



Provincial Mathematics Assessment at Grade 5

**Information Bulletin
2005-2006**

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INTRODUCTION

The Department of Education administers a comprehensive Provincial Evaluation Program to monitor overall student achievement at particular points in the system. This provides important feedback at provincial and local levels about students' knowledge and skills.

What is the purpose of a provincial mathematics assessment at the end of grade 5?

The Provincial Mathematics Assessment at Grade 5 is an important component of the Provincial Evaluation Program. It focuses on student performance at the end of kindergarten through grade 5.

Classroom teachers will administer the 2005-2006 Mathematics Assessment to grade 5 students between June 7 and 13, 2006.

What is the nature of the Provincial Mathematics Assessment at Grade 5?

The assessment is specific to the learning outcomes identified in provincial mathematics curriculum documents. It reflects an emphasis on the elements of problem solving, communication, reasoning and connections.

Where does the assessment come from?

New Brunswick educators construct assessment items and design the assessment format. This work is supported by an advisory committee of educational stakeholders, which includes elementary teachers, administrators and district office personnel as well as parents and representatives of the University of New Brunswick and the Department of Education.



Who will participate?

To obtain a realistic picture of student achievement after six years of schooling, virtually all grade 5 students will be involved in the assessment.

Modifications to administrative procedures may be considered to enable students with special needs to participate. Although parts of the mathematics assessment may be read to students with reading difficulties, help cannot be given with the interpretation, solution or approach to a question. For details regarding accommodations, see Eligibility: Elementary Assessments in the Appendix to this document.

What is the format of the Provincial Mathematics Assessment at Grade 5?

The Provincial Mathematics Assessment at Grade 5 will be administered by classroom teachers on a flexible schedule between June 7 and 13, 2006.

The assessment will take approximately two 45-minute sessions to complete. Each student will be required to complete approximately 40 multiple-choice, 10 open-response and 12 mental mathematics questions.

French Immersion students will have bilingual versions of the assessment and may respond in either French or English.

Administrative Guidelines for the Provincial Mathematics Assessment at Grade 5 will be provided prior to the assessment.

What will the assessment questions be like?

Sample questions, tied to curriculum strands and outcomes, are presented in this document. They reflect the nature and complexity of questions that will appear in the Provincial Mathematics Assessment at Grade 5. Teachers are encouraged to familiarize students with the types of questions to be asked by having them work through these samples and/or similar items.

Sample items may also be found in previous Provincial Assessment at Grade 5 Information Bulletins and online at <http://www.gnb.ca/0000/anglophone-e.asp#4>.

Current curriculum documents and support resources provide additional assessment models and suggestions. Such references include

- Elementary Mathematics Curriculum Guide and Item Bank,
- Mathematics Item Banks,
- Foundation for the Atlantic Canada Mathematics Curriculum.



How will the Provincial Mathematics Assessment at Grade 5 be scored?

Prior to the marking sessions, committees of teachers, supervisors and departmental consultants will develop marking criteria and select representative models of student responses for training purposes. Scoring will take place in early July. Experienced educators, primarily practising teachers, will be invited to score student work according to established marking criteria. Marking sessions will be organized and supervised by the Evaluation Branch.

How will results be reported?

Early in the new school year, results will be reported. Districts and schools will be provided provincial, district and school level information as well as individual student results.

How can students be helped to prepare for this assessment?

If assessment results are to demonstrate as accurately as possible what students know and can do under given conditions, then the assessment situation and the type of tasks should be familiar to students. By knowing the expected curriculum outcomes and helping students to attain them, teachers (K-5) will, in the regular course of their classroom instruction, help students prepare for an assessment of this nature. Certainly, the use of the support references cited previously will help clarify curriculum expectations for students and the school community as a whole.

Students may benefit from experiences that focus on various strategies for approaching open-ended and multiple-choice questions. Suggestions on how to approach individual questions will vary but could form the basis for discussion as students work through samples.



PROVINCIAL MATHEMATICS ASSESSMENT AT GRADE 5, 2005: FINDINGS

Background

The Provincial Assessment at Grade 5 was administered in the spring and highlighted student achievement in mathematics at the end of six years of schooling. Results were reported in terms of Strong Performance, Appropriate Performance, and Experiencing Difficulty which, in turn, were linked to the percentage of items answered correctly.

Findings

- Five thousand nine hundred three students participated in the assessment, with an exemption rate of 4%.
- Sixty-seven percent of students performed at appropriate or better levels, thereby meeting the provincial standard in mathematics.
- Gender differences were minimal with males performing slightly better than females (67% met the standard compared to 66%).
- Twenty-four percent of the student population was enrolled in the French Immersion program and 76% in the English program.
- French Immersion students outperformed students in the English program, with 74% of French Immersion students meeting the provincial standard compared to 64% for students in the English program.



