

Released Assessment Questions, 2015

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

14 (a) (b) (c) (d)

15 (a) (b) (c) (d)

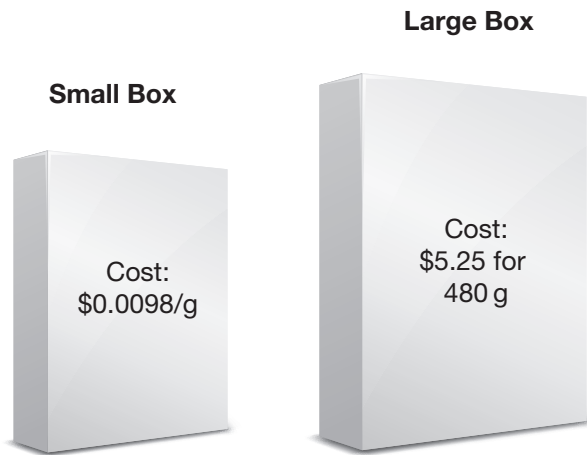
16 (a) (b) (c) (d)

17 (a) (b) (c) (d)

18 (a) (b) (c) (d)

19 Healthy Start

A grocery store sells Healthy Start cereal in two different sized boxes as shown below.



What is the difference in the cost of 100 g of cereal in these two boxes?

Show your work.

The difference in the cost for 100 g of cereal in these two boxes is _____ .

20 Banking on a Car

Juan borrows money from his mom to buy a used car.

His mom uses the equation shown below to determine the number of monthly payments Juan will make to pay her back.

$$1.13T = 75n + d$$

In the equation,

- T represents the total cost of the car before tax, in dollars,
- n represents the number of monthly payments and
- d represents the amount of his down payment, in dollars.

How many monthly payments will Juan have to make to pay his mom back fully for a car that costs \$2000 before tax with a down payment of \$535?

Show your work.

The number of monthly payments is _____.

21 Jar of Pennies

Sheldon creates a pattern by placing pennies in a jar. Each day he adds twice as many pennies as he did the day before.

- On Day 1, he places 1 penny in the jar.
- On Day 2, he adds 2 more pennies, for a total of 3 pennies in the jar.
- On Day 3, he adds 4 more pennies, for a total of 7 pennies in the jar.
- On Day 4, he adds 8 more pennies to the jar.

He continues adding pennies using this pattern.

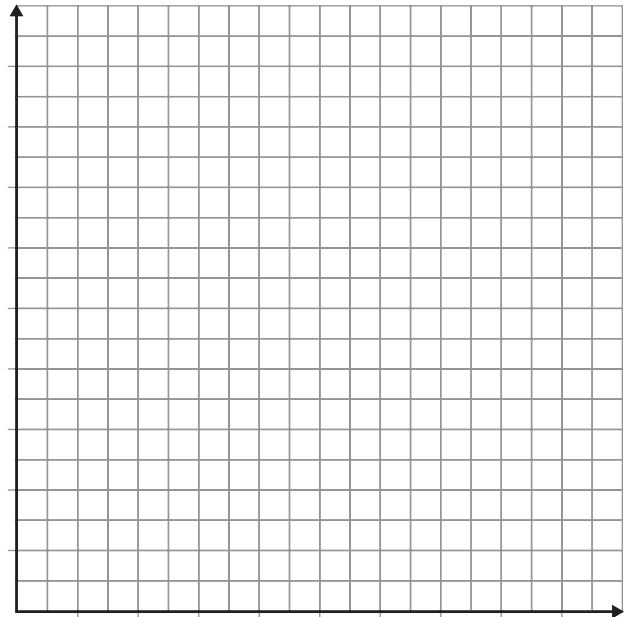
Complete the table of values with the total number of pennies in Sheldon’s jar on Days 4 and 5.

Day	Total number of pennies in Sheldon’s jar
1	1
2	3
3	7
4	
5	

Is the relationship between the total number of pennies in Sheldon’s jar and the day number linear or non-linear?

Circle one: Linear Non-linear

Justify your answer. You may use the grid if you wish.



