

Released Assessment Questions, 2017

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 a regular booklet.

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

Education Quality and
Accountability Office



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 Saving on Apples

Janice and Irene buy apples at different stores. Both stores sell apples by the kilogram.

- Janice pays \$6.00 for 3.75 kg of apples.
- Irene pays \$5.25 for 3 kg of apples.

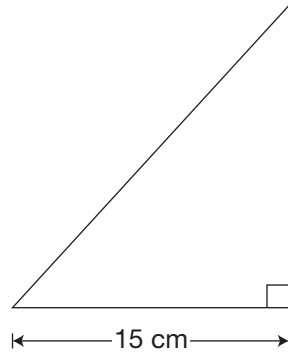
How much **more** will Irene pay than Janice if they had each bought 9 kg of apples?

Show your work.

Irene will pay \$_____ more than Janice for 9 kg of apples.

14 Tall Triangles

A triangle is pictured below with the length of its base labelled.



The area of the triangle is 123 cm^2 .

Determine the height of the triangle.

Show your work.

Hint:

$$A = \frac{bh}{2}$$

15 Tower of Power

Austin is using toothpicks to make the diagrams shown below.

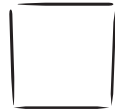


Diagram 1

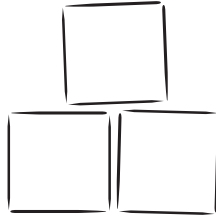


Diagram 2

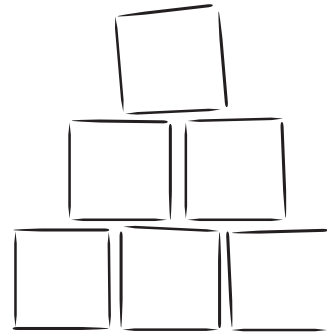


Diagram 3

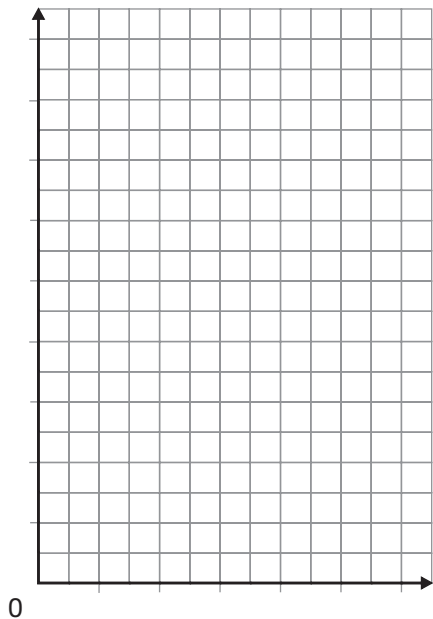
The pattern continues. Complete the chart below.

Diagram number	Total number of toothpicks
1	4
2	
3	
4	

Determine whether the relationship between the total number of toothpicks and the diagram number is linear or non-linear.

Circle one: Linear Non-linear

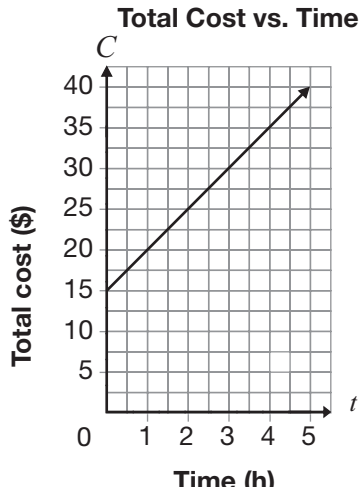
Justify your answer. You have the option of using the grid for part of your answer.



16 Ski Day

Information about the linear relationship between the total cost of skiing, C , in dollars, and time, t , in hours, at three different ski resorts is shown below.

Determine the initial value for each relationship.

