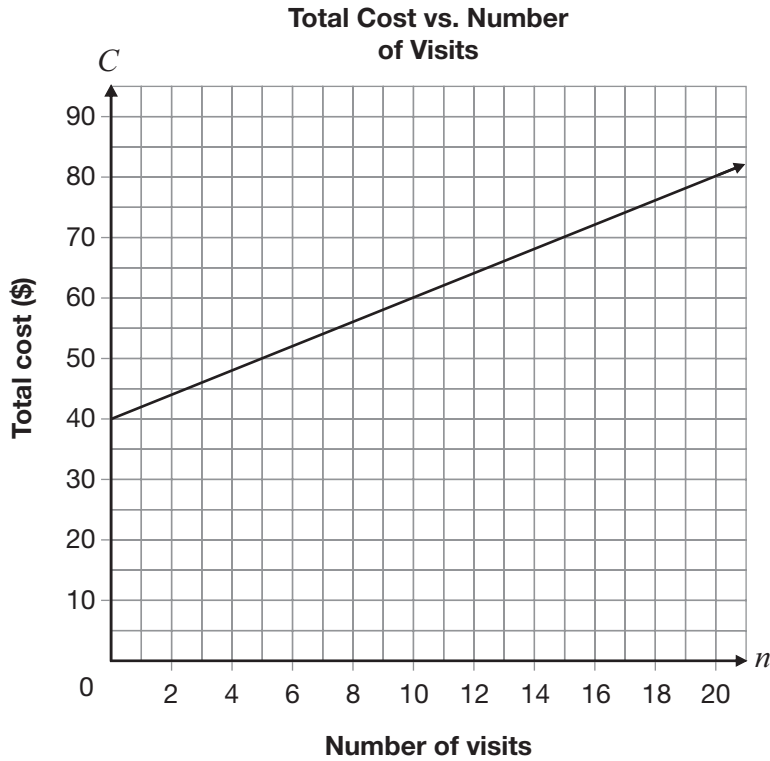
The club changes its costs so that there is a **lower** fixed fee but a **higher** cost per visit.

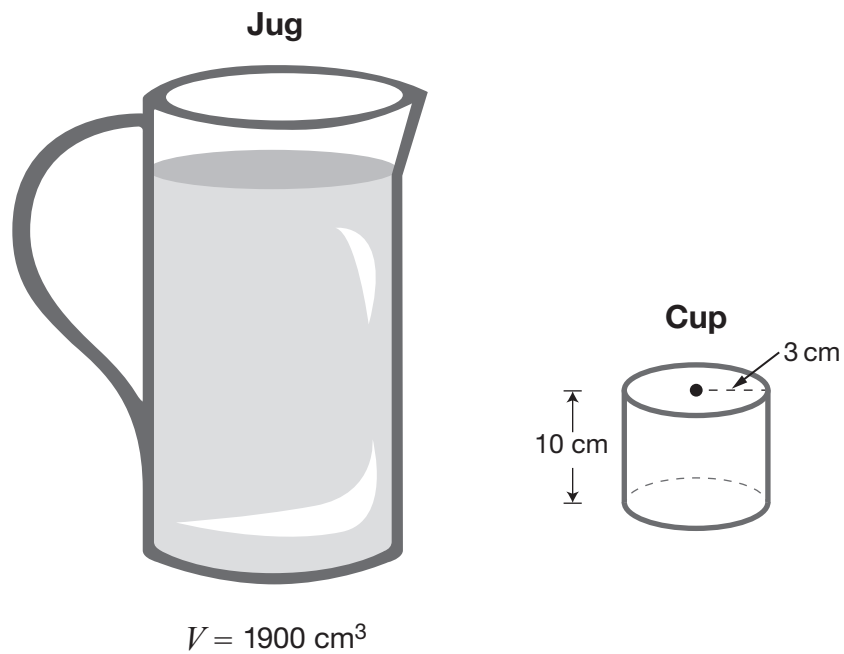Determine a possible fixed fee, cost per visit and equation for the new total cost.

Justify your answer.

Fixed fee: _____   Cost per visit: _____

Equation: $C =$ _____

🔢 Pouring Water

Velma is filling cylindrical cups with water from the jug pictured below.

Jug

$V = 1900$ cm³

Cup

3 cm

10 cm
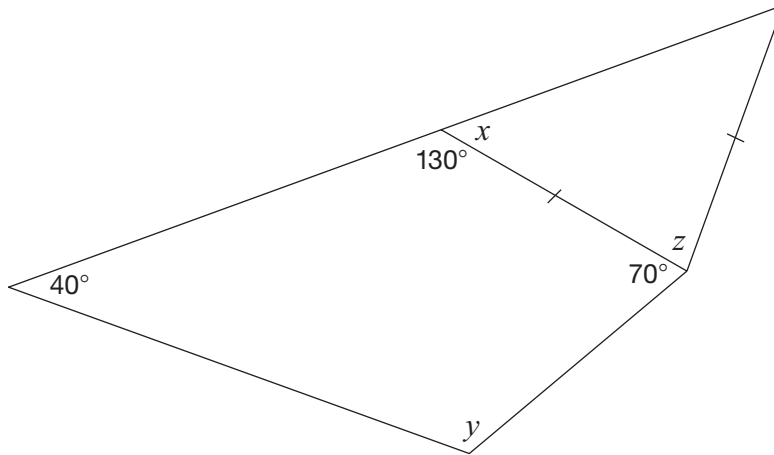
The jug contains 1900 cm³ of water.

Determine the maximum number of cups Velma can completely fill with water from the jug.

Show your work.

Velma can completely fill _____ cups of water.

18 Find All Three!

A diagram is made using a quadrilateral and a triangle, as shown.

Using geometric properties, determine the values of *x, y* and *z*. Justify your answers by showing your calculations or describing the geometric properties you have used.

Value	Calculations or descriptions of geometric properties
x = _____	
y = _____	
z = _____	

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19 ⓐ ⓑ ⓒ ⓓ

20 ⓐ ⓑ ⓒ ⓓ

21 ⓐ ⓑ ⓒ ⓓ

22 ⓐ ⓑ ⓒ ⓓ