MATHEMATICS**Conceptual Framework**

The table below shows the conceptual framework for the mathematics component:

Strand	Percentage of Assessment
Number Concepts / Number and Relationship Operations (Number)	15%
Number Concepts / Number and Relationship Operations (Operations)	30%
Patterns and Relations	10%
Shape and Space (Measurement)	15%
Shape and Space (Geometry)	15%
Data Management & Probability (Data Management)	10%
Data Management & Probability (Probability)	5%
	100%



Mathematics Outcomes

Number Concepts / Number and Relationship Operations (Number)

- A1 • Represent whole numbers to the millions
- A2 • Interpret and model decimal tenths, hundredths and thousandths
- A3 • Interpret, model and rename fractions
- A4 • Demonstrate an understanding of the relationship between fractions and division
- A5 • Explore the concepts of ratio and rate informally
- A6 • Read and represent numbers to millions
- A7 • Read and represent numbers to thousandths
- A8 • Compare and order large numbers
- A9 • Compare and order decimals
- A10 • Compare and order fractions using conceptual methods
- A11 • Recognize and find factors of numbers

Number Concepts / Number and Relationship Operations (Operations)

- B1 • Find sums and differences involving decimals to thousandths
- B2 • Multiply 2-, 3- and 4- digit numbers by 1-digit numbers
- B3 • Find the product of two 2-digit numbers
- B4 • Divide 2-, 3- and 4-digit numbers by single-digit divisors and investigate division by 2-digit divisors
- B5 • Find simple products of whole numbers and decimals
- B6 • Divide decimal numbers by single-digit whole numbers
- B7 • Determine whether an open sentence is always, sometimes, or never true
- B8 • Solve and create addition and subtraction problems involving whole numbers and/or decimals
- B9 • Solve and create multiplication and division problems involving whole numbers and/or decimals
- B10 • Estimate sums and differences involving decimals to thousandths
- B11 • Estimate products and quotients of two whole numbers
- B12 • Estimate products and quotients of decimal numbers by single-digit whole numbers
- B13 • Perform appropriate mental multiplications with facility
- B14 • Divide numbers mentally when appropriate
- B15 • Multiply whole numbers by 0.1, 0.01 and 0.001 mentally

Patterns and Relations (Patterns)

- C1 • Use place value patterns to extend understanding of the representation of numbers to millions
- C2 • Recognize and explain the pattern in dividing by 10, 100, and 1000 and in multiplying by 0.1, 0.01 and 0.001



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- C3** • Solve problems using patterns
 - C4** • Rearrange factors to make multiplication simpler
 - C5** • Recognize and explain how a change in one factor affects a product or quotient
 - C6** • Predict how a change in unit affects an SI measurement
 - C7** • Manipulate the dimensions of a rectangle so that the area remains the same
 - C8** • Demonstrate an understanding that the multiplicative relationship between numerators and denominators is constant for equivalent fractions
 - C9** • Represent measurement relationships using tables and two-dimensional graphs

Shape and Space (Measurement)

- D1** • Solve simple problems involving the perimeters of polygons
- D2** • Calculate areas of irregular shapes
- D3** • Determine the measure of right, acute and obtuse angles
- D4** • Demonstrate an understanding of the relationship among particular SI units
- D5** • Develop formulas for areas and perimeters of squares and rectangles
- D6** • Solve simple problems involving volume and capacity
- D7** • Estimate angle size in degrees
- D8** • Determine which unit is appropriate in a given situation and solve problems involving length and area

Shape and Space (Geometry)

- E1** • Draw a variety of nets for various prisms and pyramids
- E2** • Identify, describe and represent the various cross-sections of cubes and rectangular prisms
- E3** • Make and interpret isometric drawings of shapes made from cubes
- E4** • Explore relationships between area and perimeter of squares and rectangles
- E5** • Predict and construct figures made by combining two triangles
- E6** • Recognize, name, describe and represent perpendicular lines/segments, bisectors of angles and segments, and perpendicular-bisectors of segments
- E7** • Recognize, name, describe and construct right, obtuse and acute triangles
- E8** • Make generalizations about the diagonal properties of squares and rectangles and apply them
- E9** • Make generalizations about the properties of translations and reflections and apply them
- E10** • Explore rotations of one-quarter, one-half and three-quarter turns, using a variety of centres
- E11** • Make generalizations about the rotational symmetry properties of squares and rectangles and apply them
- E12** • Recognize, name and represent figures that tessellate
- E13** • Explore how figures can be dissected and transformed into other figures



Data Management and Probability (Data Management)

- F1** • Use double bar graphs to display data
- F2** • Use bar graphs to display and interpret data
- F3** • Use coordinate graphs to display data
- F4** • Create and interpret line graphs
- F5** • Group data appropriately and use stem-and-leaf plots to describe the data
- F6** • Recognize and explain the effect of changes in data on the mean of that data
- F7** • Explore relevant issues for which data collection assists in reaching conclusions

Data Management and Probability (Probability)

- G1** • Conduct simple experiments to determine probabilities
- G2** • Determine simple theoretical probabilities and use fractions to describe them



Sample Mathematics Items

The following types of mathematics sample items are provided: multiple-choice, open-response and mental mathematics questions. The correct answers for the multiple-choice questions are highlighted in bold. Statistical information on provincial student performance is given for sample items.

