

Released Assessment Questions, 2019

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 in 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 Countdown to Empty

Information about the fuel consumption for two cars is given in the chart below.

| Car A | Car B |
|---|---|
| <ul style="list-style-type: none">• The fuel tank starts with 60 L of fuel.• 30% of this fuel is used. | <ul style="list-style-type: none">• The fuel tank starts with 70 L of fuel.• 68% of this fuel remains in the tank. |

Determine which car has **more** fuel left in its fuel tank.

Circle one: Car A Car B

Justify your answer.

9 Accommodations

Information about the linear relationship between the total cost to rent an apartment while on holiday and the number of nights it is rented is given for two companies.

Holiday Apartments

\$360 for 3 nights
or
\$720 for 6 nights

Vacation Apartments

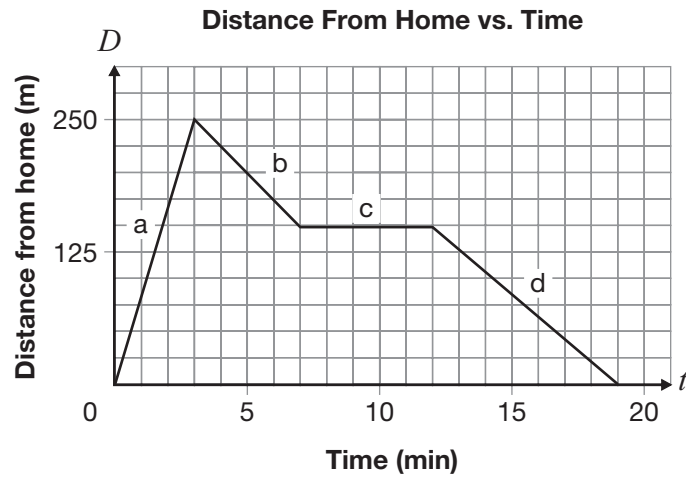
| Number of nights | Cost (\$) |
|------------------|-----------|
| 3 | \$390 |
| 5 | \$550 |
| 7 | \$710 |

Complete the table by determining the initial value and selecting the type of variation for each company. Justify your choice of variation for each company.

| Company | Initial value | Type of variation and justification |
|----------------------------|---------------|--|
| Holiday Apartments | \$ _____ | Circle one: Direct variation Partial variation Justification: |
| Vacation Apartments | \$ _____ | Circle one: Direct variation Partial variation Justification: |

10 Morning Walk

Melanie goes on a morning walk with her dog. This graph shows the relationship between Melanie’s distance from her home and time.



Describe the four segments of Melanie’s walk by completing the missing parts of this table.

Three parts have been completed for you.

| Segment | Distance travelled (m) | Time (min) | Speed (m/min) | Direction |
|---------|------------------------|------------|---------------|----------------|
| a | 250 | 3 | | Away from home |
| b | | | | |
| c | | | | |
| d | | | | |

11 Line W

Line W has

- the same slope as the line represented by $7x - 5y + 15 = 0$ and
- the same y -intercept as the line represented by $3x + 4y = -18$.

Determine the slope, y -intercept and equation of Line W.

Show your work.

Line W

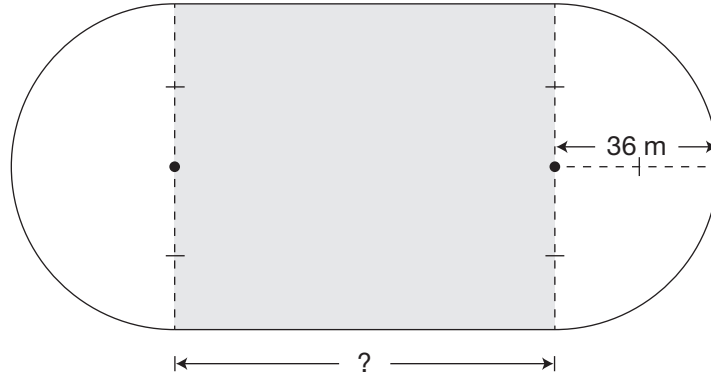
Slope: _____ y -intercept: _____

Equation: $y =$ _____

12 How Many Pieces?

A school has a track that is made up of a rectangle with two semicircles at each end, as pictured. The perimeter of the track, P , is 395 m.

$$P = 395 \text{ m}$$



The rectangular part of the track will be covered with grass. The grass comes in pieces that each have an area of 1.35 m^2 .

Determine the minimum number of pieces of grass required to cover the rectangular part of the track.

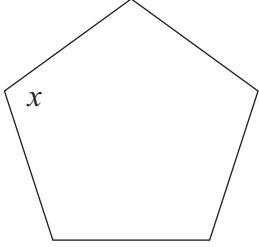
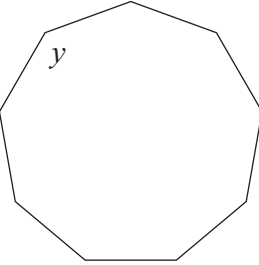
Show your work.

It will take a minimum of _____ pieces of grass to cover the rectangular part of the track.

13 Sum It Up!

Complete the table below with information about two regular polygons.

Show calculations for each polygon.

| Regular Polygon | Calculations for the sum of the interior angles | Sum of the interior angles | Measure of any interior angle |
|---|---|------------------------------|----------------------------------|
|  | | $\underline{\hspace{2cm}}$ ° | $x = \underline{\hspace{2cm}}$ ° |
|  | | $\underline{\hspace{2cm}}$ ° | $y = \underline{\hspace{2cm}}$ ° |

Another regular polygon has an interior angle of 160° .

How many **sides** does this polygon have?

Show your work.

A regular polygon with an interior angle of 160° has _____ sides.



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

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

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

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