Released Assessment Questions, 2017

ANSWERS

Grade 9 Assessment of Mathematics • Academic

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 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.

2 Carlton Street, Suite 1200, Toronto ON M5B 2M9 | Telephone: 1-888-327-7377 | Web site: www.eqao.com

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 ⓐ ⓑ ⓒ ⓓ

2 ⓐ ⓑ ⓒ ⓓ

3 ⓐ ⓑ ⓒ ⓓ

4 ⓐ ⓑ ⓒ ⓓ

5 ⓐ ⓑ ⓒ ⓓ

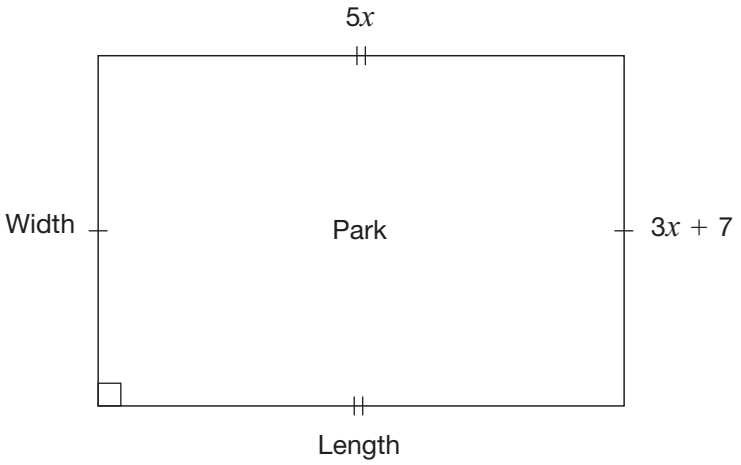
6 ⓐ ⓑ ⓒ ⓓ

7 ⓐ ⓑ ⓒ ⓓ

8 ⓐ ⓑ ⓒ ⓓ

9 Walking Around the Park

A park in the shape of a rectangle is pictured with algebraic expressions representing its length and width, in metres.



The perimeter of the park, P, can be determined using the equation

$$P = 2l + 2w.$$

Determine an equation to represent the perimeter of the park using the given sides.

$P =$ _____

The perimeter of the park is 350 m.

Determine the length of the park. Show your work.

The length of the park is _____ m.

10 Fabric Purchase

Two companies sell fabric online. The total cost, C, in dollars, for n metres of fabric for each company is given below.

- Fabric Fun: $C = 4.25n + 3.00$
- Sew-a-Lot: $C = 6.50n$

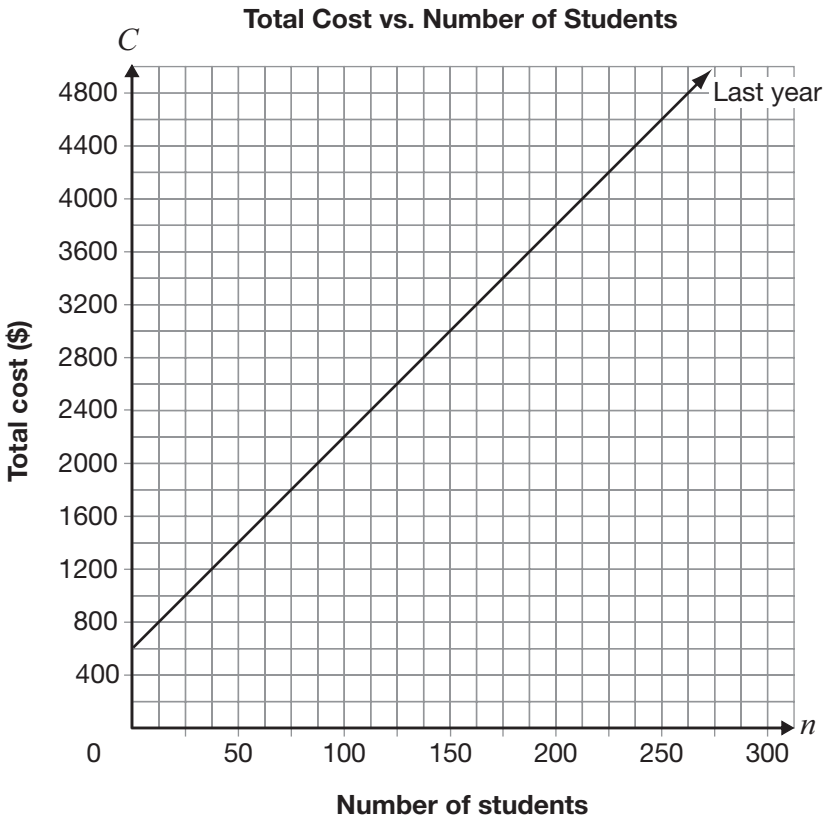
Complete the chart below by determining the initial value, rate of change and type of variation for the relationship for each company.

