

# Sample Assessment Booklet: New Layout

## Booklet 1

# QUESTIONS

Grade 9 Assessment of Mathematics • Applied

2015

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**Follow along as your teacher reads the instructions below.**

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Along with this booklet, make sure you have *Answer Booklet 1* and the Formula Sheet.

You may use any space in this book for rough work for multiple-choice questions only.

**Note:**

The diagrams in these booklets are **not** all drawn to scale.

The use of cellphones, audio- or video-recording devices, digital music players or e-mail or text messaging devices during the assessment is prohibited.

**No work in this booklet  
will be scored.**

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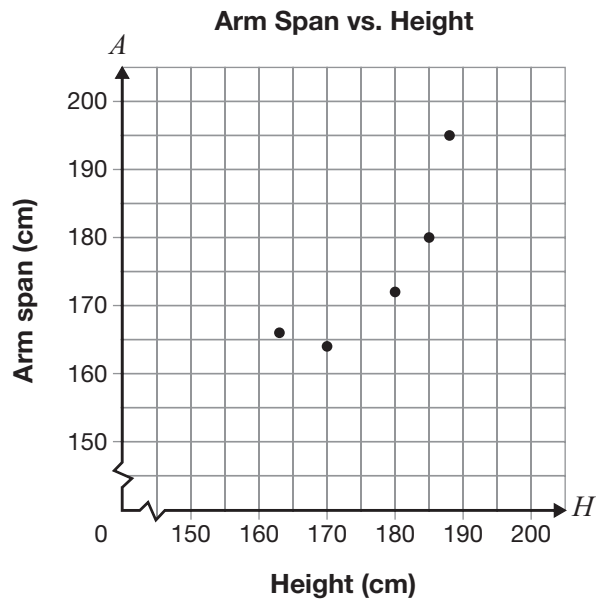


Continue to follow along as your teacher  
reads the directions on the cover of  
*Answer Booklet 1*.



Remember to write your answers  
in your *Answer Booklet 1*.

- 1** Five students plot their arm span and height on the graph below.



Which of the following describes one of these 5 students?

- A height: 166 cm; arm span: 162 cm
- B height: 170 cm; arm span: 164 cm
- C height: 180 cm; arm span: 165 cm
- D height: 195 cm; arm span: 188 cm

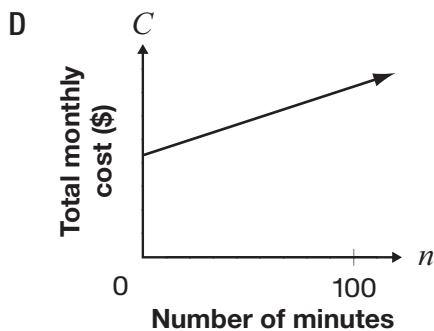
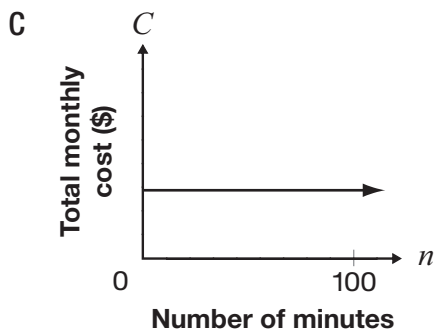
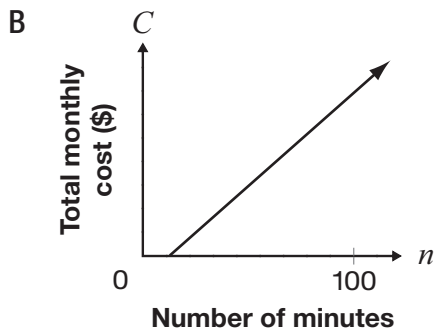
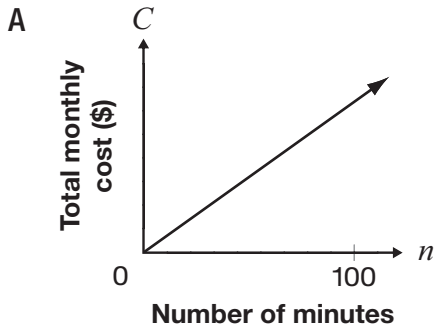
- 2** The ratio of the width to the height of a television screen is 16:9.