In the information bulletins prior to 2006, the sample items ranged in levels of difficulty. This year, a focus has been placed on questions that illustrate the outcomes with which students have most often experienced difficulty. Teachers are asked to refer to the information bulletins from the years 2000 to 2005 to view sample items of varying levels of difficulty.

The mathematics questions on the 2005-2006 assessment will be similar to those given in the 2004-2005 Assessment.

The time limit for the Mental Mathematics portion of the assessment is 3 minutes.



Multiple-Choice Questions 2005

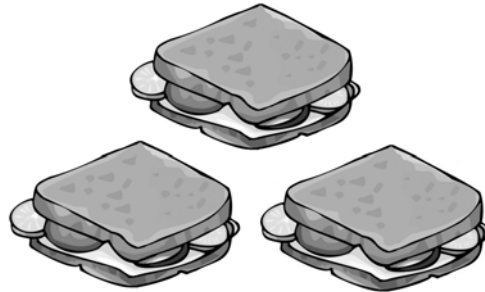
1. If 2 children share 3 sandwiches fairly, what fraction of the sandwiches does each child get?

A. $\frac{2}{3}$

B. $\frac{3}{2}$

C. $\frac{2}{5}$

D. $\frac{5}{2}$



*GCO: A4	A. 43%	B. 43%	C. 11%	D. 3%
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2. Which answer is about 60?

A. $4872 \div 78$

B. $2300 \div 32$

C. $2241 \div 51$

D. $125 \div 22$

GCO: B11	A. 30%	B. 20%	C. 20%	D. 30%
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*GCO – General Curriculum Outcome



3. **Multiplying a number by 0.01 is the same as**

- A. multiplying by 100.
- B. multiplying by 10.
- C. **dividing by 100.**
- D. dividing by 10.

GCO: B15	A. 25%	B. 19%	C. 37%	D. 19%
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4. **Which is longest?**

- A. 0.05 m
- B. 0.5 m
- C. **55 cm**
- D. 400 mm

GCO: C6	A. 13%	B. 28%	C. 44%	D. 15%
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5. **257 m is equal to**

- A. 257 000 cm
- B. **25 700 cm**
- C. 2570 cm
- D. 27.5 cm

GCO: D4	A. 26%	B. 40%	C. 25%	D. 9%
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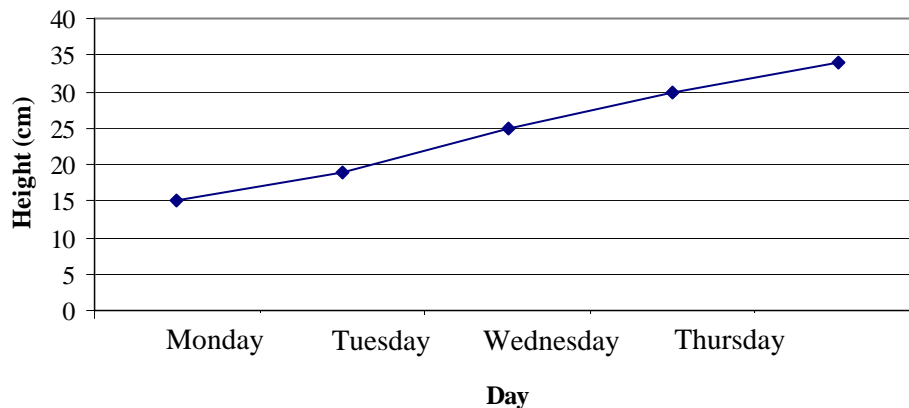
6. The length of a rectangle is 10 cm.
Its area is 50 cm^2 .
What is its perimeter?

- A. 30 cm
- B. 40 cm
- C. 60 cm
- D. 500 cm

GCO: D8	A. 47%	B. 18%	C. 17%	D. 18%
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7. The height of a plant is measured each day.

Plant Height



On which day did the plant grow the most?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday

GCO: F4	A. 4%	B. 32%	C. 11%	D. 53%
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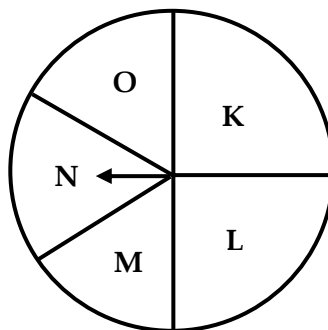
8. What is the probability of spinning an “N” on this spinner?

A. $\frac{1}{3}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{6}$



GCO: G2

A. 8%

B. 8%

C. 49%

D. 35%



9. You rolled a number cube 10 times. The results are shown below:

<u>The Number</u>	<u>Came up this many times</u>
1	1
2	3
3	1
4	0
5	1
6	4

What was the experimental probability of rolling a 6?

