Grade 6
Assessment Highlights
Mathematics

Alberta Provincial Achievement Testing

2017–2018

Alberta

This document contains assessment highlights from the 2018 Grade 6 Mathematics Achievement Test.

Assessment Highlights provides information about the overall test, the test blueprint, and student performance on the achievement test that was administered in 2018. Also provided is information on student performance at the acceptable standard and the standard of excellence on selected items from the 2018 Grade 6 Mathematics Achievement Test. This information is intended for teachers and is best used in conjunction with multi-year and detailed school reports that are available in schools via the extranet. *Assessment Highlights* reports for all achievement test subjects and grades are posted on the Alberta Education website every year in the fall.

The examination statistics that are included in this document represent both French and English writers. If you would like to obtain English-only statistics or French-only statistics that apply to your school, please refer to your detailed reports, which are available on the extranet.

All released achievement tests, including test blueprints, answer keys with the item difficulty, reporting category, test section, and item description for each test item, are posted on the Alberta Education website (see Achievement Documents).

These materials, along with the program of studies and subject bulletins, provide information that can be used to inform instructional practice.

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The Alberta Education Internet address is education.alberta.ca.

This document was written primarily for:

Students	
Teachers	✓ of Grade 6 Mathematics
Administrators	✓
Parents	
General Audience	
Others	

Contents

The 2018 Grade 6 Mathematics Achievement Test

This report provides teachers, school administrators, and the public with an overview of the performance of those students who wrote the 2018 Grade 6 Mathematics Achievement Test. It complements the detailed school and jurisdiction reports.

How Many Students Wrote the Test?

A total of 46 883 students wrote the 2018 Grade 6 Mathematics Achievement Test. The English form of the test was written by 43 089 students, and the French form of the test was written by 3 794 students.

What Was the Test Like?

The 2018 Grade 6 Mathematics Achievement Test consisted of two parts: **Part A** and **Part B**.
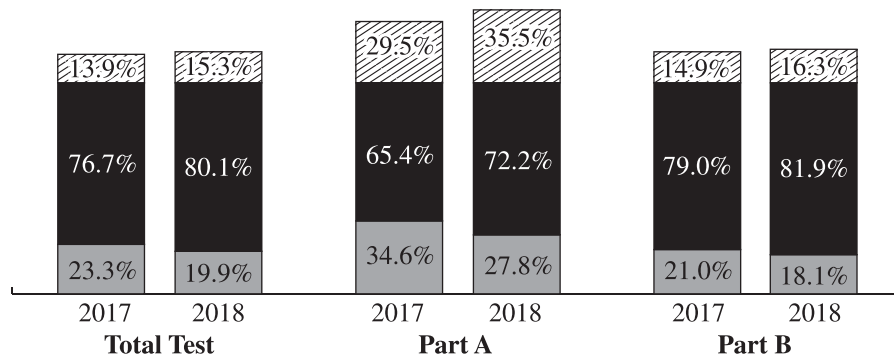
Part A consisted of 15 questions and represented 10% of the final overall test score. There were three addition questions, four subtraction questions, four multiplication questions, and four division questions. The format of the questions was numerical-response, which required students to generate a response (in symbolic form) to a particular problem, rather than selecting a response from a list of four options. Each response consisted of a maximum of four digits or, if a decimal point occurred in the answer, three digits.

Part B consisted of 40 questions and represented 90% of the final overall test score. The format of the questions was multiple choice, which provided students with four response options, of which only one was correct. The questions on the test required students to apply their understanding of one or more mathematical concepts from within and/or across the four strands: Number, Patterns and Relations, Shape and Space, and Statistics and Probability. The results presented in this report are based on the scores of all students who wrote the test. Detailed provincial assessment results are provided in school and jurisdiction reports.

How Well Did Students Do?

The percentages of students meeting the acceptable standard and the standard of excellence in 2018 are shown in the graph below. In 2018, 80.1% of students who wrote the Grade 6 Mathematics Achievement Test achieved the acceptable standard, and 15.3% of students who wrote achieved the standard of excellence.

Percentage of Students Meeting the Provincial Standards
(French and English combined)

	Total Test		Part A		Part B	
	2017	2018	2017	2018	2017	2018
Excellence	13.9%	15.3%	29.5%	35.5%	14.9%	16.3%
Acceptable	76.7%	80.1%	65.4%	72.2%	79.0%	81.9%
Below	23.3%	19.9%	34.6%	27.8%	21.0%	18.1%

The percentage of students in the province who met the standard of excellence on the 2018 Grade 6 Mathematics Achievement Test (based on those who wrote)

The percentage of students in the province who met the acceptable standard on the 2018 Grade 6 Mathematics Achievement Test (based on those who wrote)
Note: The percentage of students who met the acceptable standard includes the percentage of students who met the standard of excellence.