Justify the type of variation you have selected.

Fabric Fun	**Sew-a-Lot**
Initial value: _____ **Rate of change:** _____	**Initial value:** _____ **Rate of change:** _____
Type of variation Circle one: Partial Direct Justification	Type of variation Circle one: Partial Direct Justification

11 What's the New Price?

This graph shows information about last year's total cost for a banquet for n students.



This year the cost per person has decreased by \$5, but the initial fee has doubled.

Determine an equation to represent total cost, C, for **this year.**

$C =$ _____

Show your work.

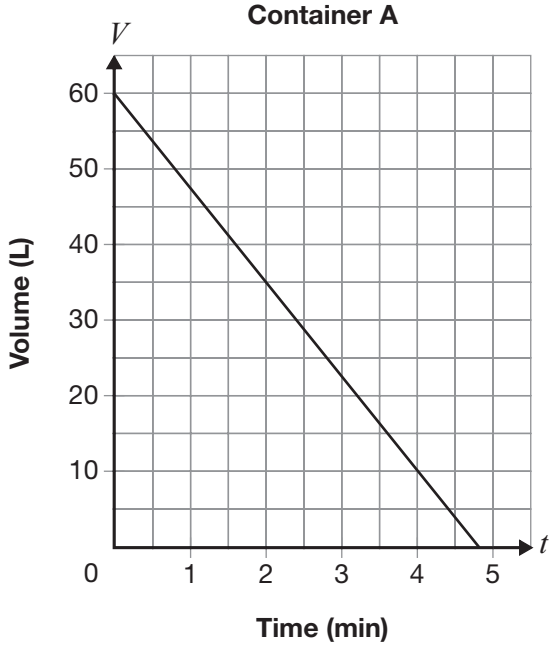
Describe **two ways** the graph for total cost for this year will be different from the graph for total cost for last year.

Justify your answer.

12 Draining Away

Water drains out of two different containers at constant rates. Information about the volume of water in the containers over time is given below.

Container A



Container B

Time (min)	Volume (L)
1	54
3	32
5	10

Out of which container is the water draining at a faster rate?

Circle one: Container A Container B

Justify your answer.

13 Related Relations

A new line

- is perpendicular to the line represented by $3x - y = 5$ and
- has the same y-intercept as the line represented by $4x - 3y - 12 = 0$.

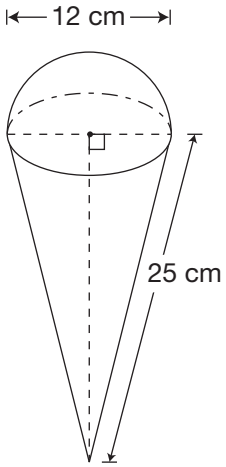
Determine the equation of the new line.

Justify your answer.

The equation of the new line is _____ .

14 Don't Let It Melt!

A model of an ice cream cone made up of a cone and a hemisphere is pictured below.



The total surface area of the model will be painted at a cost of $\$0.0035/cm^2$.

Determine the total cost of painting the model.

Show your work.

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15 ⓐ ⓑ ⓒ ⓓ

16 ⓐ ⓑ ⓒ ⓓ

17 ⓐ ⓑ ⓒ ⓓ

18 ⓐ ⓑ ⓒ ⓓ

19 ⓐ ⓑ ⓒ ⓓ

20 ⓐ ⓑ ⓒ ⓓ

21 ⓐ ⓑ ⓒ ⓓ

22 ⓐ ⓑ ⓒ ⓓ