- A. $\frac{1}{10}$
- B. $\frac{2}{5}$
- C. $\frac{3}{10}$
- D. $\frac{4}{6}$

GCO: G2	A. 20%	B. 21%	C. 8%	D. 51%
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Multiple-Choice Questions 2000-2004

1. Which is the same as 0.231?

A. $\frac{231}{1}$

B. $\frac{231}{10}$

C. $\frac{231}{100}$

D. $\frac{231}{1000}$

GCO: A7 Mean = 44%

2. Which is greater than 2.298 and less than 3.41?

A. 2

B. 2.49

C. 35.2

D. 2.199

GCO: A9 Mean = 48%



3. Which fraction is between $\frac{2}{5}$ and $\frac{7}{10}$?

A. $\frac{3}{10}$

B. $\frac{1}{2}$

C. $\frac{3}{4}$

D. $\frac{4}{5}$

GCO: A10	Mean = 31%
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4. 3 is a factor of one of these numbers. Which one?

A. 34

B. 304

C. 361

D. 81

GCO: A11	Mean = 34%
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5. You cut a 5.25 m piece of yarn in half.
How long is each piece?

A. 2.18 m
B. 2.185 m
C. 2.63 m
D. **2.625 m**

GCO: B6 **Mean = 22%**

6. Three boxes of crackers cost \$4.50 altogether.
How much do 2 boxes cost?

A. \$1.50
B. \$1.75
C. **\$3.00**
D. \$3.25

GCO: B6 **Mean = 43%**

7. The product of 38 and another number is about 2800.
Which is the other number?

A. 700
B. **70**
C. 800
D. 28

GCO: B11 **Mean = 37%**



8. Which is the best estimate for $15\,234 \div 98$?

- A. 100
- B. 150**
- C. 200
- D. 250

GCO: B11	Mean = 43%
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9. How many metres are 55 000 cm?

- A. 55 m
- B. 550 m**
- C. 5500 m
- D. 5.5 m

GCO: C6	Mean = 42%
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10. The area of a 17×24 rectangle is the same as the area of which rectangle below?

- A. 10×31
- B. 34×48
- C. 34×12**
- D. 20×27

GCO: C7	Mean = 48%
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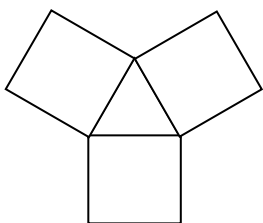


11. A square is 9 cm on a side.
Which is its area?

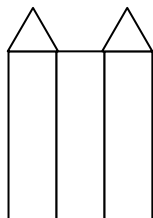
- A. 18 cm^2
- B. 36 cm^2
- C. 72 cm^2
- D. 81 cm^2

GCO: D5 Mean = 42%

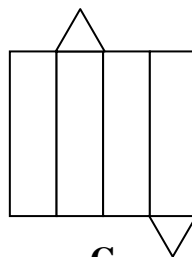
12. Which is the net for a triangular prism?



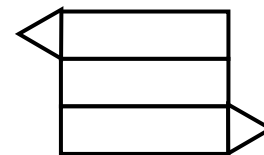
A.



B.



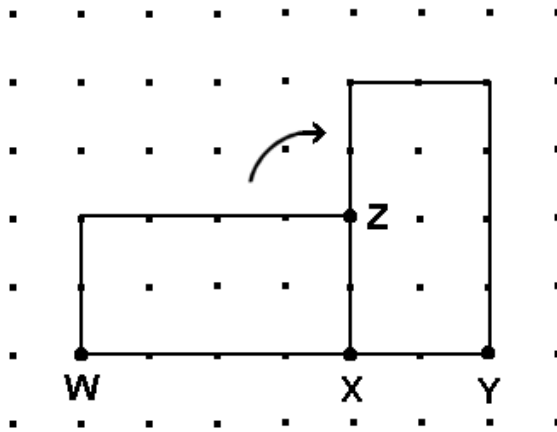
C.



D.

GCO: E1 Mean = 48%

13. The rectangle below was turned a quarter turn.
Where was the centre of rotation?



- A. Point W
- B. **Point X**
- C. Point Y
- D. Point Z

GCO: E10	Mean = 53%
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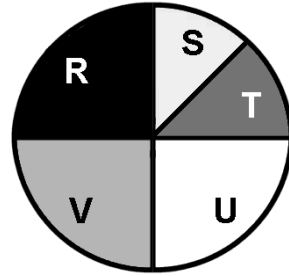
14. What is the probability of spinning an “S” on this spinner?

A. $\frac{1}{8}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{2}$



GCO: G2 Mean = 48%



Constructed-Response Questions 2000-2005

A6. Write the numeral for "four hundred fifty thousand six".

Maximum Value: 1 point

1 point 450 006

Comments:

- The incorrect use of commas is very common among students. They need to learn to separate groupings of digits (other than dollar amounts) with spaces rather than commas. The correct use of spacing should be emphasized.

