

Grade 9 Assessment of Mathematics, 2002–2003

# Release Items

## Booklet 1—Multiple-Choice Academic Program



Education  
Quality and  
Accountability  
Office



Education  
Quality and  
Accountability  
Office

# Student Answer Sheet— Booklet 1

Please ensure that all your answers to the multiple-choice questions in *Booklet 1* are entered on this Student Answer Sheet. To ensure your multiple-choice answers are included in the calculation of your final results, they must be entered on this sheet.

To indicate the correct answer, **fill in the circle completely using an HB pencil**, as shown below.

Correct ● Incorrect ⊗ ✓ ◐ ●

If you fill in more than one answer to a question, the question will be scored incorrect. To make a correction, cleanly erase the answer you wish to change and fill in the circle for your new answer.

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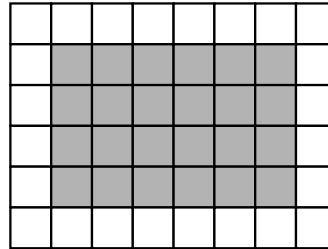
1. (A) (B) (C) (D)
  2. (F) (G) (H) (J)
  3. (A) (B) (C) (D)
  4. (F) (G) (H) (J)
  5. (A) (B) (C) (D)
  6. (F) (G) (H) (J)
  7. (A) (B) (C) (D)
  8. (F) (G) (H) (J)
  9. (A) (B) (C) (D)
  10. (F) (G) (H) (J)
  11. (A) (B) (C) (D)
  12. (F) (G) (H) (J)
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# Directions to Students About Answering Multiple-Choice Questions

- For this part of the assessment, make sure that you have the following materials along with *Booklet 1*:
  - a Student Answer Sheet
  - an HB pencil
  - a ruler and a protractor
  - a scientific calculator or graphing calculator
  - some paper for rough work
- Be sure to read the problem and all four answer choices for each question carefully. When you choose an answer, fill in the appropriate circle on your answer sheet.
- Always choose the best answer. Mark only one answer for each question.
- There are 24 questions in *Booklet 1*. Try to answer all of them. Do not spend too much time on any one question.
- Figures in this section are not drawn to scale.
- Now do the following sample question. Fill in your choice below the sample question.

## Sample Question

- Find the area of the shaded region of the rectangle below.




 1 square unit

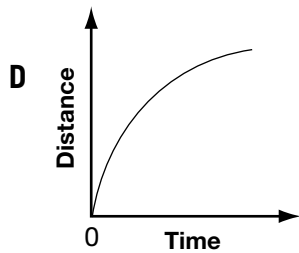
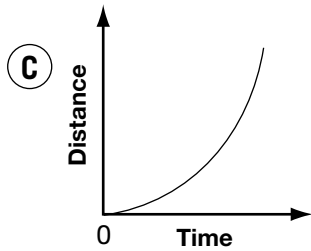
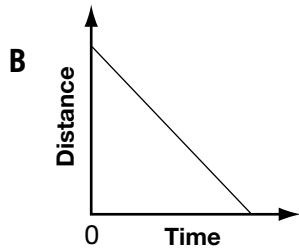
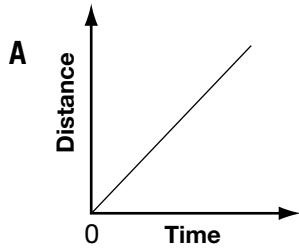
- A** 16 square units  
**B** 24 square units  
**C** 30 square units  
**D** 36 square units
- (A)  (B)  (C)  (D)

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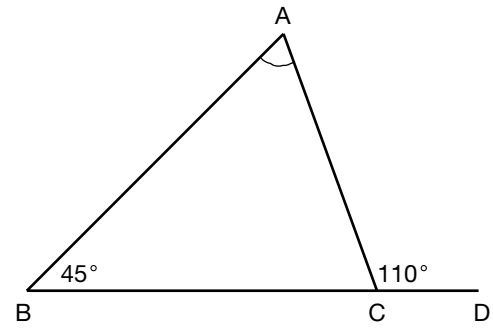
You should have filled in (B). To make a correction, cleanly erase the answer you wish to change and fill in the circle for your new answer.

- You will have **30 min** to do the 24 multiple-choice questions.
- When you see the  sign, you have completed *Booklet 1*. Check your answers. Then wait quietly for directions from your teacher.

1. Which distance-time graph below **best** illustrates a car that **gradually** increases its speed?



2. In the figure,  $\angle B = 45^\circ$  and  $BC$  is produced to  $D$ .



If  $\angle ACD = 110^\circ$ , what is the measure of  $\angle A$ ?