Ski Slope Hill	Mountain Ski	Snow Way Adventures												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Time, t (h)</th> <th style="padding: 5px;">Total cost, C (\$)</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td style="text-align: center;">10</td></tr> <tr><td style="text-align: center;">2</td><td style="text-align: center;">20</td></tr> <tr><td style="text-align: center;">3</td><td style="text-align: center;">30</td></tr> <tr><td style="text-align: center;">4</td><td style="text-align: center;">40</td></tr> <tr><td style="text-align: center;">5</td><td style="text-align: center;">50</td></tr> </tbody> </table>	Time, t (h)	Total cost, C (\$)	1	10	2	20	3	30	4	40	5	50	$C = 8t$	
Time, t (h)	Total cost, C (\$)													
1	10													
2	20													
3	30													
4	40													
5	50													
Initial value: _____	Initial value: _____	Initial value: _____												

Circle each relationship that represents a partial variation.

Ski Slope Hill

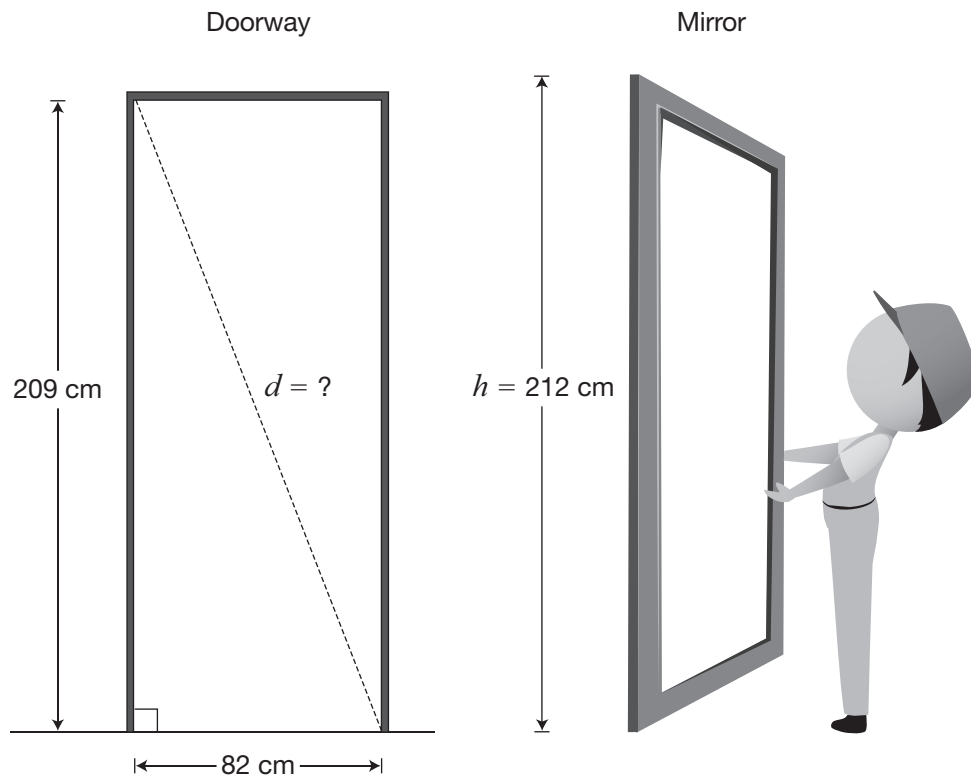
Mountain Ski

Snow Way Adventures

Justify your answer.

17 Moving a Mirror

A rectangular doorway and a square mirror are pictured below. The mirror's sides are 212 cm long. The mirror is tilted along the line, d , to fit through the doorway.



Determine how much **greater** the length of the diagonal, d , in the doorway is than the height of the mirror, h .

Hint:

Use the Pythagorean theorem.

Justify your answer.



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

19 (a) (b) (c) (d)

20 (a) (b) (c) (d)

21 (a) (b) (c) (d)

22 (a) (b) (c) (d)