GCO: A6	Mean = 57%
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B4. $3 \overline{)4532}$

Maximum Value: 1 point

1 point 1510 R2, 1510 r2, $1510\frac{2}{3}$, 1510.66666, 1510.6, 1510.67, 1510.7,
1510 with remainder evident in calculations

Comments

- Common errors include the following answers: 151 R2 (very common), 1510.2 (fairly common), 1510.66 R2 (not common; these children did not know what to do with a repeating decimal).

GCO: B4	Mean = 44 %
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**C4. To find 84×250 , Sue multiplied 21×1000 .
Why are the two answers the same?**

Maximum Value: 2 points

2 points A clear explanation of the " $\div 4, \times 4$ " calculation strategy

OR

an indication of a relationship which explains the calculation strategy

e.g. $21 \times 4 = 84$ and $250 \times 4 = 1000$

1 point Correct calculation of both answers (21 000)

GCO: C4	Mean = 0.6/2.0
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F4. The data below show the height of a plant in different months.

Month	Height (cm)
March	6
April	7
May	7.5
June	8.5
July	10

Draw a line graph to show the data.

Maximum Value: 3 points

- 3 points** One point for each of the following:
- correct labelling including 0 at the origin
 - correct values
 - line graph with at least 2 correct data points (not a bar graph or scatter plots)
- 2 points** Two of the above
- 1 point** One of the above

Notes:

- The graph can be drawn upwards, downwards or horizontally.
- For labelling:
 - Titles are not necessary.
 - There should be consistent spacing e.g. 0, 1, 2, 3... or 0, 2, 4, 6...
 - Not acceptable for labelling: 1,2,3... (with 1 at the origin); 0, 6, 7, 8...

GCO: F4	Mean = 1.2/3.0
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F5. The total number of goals scored by each player of a hockey team is shown below:

Mike	22
Paul	43
Will	10
Liam	19
Andrew	32
Chris	45
Brett	24
Joshua	11
Matt	30
John	11

Show this information in a stem-and-leaf plot.

1		0	1	1	9
2		2	4		
3		0	2		
4		3	5		

Maximum Value: 2 points

2 points All the data must be displayed in order from left to right. The stem can be in ascending or descending order.

1 point Complete data, but not in ascending or descending order and/or lined up.

Notes:

- The student cannot score 2 points if the data is not lined up.
- If there were to be a value less than 10, the student cannot score 2 points if 0 is left out of the stem. (This does not apply to this example.)

Comments:

- Most students did have complete data. Those who did not received a 0.
- Many students are still unaware that the data are supposed to be lined up. The lining up is important because the representation is similar to that of a bar graph. The length of the leaves is similar to the heights of the bars in a bar graph.
- Many students do not know that commas are not to be used.

GCO: F5	Mean = 1.2/2.0
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Mental Mathematics 2005

		Answer	% Correct
1.	$9 \times 8 =$	<u>72</u>	87%
2.	$20 \times 40 =$	<u>800</u>	72%
3.	$3 \times 432 =$	<u>1296</u>	78%
4.	$150 \div 25 =$	<u>6</u>	56%
5.	$900 - 499 =$	<u>401</u>	51%
6.	$16 \times 50 =$	<u>800</u>	46%
7.	$876 \times 0.1 =$	<u>87.6</u>	63%
8.	$359 \div 10 =$	<u>35.9</u>	51%
9.	$4.98 + 4.98 =$	<u>9.96</u>	57%
10.	$2 \times 36 \times 5 =$	<u>360</u>	66%
11.	Half of 486 is	<u>243</u>	81%
12.	Estimate: 18.9×31.7	<u>600</u>	12%



Réponses choisies 2005

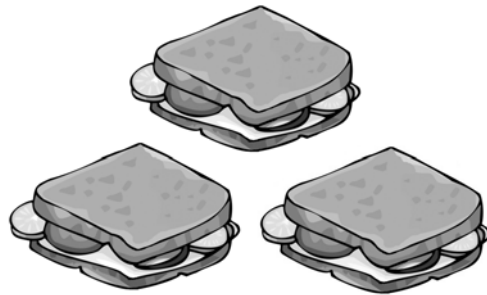
1. Si 2 enfants se partagent également 3 sandwichs, quelle fraction d'un sandwich chaque enfant reçoit-il ?

A. $\frac{2}{3}$

B. $\frac{3}{2}$

C. $\frac{2}{5}$

D. $\frac{5}{2}$



RAP* : A4	A. 43 %	B. 43 %	C. 11 %	D. 3 %
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2. Quel résultat correspond environ à 60 ?

A. $4872 \div 78$

B. $2300 \div 32$

C. $2241 \div 51$

D. $125 \div 22$

RAP : B11	A. 30 %	B. 20 %	C. 20 %	D. 30 %
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* RAP – Résultats d'apprentissage du programme



3. Multiplier un nombre par 0,01 correspond à

- A. multiplier par 100.
- B. multiplier par 10.
- C. **diviser par 100.**
- D. diviser par 10.