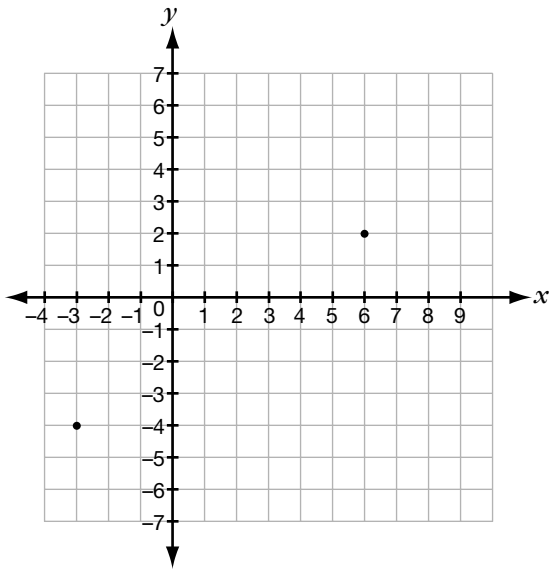
F  $45^\circ$

G  $55^\circ$

H  $65^\circ$

J  $75^\circ$

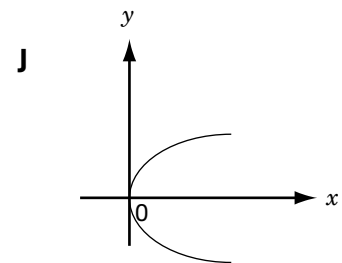
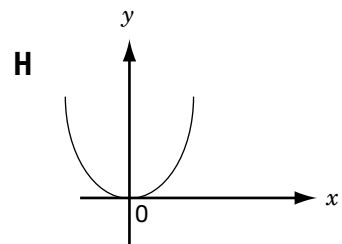
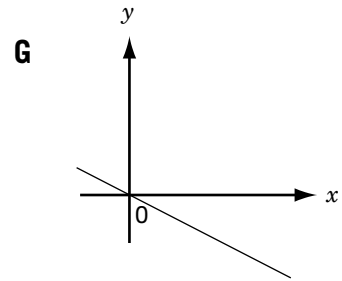
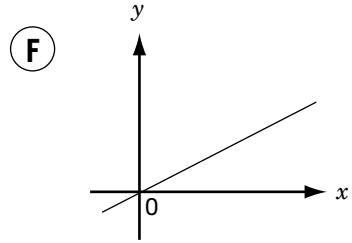
3. The points  $(-3, -4)$  and  $(6, 2)$  are marked on an  $xy$ -plane.



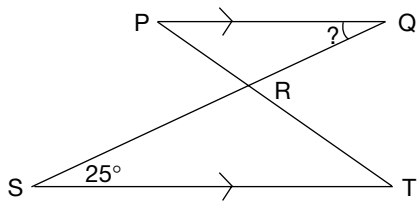
Which statement about the line through  $(-3, -4)$  and  $(6, 2)$  is **not** true?

- A Its  $x$ -intercept is 3.
- B Its slope is positive.
- C Its  $y$ -intercept is  $-2$ .
- D It passes through  $(4, 9)$ .

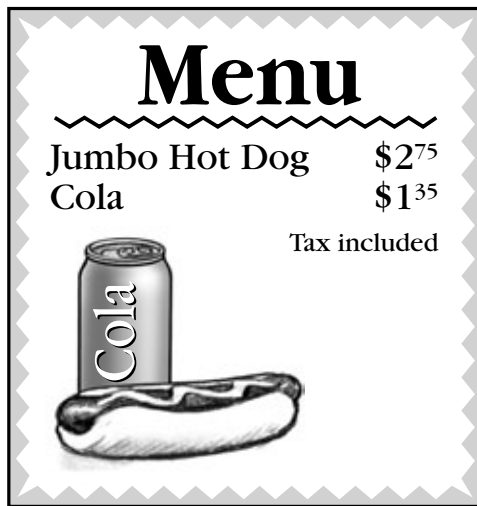
4. Which graph below is likely the graph for  $y = 2x$ ?



5. If  $PQ$  is parallel to  $ST$ , what is the measure of  $\angle PQR$ ?



- A  $25^\circ$   
 B  $35^\circ$   
 C  $60^\circ$   
 D  $120^\circ$
6. Pierre and his friends order from a hot dog stand.



Based on the price list given, how many hot dogs and colas do they buy with \$17.80?

