

Sample Assessment Booklet: New Layout

Booklet 1

ANSWERS

Grade 9 Assessment of Mathematics • Academic

2015

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**. Work on additional or other pages will **not** be scored.

Write your solutions, including all calculations, clearly and completely, as they will be scored by someone who does not know your work. Your teacher may also mark some or all of your work.

**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
the assessment.**



Please read the questions in *Question Booklet 1*; 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: ⊗ ✓ ◐ ●

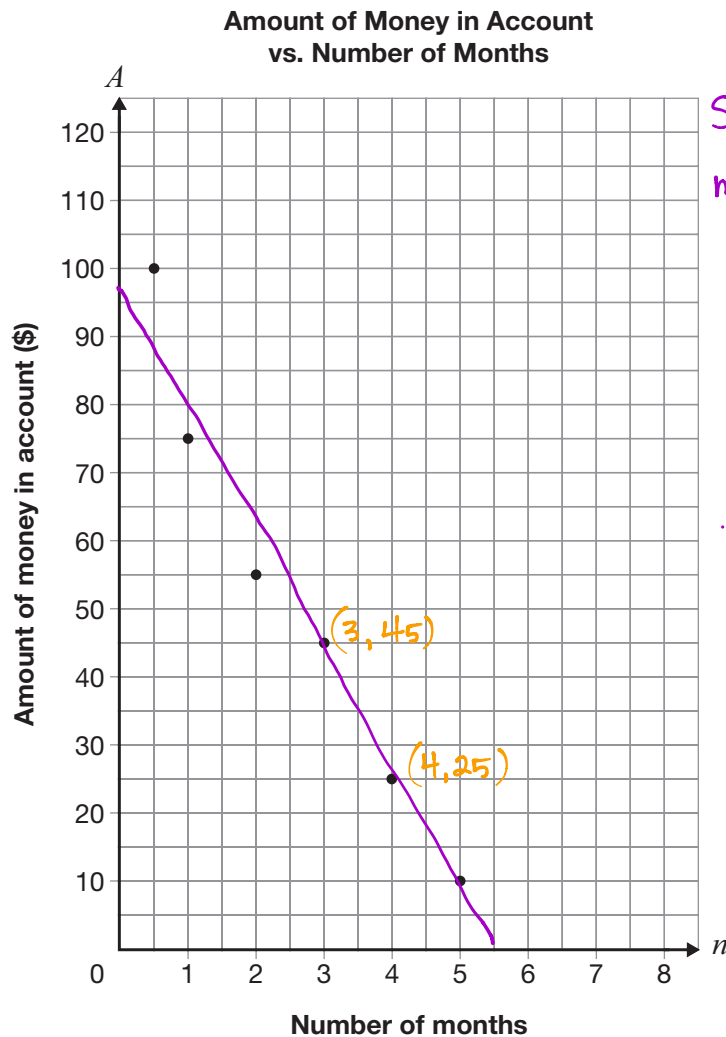
Cleanly erase your answer if you wish to change it and fill in the circle for your new answer.

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

- 1 (A) (B) (C) (D)
- 2 (F) (G) (H) (J)
- 3 (A) (B) (C) (D)
- 4 (F) (G) (H) (J)
- 5 (A) (B) (C) (D)
- 6 (F) (G) (H) (J)
- 7 (A) (B) (C) (D)

8 More Money, Please!

The graph below shows information about the amount of money, A , in Shreya's bank account and the number of months, n , she has had the account.



Step 1: find m Step 2: find b

$$m = \frac{A_2 - A_1}{n_2 - n_1}$$

$$= \frac{25 - 45}{4 - 3}$$

$$= \frac{-20}{1}$$

$$= -20$$

$m = -20$ $b = ?$ $x = 4$ $y = 25$

$$y = mx + b$$

$$25 = -20(4) + b$$

$$25 = -80 + b$$

$$105 = b$$

\therefore the equation of the line of best fit is $A = -20n + 105$.

Draw the line of best fit for the data.

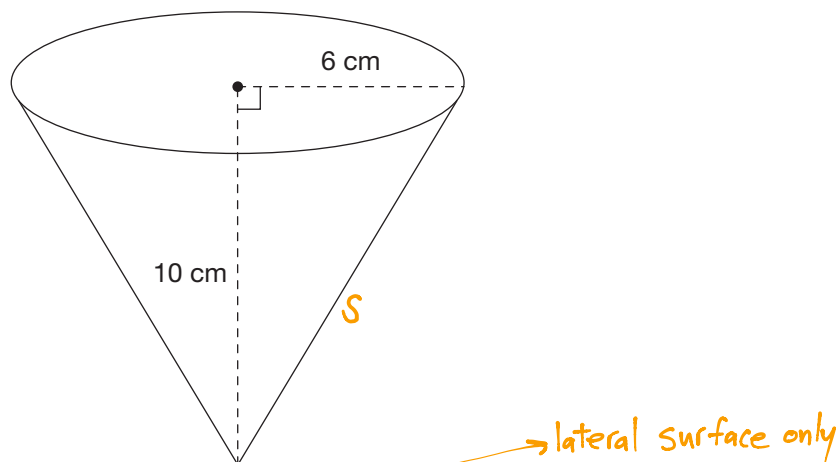
Determine the equation of your line of best fit.

$$\underline{A = -20n + 105}$$

Show your work.