RAP : B15	A. 25 %	B. 19 %	C. 37 %	D. 19 %
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4. Quelle mesure est la plus longue ?

- A. 0.05 m
- B. 0.5 m
- C. **55 cm**
- D. 400 mm

RAP : C6	A. 13 %	B. 28 %	C. 44 %	D. 15 %
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5. 257 m est égal à

- A. 257 000 cm
- B. **25 700 cm**
- C. 2570 cm
- D. 27,5 cm

RAP : D4	A. 26 %	B. 40 %	C. 25 %	D. 9 %
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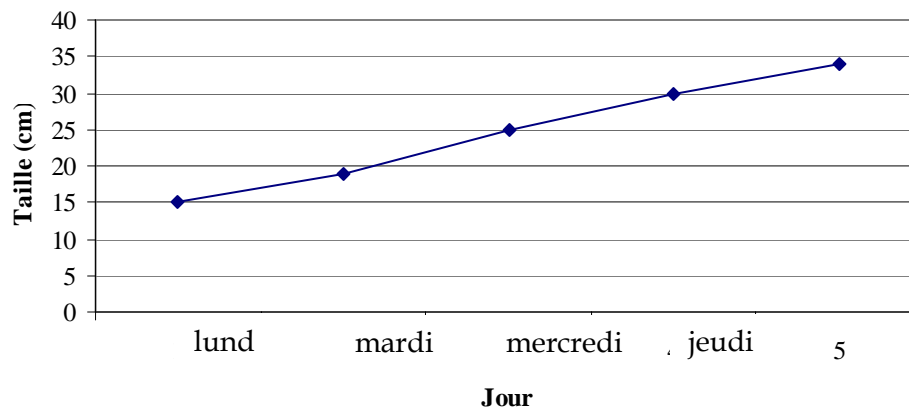
6. La longueur d'un rectangle est de 10 cm.
Son aire mesure 50 cm^2 .
Quel est son périmètre ?

- A. 30 cm
- B. 40 cm
- C. 60 cm
- D. 500 cm

RAP : D8	A. 47 %	B. 18 %	C. 17 %	D. 18 %
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7. Chaque jour, on mesure une plante.

Taille de la plante



Quand la plante a-t-elle grandi le plus ?

- A. lundi
- B. **mardi**
- C. mercredi
- D. jeudi

RAP : F4	A. 4 %	B. 32 %	C. 11 %	D. 53 %
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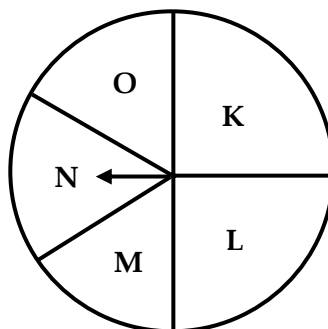
8. Quelle est la probabilité d'obtenir la lettre « N » en faisant tourner cette roulette ?

A. $\frac{1}{3}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{6}$



RAP : G2

A. 8 %

B. 8 %

C. 49 %

D. 35 %



9. Un dé numéroté a été lancé 10 fois. Les résultats obtenus sont les suivants :

<u>Chiffre</u>	<u>Nombre de fois obtenu</u>
1	1
2	3
3	1
4	0
5	1
6	4

Quelle était la probabilité expérimentale d'obtenir le chiffre 6 ?

- A. $\frac{1}{10}$
- B. $\frac{2}{5}$
- C. $\frac{3}{10}$
- D. $\frac{4}{6}$

RAP : G2	A. 20 %	B. 21 %	C. 8 %	D. 51 %
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Réponses choisies 2000-2004

1. Lequel est le même que 0,231?

A. $\frac{231}{1}$

B. $\frac{231}{10}$

C. $\frac{231}{100}$

D. $\frac{231}{1\ 000}$

RAP : A7 Moyenne = 44 %

2. Quel nombre est plus grand que 2,29 et moins grand que 3,41 ?

A. 2,2

B. 2,49

C. 3,6

D. 2,199

RAP : A9 Moyenne = 48 %



3. Quelle fraction est située entre $\frac{2}{5}$ et $\frac{7}{10}$?

A. $\frac{3}{10}$

B. $\frac{1}{2}$

C. $\frac{3}{4}$

D. $\frac{4}{5}$

RAP : A10	Moyenne = 31 %
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4. 3 est un facteur d'un de ces nombres. Lequel ?

A. 34

B. 304

C. 361

D. 81

RAP : A11	Moyenne = 34 %
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-
5. Tu coupes en deux un bout de laine qui mesure 5,25 m.
Combien mesure chaque bout de laine ?