- F 3 hot dogs and 5 colas  
 G 5 hot dogs and 3 colas  
 H 6 hot dogs and 4 colas  
 J 5 hot dogs and 5 colas

7. The area of a square is between  $5000 \text{ cm}^2$  and  $7500 \text{ cm}^2$ .

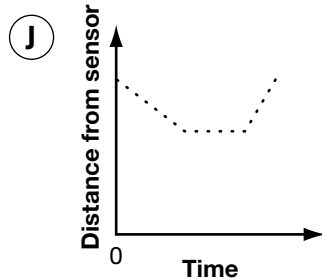
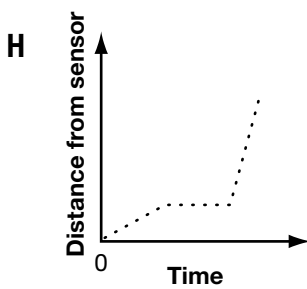
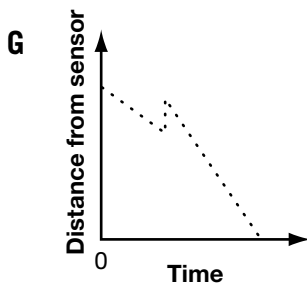
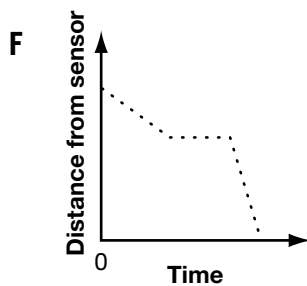
Which value could be the length, in centimetres, of one side of the square?

- A 50  
 B 60  
 C 70  
 D 80

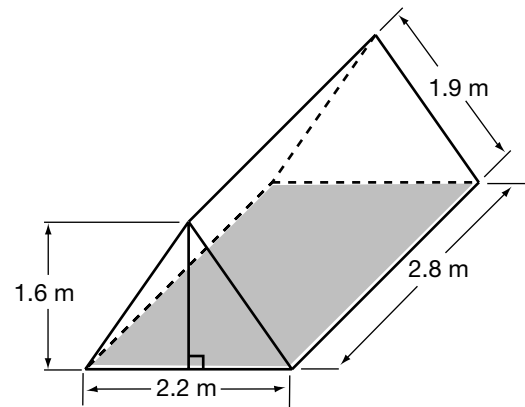
8. Mark places a motion sensor on a table. He walks slowly toward the sensor, waits a moment, then walks quickly backward away from the sensor.



Which graph below best represents his motion?



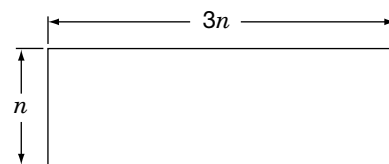
9. The figure below shows the dimensions of a tent.



What is the total area of the walls on the **two sides** and the **two ends**, correct to the nearest square metre?

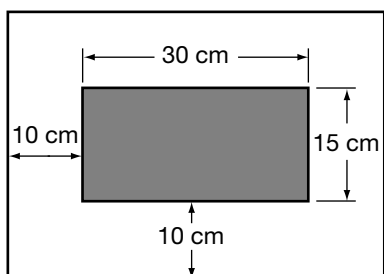
- A** 12 m<sup>2</sup>  
**B** 14 m<sup>2</sup>  
**C** 16 m<sup>2</sup>  
**D** 20 m<sup>2</sup>

10. If the perimeter of this rectangle is 120 units, what is its area in square units?



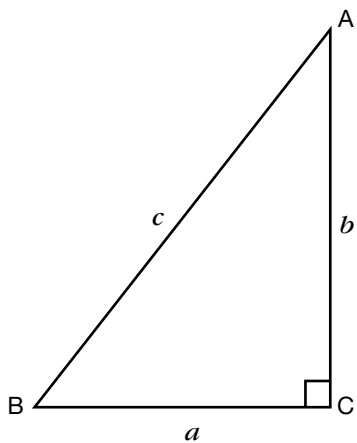
- F** 675  
**G** 900  
**H** 1225  
**J** 2700

11. A picture measures 30 cm by 15 cm. The mat around the picture is 10 cm wide as shown.



Find the **area** of the mat.

- A  $450 \text{ cm}^2$   
B  $1000 \text{ cm}^2$   
C  $1200 \text{ cm}^2$   
D  $1300 \text{ cm}^2$
12.  $\triangle ABC$  is a right-angled triangle with  $BC = a$ ,  $AC = b$  and  $AB = c$ .



Which statement is **not** true?

- F  $c > a + b$   
G  $c^2 = a^2 + b^2$   
H  $\angle C = 90^\circ$   
J  $\angle A + \angle B = 90^\circ$

