



**Provincial Mathematics Assessment at Grade 8**

**English Prime**

# **Sample Assessment**

**2011**



**PROVINCIAL ASSESSMENT PROGRAM**

Provincial Mathematics Assessment Program: Information Bulletin

February, 2011

Assessment and Evaluation Branch  
Department of Education and Early Childhood Development  
Province of New Brunswick  
P.O. Box 6000  
Fredericton, N.B.  
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Canada

# For the teacher

## Information Regarding the Provincial Mathematics Assessment at Grade 8

The Provincial Mathematics Assessment at Grade 8 will take place on Monday, June 6<sup>th</sup> (calculator) and Tuesday, June 7<sup>th</sup> (non-calculator), 2011. The general layout of the assessments will be as follows:

<b>Grade 8</b>
<b>Part A: Calculator</b> Multiple Choice Constructed Response
<b>Part B: Non-Calculator</b> Mental Mathematics Multiple Choice Constructed Response

To assist teachers and to ensure consistent administration, all teachers will use the *Teacher Guide* in the administration of the June assessment. Every teacher will receive the *Teacher Guide* along with each class set of assessment booklets.

Answer Sheets (bubble sheets) are no longer required for the grade 8 provincial assessment.

All items within the mathematics assessments are aligned to the New Brunswick Mathematics Curriculum. The following sample assessment is provided to illustrate the questions and test formatting and is not, in any way, meant to be a comprehensive representation of the assessment.

For further information on the Mathematics Assessment at Grade 8, please see the 2011 Mathematics Information Bulletin located on the portal on the Assessment and Evaluation site: <https://portal.nbed.nb.ca/tr/AaE/Pages/default.aspx>

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Provincial Mathematics  
Assessment at Grade 8

Sample Assessment  
Booklet A  
Calculator  
English Prime

INSTRUCTIONS FOR STUDENTS:

- Some parts of this assessment require written answers. For these questions, be sure to show your work.
- Other parts of this assessment require you to select the correct answer. For these questions you will shade the bubble of the correct answer.

Solve the following questions by filling in the bubble of the correct answer.

1. Given that  $2w + 4t = 60$ , and  $t = 8$ , find the value of  $w$ .

(A) 6

(B) 10

(C) 11

(D) 14

2. The ratio of boys to girls on the “green team” is 2:3. Which must be true?

(A) There are 3 times as many girls as boys.

(B) There are twice as many boys as girls.

(C) The number of people on the team is a multiple of 3.

(D) The number of people on the team is a multiple of 5.

3. A recipe used 500 mL of flour for every 125 mL of sugar. How much flour would be needed if 500 mL of sugar are used?

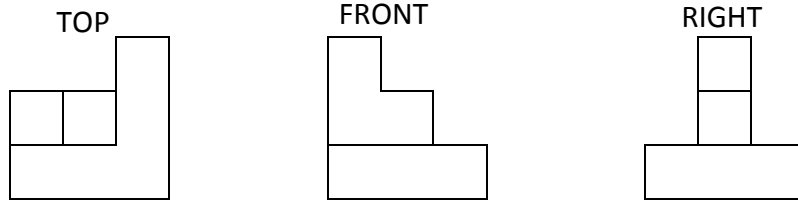
Ⓐ 1 L

Ⓑ 625 mL

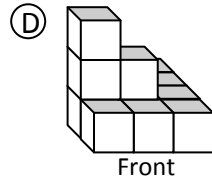
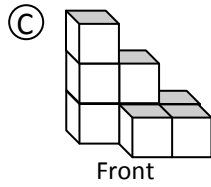
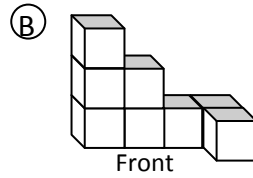
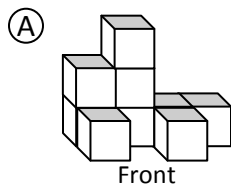
Ⓒ 375 mL

Ⓓ 2 L

4.

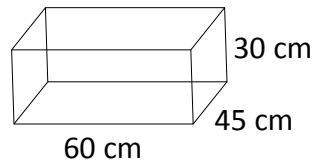


Which object was made using the set of plans above?





5. Jenny wants to cover only the sides and bottom (not the top) of this cardboard box with paper. How many square centimetres of paper will she need?



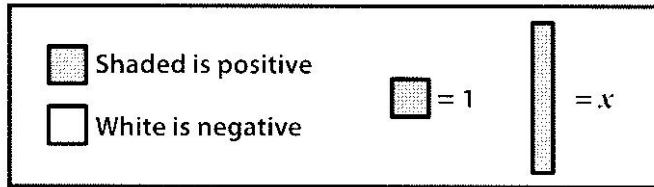
- (A) 5 850 cm<sup>2</sup>
- (B) 9 000 cm<sup>2</sup>
- (C) 11 700 cm<sup>2</sup>
- (D) 81 000 cm<sup>2</sup>
6. Richard has  $5\frac{1}{3}$  cups of flour. His cookie recipe requires  $1\frac{2}{3}$  cups of flour to make one batch. What is the greatest number of full batches he will be able to bake?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

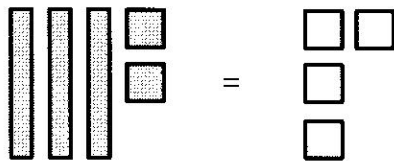
7. The values for  $x$  and  $y$  are related as follows:  $y = 2x + 5$ . If  $x$  increases by 3, what happens to  $y$ ?