A. 2,18 m
B. 2,185 m
C. 2,63 m
D. 2,625 m

RAP : B6 Moyenne = 22 %

6. Trois boîtes de craquelins coûtent 4,50 \$ en tout.
Combien coûteraient 2 boîtes ?

A. \$1.50
B. \$1.75
C. **\$3.00**
D. \$3.25

RAP : B6 Moyenne = 43 %

7. Le produit de 38 et d'un autre nombre est d'environ 2 800.
Quel est l'autre nombre ?

A. 700
B. **70**
C. 800
D. 28

RAP : B11 Moyenne = 37 %



8. Quelle est la meilleure estimation pour $15\,234 \div 98$?

- A. 100
- B. 150**
- C. 200
- D. 250

RAP : B11 Moyenne = 43 %

9. Combien de mètres font 55 000 cm ?

- A. 55 m
- B. 550 m**
- C. 5 500 m
- D. 5,5 m

RAP : C6 Moyenne = 42 %

10. L'aire d'un rectangle qui mesure 17 x 24 est la même que l'aire de quel rectangle ci-dessous ?

- A. 10×31
- B. 34×48
- C. 34×12**
- D. 20×27

RAP : C7 Moyenne = 48 %

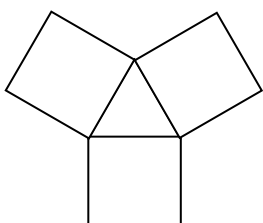


11. Chaque côté d'un carré mesure 9 cm.
Quelle est l'aire de ce carré ?

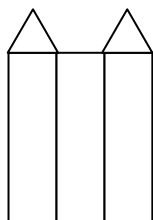
- A. 18 cm^2
- B. 36 cm^2
- C. 72 cm^2
- D. 81 cm^2

RAP : D5 Moyenne = 42 %

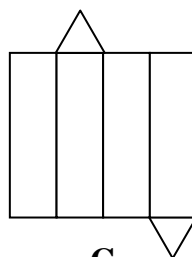
12. Quel développement correspond à un prisme à base triangulaire ?



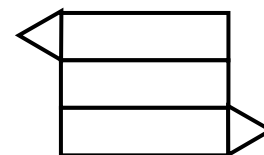
A.



B.



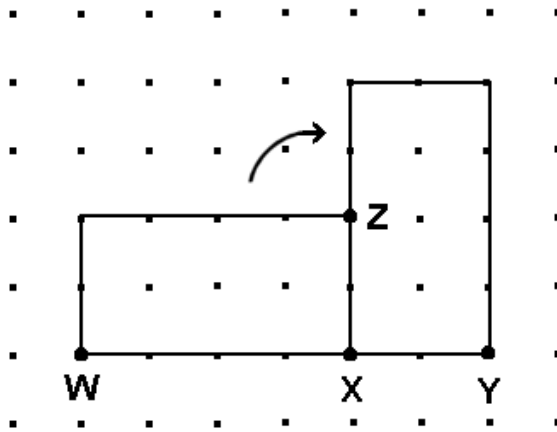
C.



D.

RAP : E1 Moyenne = 48 %

13. Ce rectangle a subi une rotation d'un quart de tour.
Où était le centre de rotation ?



- A. au point W
- B. **au point X**
- C. au point Y
- D. au point Z

RAP : E10	Moyenne = 53 %
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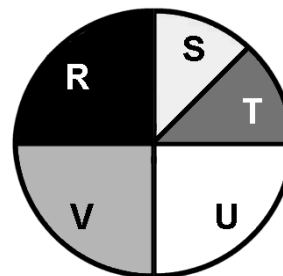
14. Quelle est la probabilité d'obtenir la lettre « S » en faisant tourner cette roulette ?

A. $\frac{1}{8}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{2}$



RAP : G2 **Moyenne = 48 %**



Réponses construites 2000-2005

A6. Écris en chiffres le nombre « quatre cent cinquante mille six.

Maximum Value: 1 point

1 point 450 006

Comments:

- The incorrect use of commas is very common among students. They need to learn to separate groupings of digits (other than dollar amounts) with spaces rather than commas. The correct use of spacing should be emphasized.

RAP : A6	Moyenne = 57 %
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B4. $3 \overline{)4532}$

Maximum Value: 1 point

1 point 1510 R2, 1510 r2, $1510\frac{2}{3}$, 1510.66666, 1510.6, 1510.67, 1510.7,
1510 with remainder evident in calculations

Comments

- Common errors include the following answers: 151 R2 (very common), 1510.2 (fairly common), 1510.66 R2 (not common; these children did not know what to do with a repeating decimal).

RAP : B4	Moyenne = 44 %
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**C4. Pour trouver la réponse à 84×250 , Sue a multiplié $21 \times 1\,000$.
Pourquoi les réponses sont-elles les mêmes ?**

Maximum Value: 2 points

2 points A clear explanation of the " $\div 4, \times 4$ " calculation strategy

OR

an indication of a relationship which explains the calculation strategy

e.g. $21 \times 4 = 84$ and $250 \times 4 = 1000$

1 point Correct calculation of both answers (21 000)

RAP : C4	Moyenne = 0,6/2,0
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F4. Les données ci-dessous montrent la taille d'une plante à différents mois.