If the height of the screen is 52 cm, which is closest to the width?

- F 92 cm
- G 87 cm
- H 59 cm
- J 29 cm

- 3** Each month, Alex’s cellphone plan costs \$15, plus \$0.10 per minute of use.

Which graph could represent Alex’s total monthly cost?



- 4** Carla belongs to a movie subscription service. Her total monthly cost consists of a \$16 fee and \$1.50 per movie viewed.

Susan’s total monthly cost for a different movie subscription service has a fee that is \$4 less than Carla’s, but the cost per movie viewed is the same.

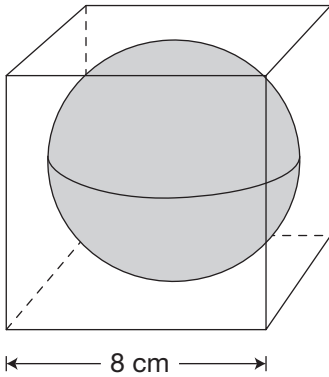
Which of the following represents Susan’s total monthly cost,  $C$ , in dollars, where  $n$  is the number of movies viewed?

- F**  $C = 20 + 1.5n$   
**G**  $C = 12 + 1.5n$   
**H**  $C = 13.5n$   
**J**  $C = 12n$

- 5** What is the value of  $x$  in the equation  $25 - \sqrt{x} = 9$ ?

- A** 4  
**B** 16  
**C** 225  
**D** 256

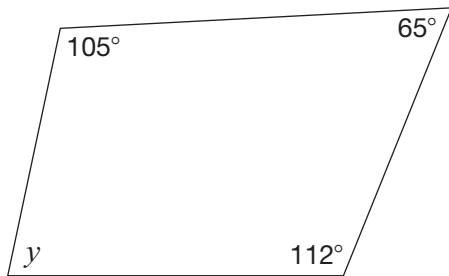
- 6** The diagram below shows a spherical globe in a cube-shaped box. The globe fits tightly in the box.



Which is closest to the volume of empty space in the box?

- F  $244 \text{ cm}^3$
- G  $268 \text{ cm}^3$
- H  $512 \text{ cm}^3$
- J  $780 \text{ cm}^3$

- 7** What is the value of  $y$  in the diagram below?



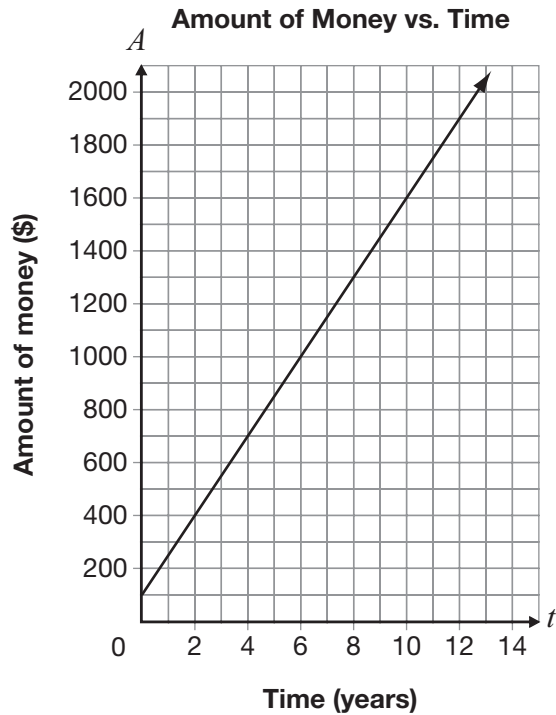
- A  $65^\circ$
- B  $75^\circ$
- C  $78^\circ$
- D  $102^\circ$



Go to *Answer Booklet 1* and complete the four open-response questions before continuing with question 12.

- 8** Open-Response
- 9** Open-Response
- 10** Open-Response
- 11** Open-Response

- 12** A graph representing the relationship between the amount of money in a bank account and time, in years, is shown below.



What is the rate of change for this relationship?