- Ⓐ  $y$  would increase by 3
- Ⓑ  $y$  would increase by 6
- Ⓒ  $y$  would increase by 8
- Ⓓ  $y$  would increase by 11

8. Use the following key to answer question 8.



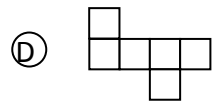
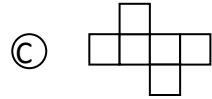
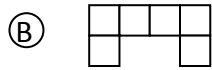
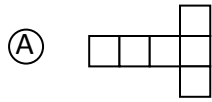
The diagram below represents an equation.



What would be the value of  $x$  for this equation?

- (A)  $x = -2$
- (B)  $x = -4$
- (C)  $x = 3$
- (D)  $x = 6$

9. Which is not a net for a cube?



10. A recipe uses  $1\frac{3}{4}$  cups of flour to make 24 cookies. How much flour is needed to make 72 cookies?

(A)  $5\frac{1}{4}$  cups

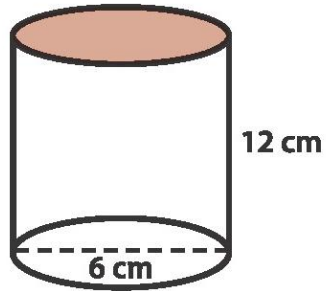
(B)  $4\frac{1}{2}$  cups

(C)  $3\frac{3}{4}$  cups

(D)  $3\frac{1}{2}$  cups

This section has questions that ask for written answers. Answer each question completely and remember to show all of your work.

A 355 mL can of juice has the following dimensions (diagrams not drawn to scale):



For each case of 12 cans the juice company is trying to decide whether to pack them in boxes that have:

- 1 row of 12 cans
- 2 rows of 6 cans or,
- 3 rows of 4 cans.

**A.** Determine the amount of material that would be needed to make each of the three boxes.

For each case of 12 cans the juice company is trying to decide whether to pack them in boxes that have:

1 row of 12 cans  
2 rows of 6 cans or,  
3 rows of 4 cans.

**B.** Do all of the boxes have the same volume? Explain.

**C.** Explain the pros and cons of using the boxes of different dimensions. Choose which you would use and explain why.

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# Mental Math

Solve the following questions using a **MENTAL MATH STRATEGY**. Please write your answers in the space provided. Show your thinking.

1.  $36 \times 25$

2. 5% of a number is 25. What is the number?

3.  $\frac{2}{3}$  of 48



Solve the following questions by filling in the bubble of the correct answer.

4.  $(-2) \times (6) \times (-7)$

Ⓐ -84

Ⓑ 84

Ⓒ -28

Ⓓ -56

5. Which of the following has a value that is closest to 8?

Ⓐ  $\sqrt{16}$

Ⓑ  $\sqrt{60}$

Ⓒ  $\sqrt{80}$

Ⓓ  $\sqrt{88}$

6.  $-350 \div -70$

(A) 5

(B) -5

(C) 50

(D) -50

7.  $3 \times 6\frac{1}{3}$

(A) 18

(B)  $18\frac{1}{3}$

(C) 19

(D)  $19\frac{1}{3}$

8. 
$$\frac{-4 + 10 \div -2}{12 - 3} =$$

(A)  $\frac{3}{9}$

(B)  $-\frac{3}{9}$

(C) 1

(D) -1

9. A seamstress has a piece of fabric  $\frac{6}{7}$  of a metre long. She cut it into 2 equal parts. How long is each part?

(A)  $\frac{12}{7}$

(B)  $\frac{3}{7}$

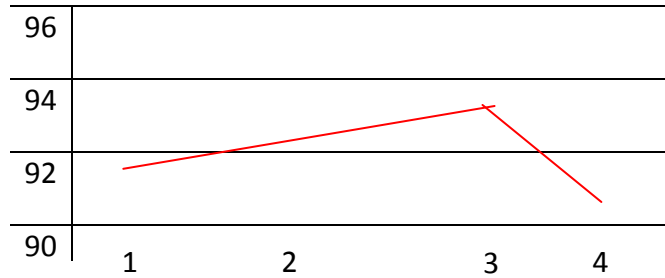
(C)  $\frac{12}{14}$

(D)  $\frac{3}{14}$

This section has questions that ask for written answers. Answer each question completely and remember to show all of your work.

The graph and the table below represent Elizabeth's scores in science for each report card.

Term	%
1	92
2	93
3	94
4	89



- A. This graph is poorly constructed. What should be changed or added to make the graph more accurate?
- B. Do you think Elizabeth should be worried about her scores? Explain your reasoning.