Mois	Taille (cm)
mars	6
avril	7
mai	7,5
juin	8,5
juillet	10

Dessine un diagramme à ligne brisée pour montrer les données.

Maximum Value: 3 points

- 3 points** One point for each of the following:
- correct labelling including 0 at the origin
 - correct values
 - line graph with at least 2 correct data points (not a bar graph or scatter plots)
- 2 points** Two of the above
- 1 point** One of the above

Notes:

- The graph can be drawn upwards, downwards or horizontally.
- For labelling:
 - Titles are not necessary.
 - There should be consistent spacing e.g. 0, 1, 2, 3... or 0, 2, 4, 6...
 - Not acceptable for labelling: 1,2,3... (with 1 at the origin); 0, 6, 7, 8...

RAP : F4	Moyenne = 1,2/3,0
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F5. Le tableau suivant représente le nombre total de buts comptés par chaque joueur d'une équipe de hockey :

Joueur	Buts
Mike	22
Paul	43
Will	10
Liam	19
Andrew	32
Chris	45
Brett	24
Joshua	11
Matt	30
John	11

Montre cette information dans un diagramme à tiges et à feuilles.

1		0	1	1	9
2		2	4		
3		0	2		
4		3	5		

Maximum Value: 2 points

2 points All the data must be displayed in order from left to right. The stem can be in ascending or descending order.

1 point Complete data, but not in ascending or descending order and/or lined up.

Notes:

- The student cannot score 2 points if the data is not lined up.
- If there were to be a value less than 10, the student cannot score 2 points if 0 is left out of the stem. (This does not apply to this example.)

Comments:

- Most students did have complete data. Those who did not received a 0.
- Many students are still unaware that the data are supposed to be lined up. The lining up is important because the representation is similar to that of a bar graph. The length of the leaves is similar to the heights of the bars in a bar graph.
- Many students do not know that commas are not to be used.

RAP : F5	Moyenne = 1,2/2,0
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Le calcul mental 2005

		Réponse	Moyenne
1.	$9 \times 8 =$	<u>72</u>	87%
2.	$20 \times 40 =$	<u>800</u>	72%
3.	$3 \times 432 =$	<u>1 296</u>	78%
4.	$150 \div 25 =$	<u>6</u>	56%
5.	$900 - 499 =$	<u>401</u>	51%
6.	$16 \times 50 =$	<u>800</u>	46%
7.	$876 \times 0,1 =$	<u>87,6</u>	63%
8.	$359 \div 10 =$	<u>35,9</u>	51%
9.	$4,98 + 4,98 =$	<u>9,96</u>	57%
10.	$2 \times 36 \times 5 =$	<u>360</u>	66%
11.	La moitié de 486 est	<u>243</u>	81%
12.	Fais une estimation : $18,9 \times 31,7$	<u>600</u>	12%



Appendix

Eligibility: Elementary Assessments

Total Exemptions

Total exemptions from an Elementary Assessment should be considered for those students who have a cognitive deficit, multiple handicapping conditions or a specific learning disability to such a degree as would render the assessment inappropriate and/or emotionally harmful to them. Exemptions will be allowed for students who have been identified with exceptionalities and have current Special Education Plans, which document the need for exemption.

Partial Exemptions

Partial exemptions may be considered for students who are unable to attempt specific components of the assessments.

Accommodations

Teachers and principals should make every effort to enable students with special needs to participate in the assessment to the best of their ability with their peers. Appropriate accommodations should be provided to preserve students' self-respect and sense of belonging. Schools are encouraged to include as many students in the assessment as possible.

Scribes. Scribes may be allowed when appropriate for constructed responses on mathematics assessments. Scribes should be provided with the Guides for Scribes sheet, and should receive training beforehand.

A scribe should write exactly what the student dictates; interventions are not appropriate. A scribe should not ask leading questions, offer advice, nor in any way suggest changes or elaboration to the student's responses. As a general rule, a scribe for a student should not be a parent or immediate family member.

Additional time. The elementary assessments are not timed tests in the way that many of those later in the school system are. By and large, all students can take the time they need to finish the various parts of the assessment. Additional time may be requested for students who need it, such as those with identified processing difficulties.

Alternate setting. An alternate individual or small group setting may be provided for students whose learning difficulties make concentration a problem, or whose behavior may distract other students.

Provision of test in different format, e.g., large print, Braille.

Use of Sign Language or personal FM system.

Verbatim scribing of responses. (See Scribes.)



Process

Total and Partial Exemptions

The required forms should be completed by the Resource teacher in consultation with appropriate teachers and the school principal, and signed by the principal and a parent or guardian.

Completed forms should be sent to the district Director of Education for confirmation and signature. The Director of Education will then forward them to the Evaluation Branch.

Accommodations

The required forms should be completed by the classroom teacher or Resource teacher and signed by the principal.

Completed forms should be returned to the Evaluation Branch with copies sent to the Director of Education.