9 Coated Cones

An ice cream store offers chocolate-coated cones as shown in the diagram below.



The cone is open topped, and the entire outside is coated in chocolate.

Determine the area of the surface that is coated in chocolate.

Show your work.

$$\begin{aligned} S^2 &= 10^2 + 6^2 \\ &= 100 + 36 \\ &= 136 \\ S &= \sqrt{136} \end{aligned}$$

$$\begin{aligned} SA &= \pi r s \\ &= \pi (6)(\sqrt{136}) \\ &\approx 219.8 \end{aligned}$$

\therefore the area of the surface coated in chocolate is approximately 219.8 cm^2 .

10 Share the Profits

Three partners, Luc, Deborah and Melanie, share the profits of a business in the ratio 2:3:7 respectively.

The profit for this year is \$176 496.

Determine the share of the profit for each partner.

Show your work.

Let x represent Luc's profit, in \$.

$$\frac{x}{176\,496} = \frac{2}{12}$$

$$176\,496 \left(\frac{x}{176\,496} \right) = 176\,496 \left(\frac{1}{6} \right)$$

$$x = 29\,416$$

\therefore Luc's profit is \$29 416.

Let y represent Deborah's profit, in \$.

$$\frac{x}{176\,496} = \frac{3}{12}$$

$$176\,496 \left(\frac{x}{176\,496} \right) = 176\,496 \left(\frac{1}{4} \right)$$

$$x = 44\,124$$

\therefore Deborah's profit is \$44 124.

Let y represent Melanie's profit, in \$.

$$\frac{x}{176\,496} = \frac{7}{12}$$

$$176\,496 \left(\frac{x}{176\,496} \right) = 176\,496 \left(\frac{7}{12} \right)$$

$$x = 102\,956$$

\therefore Melanie's profit is \$102 956.

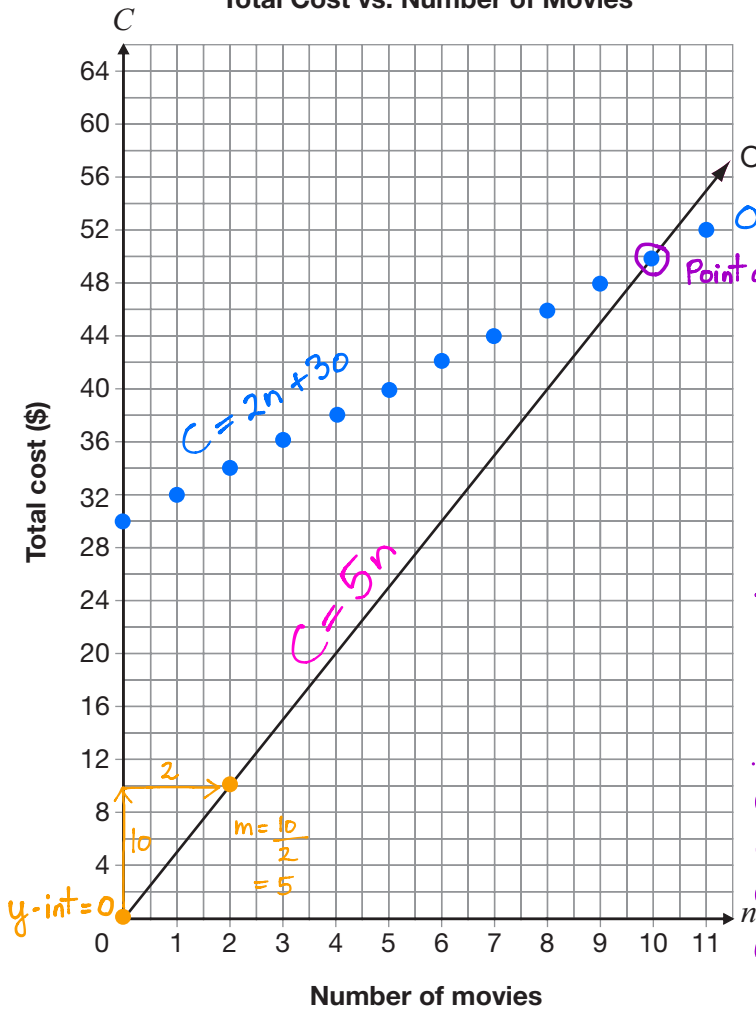
$$2+3+7 \\ = 12 \text{ parts}$$

Movie Night

There are two payment options for downloading movies from a Web site.

- **Option A:** Pay \$30 for a membership and \$2 per movie downloaded.
- **Option B:** Shown on the grid below.

Total Cost vs. Number of Movies



Option A: $m = 2$
 $b = 30$

Option B: $m = 5$
 $b = 0$

At the point of intersection the cost to download 10 movies is \$50 for both Option A and Option B.

\therefore if fewer than 10 movies are downloaded, choose Option B as it will cost less. If more than 10 movies are downloaded, choose Option A as it will cost less.

Determine under which conditions a person should select Option A and under which conditions a person should select Option B.

Justify your answer.



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then fill in your answers below.

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

12 (F) (G) (H) (J)

13 (A) (B) (C) (D)

14 (F) (G) (H) (J)

15 (A) (B) (C) (D)

16 (F) (G) (H) (J)

17 (A) (B) (C) (D)

18 (F) (G) (H) (J)



STOP

You have finished *Booklet 1*.

**Education Quality and
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