- F \$200 per year
- G \$160 per year
- H \$150 per year
- J \$100 per year

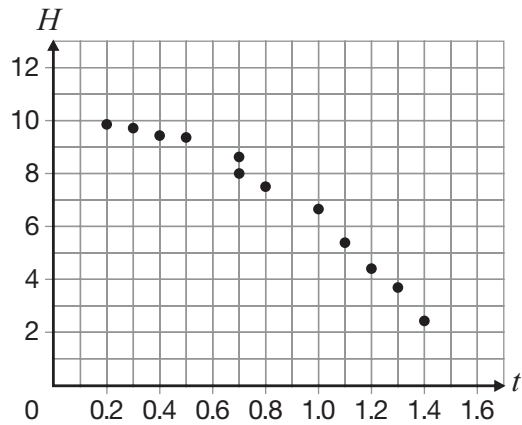
- 13** Each year, a school sends 50 students to a conference.

Last year, the cost was \$12.50 per student. This year, the cost per student has increased by 16%.

What is the total cost to send 50 students to the conference this year?

- A \$625
- B \$633
- C \$725
- D \$841

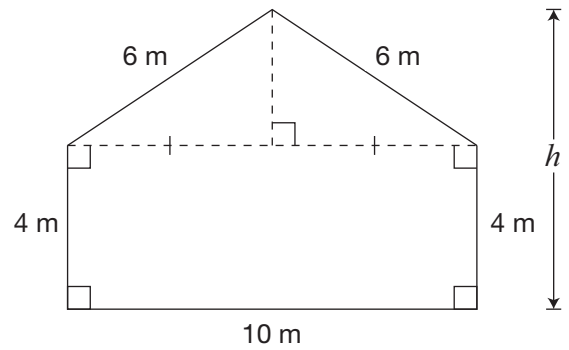
- 14** The scatter plot below shows data from an experiment.



Which of the following best represents the trend in this data?

- F** a line that starts at (0, 10) and ends at (1.5, 0)
- G** a line that starts at (0, 0) and ends at (1.6, 12)
- H** a curve that starts at (0, 10) and ends at (1.5, 0)
- J** a curve that starts at (0, 0) and ends at (1.6, 12)

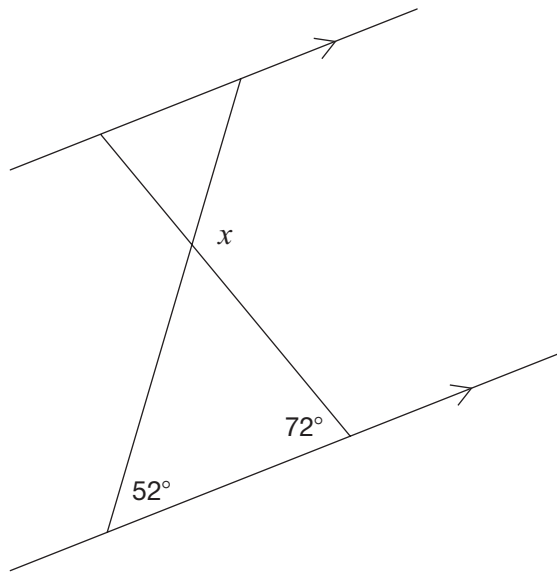
- 15** The diagram below represents the front view of a house.



Which is closest to the height,  $h$ , of the house?

- A** 3 m
- B** 7 m
- C** 10 m
- D** 12 m

- 16** What is the value of  $x$  in the diagram below?



- F  $56^\circ$   
 G  $72^\circ$   
 H  $108^\circ$   
 J  $124^\circ$

- 17** Data in the table below is from a linear relationship.

$n$	$C$
2	10
4	16
6	22
8	
10	
12	

What is the value of  $C$  when  $n = 10$ ?

- A 24  
 B 28  
 C 34  
 D 40

- 18** A formula for the relationship between a person's maximum heart rate,  $H$ , and the person's age,  $a$ , is shown below.

$$H = 217 - 0.85a$$

According to the formula, which of the following is closest to Jasmin's maximum heart rate if she is 14 years old?

- F 203  
 G 205  
 H 229  
 J 239



# STOP

You have finished *Booklet 1*.

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