22 What a Haircut!

Cody gets a haircut. He measures the length of his hair as it grows back and discovers that it grows at a rate of 3 mm per week.

Complete the following table of values for the linear relation between the length of Cody's hair and the number of weeks since his last haircut.

Number of weeks since haircut	Length of hair (mm)
0	
1	4
2	
5	

State the rate of change and the initial value for this relationship.

Rate of change: _____ Initial value: _____

Write an equation to represent this linear relation, where L is the length of Cody's hair, in mm, and n is the number of weeks since his haircut.

$L =$ _____

23 Cellphone Plans

A company offers two different cellphone plans.

- Plan A: \$17 per month for the cellphone, plus \$0.25/min for additional talk time
- Plan B: \$20 per month for the cellphone, plus \$0.15/min for additional talk time
- Both plans include 200 minutes of talk time for free.

Determine the difference in total cost between the two cellphone plans for 237 minutes of talk time in one month.

Show your work.

The difference in total cost for 237 minutes of talk time is _____.

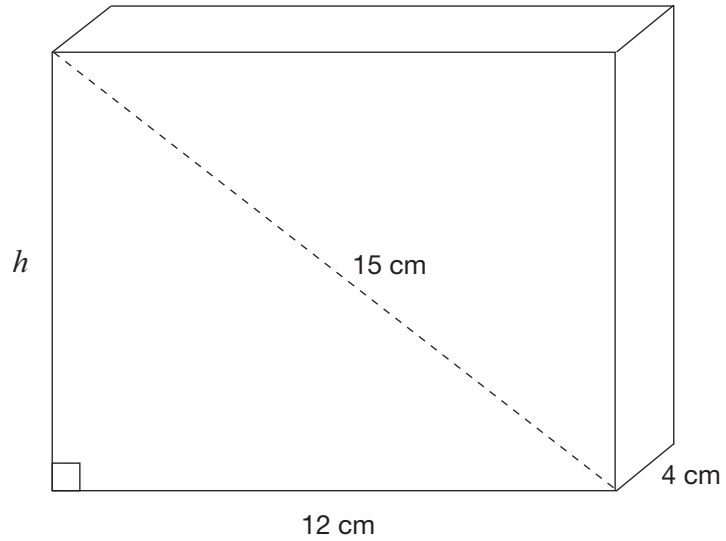
24 Picture of a Prism

Determine the volume of the rectangular prism pictured below.

Show your work.

Hint:

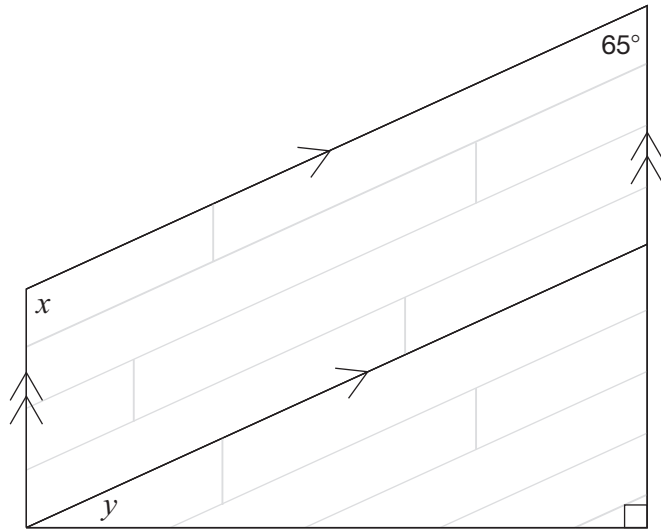
Use the Pythagorean theorem as part of your solution process.



The volume of the rectangular prism is _____.

25 Delightful Deck

Ursula is building a deck. A view of the surface of the deck from above is pictured below.



Complete the chart with the values of x and y . Justify your answers using geometric properties.

Value	Justification using geometric properties
$x = \underline{\hspace{2cm}}$	
$y = \underline{\hspace{2cm}}$	



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27 (a) (b) (c) (d)

28 (a) (b) (c) (d)

29 (a) (b) (c) (d)

30 (a) (b) (c) (d)

31 (a) (b) (c) (d)