The percentage of students in the province who were below the acceptable standard on the 2018 Grade 6 Mathematics Achievement Test (based on those who wrote)

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2018 Test Blueprint and Student Achievement

The blueprint below shows how the questions on the test were classified and includes the average raw score in each category for all Grade 6 students who wrote this test. There was a very strong positive correlation between student performance on Part A and performance on Part B. This indicates a strong relation between routine algebraic operations and problem solving. Generally speaking, students who performed well on Part A also performed well on Part B, and vice versa.

Part A Test Blueprint

Program of Study Strands	Reporting Category: Number Operations				Provincial Student Achievement (Average Raw Score and Percentage)
	Addition	Subtraction	Multiplication	Division	
Number	3	4	4	4	9.9/15 (66.0%)
Provincial Student Achievement (Average Raw Score and Percentage)	2.2/3 (73.3%)	2.4/4 (60.0%)	2.8/4 (70.0%)	2.7/4 (67.5%)	

Part B Test Blueprint

Program of Study Strands	Level of Complexity*			Provincial Student Achievement (Average Raw Score and Percentage)
	Low	Moderate	High	
Number	9	5	1	8.9/15 (59.3%)
Patterns and Relations	2	7	1	6.3/10 (63.0%)
Shape and Space	2	6	1	5/9 (55.6%)
Statistics and Probability	1	4	1	3.5/6 (58.3%)
Provincial Student Achievement (Average Raw Score and Percentage)	9.4/14 (67.1%)	12.6/22 (57.3%)	1.6/4 (40.0%)	Raw Score 23.6/40 (59.0%)

*Each question is categorized according to its level of complexity (low, moderate, or high). Descriptions of the levels of complexity can be found in the *2018-2019 Mathematics 6 Subject Bulletin*.

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Sample Questions from the 2018 Grade 6 Mathematics Achievement Test— Part A

The following eight items illustrate significant performance differences between students who performed at the standard of excellence, at the acceptable standard, and below the acceptable standard.

Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
1	6.24	89.2	529	Number	Solve a problem involving addition of decimal numbers, with regrouping (Gr.5, N.11).

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	97.7	60	6.14 (50)	5.26 (47)	6.28 (42)
Students Achieving Acceptable Standard* (n = 33 842)	91.9	125	6.14 (192)	5.26 (135)	6.34 (107)
Students Below Acceptable Standard (n = 13 041)	74.7	499	6.14 (490)	6.34 (160)	6.25 (111)

*Includes those students who achieved the acceptable standard but not the standard of excellence

1. What is 5.75 + 0.49?

   Answer: _____

Common correct response:

Common incorrect responses:

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Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
8	8.59	57.6	931	Number	Solve a problem involving the addition of a whole number and decimal numbers, without regrouping.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	92.2	91	8.23 (699)	6.61 (136)	6.25 (136)
Students Achieving Acceptable Standard* (n = 33 842)	52.9	332	8.23 (3192)	6.61 (1927)	6.25 (825)
Students Below Acceptable Standard (n = 13 041)	19.4	851	8.23 (3587)	6.25 (1663)	6.61 (1164)

*Includes those students who achieved the acceptable standard but not the standard of excellence

8. What is 2 + 6.19 + 0.4?

Answer: _____

Common correct response:

Common incorrect responses:

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Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
3	22.5	59.3	814	Subtraction	Solve a problem involving the subtraction of a whole number from a decimal number, without regrouping.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	87.8	122	28.8 (1217)	40.5 (210)	22.7 (52)
Students Achieving Acceptable Standard* (n = 33 842)	52.9	334	28.8 (5090)	40.5 (288)	288 (184)
Students Below Acceptable Standard (n = 13 041)	31.2	708	28.8 (3266)	29.2 (713)	27 (270)

*Includes those students who achieved the acceptable standard but not the standard of excellence

3. What is 29.5 – 7?

   Answer: _____

Common correct response:

$$
\begin{array}{r}
29.5 \\
-7.0 \\
\hline
22.5
\end{array}
$$

Common incorrect responses:

$$
\begin{array}{r}
2\overset{8}{9}.15 \\
7 \\
\hline
28.5
\end{array}
$$

$$
\begin{array}{r}
29.5 \\
7 \\
\hline
29.2
\end{array}
$$

$$
\begin{array}{r}
\overset{6}{7}\overset{9}{8}.\overset{10}{0} \\
29.5 \\
\hline
40.5
\end{array}
$$

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Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
11	5.93	48.1	817	Subtraction	Solve a problem involving the subtraction of a decimal number from a whole number, with regrouping.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	90.7	109	6.07 (470)	2.98 (151)	3.02 (12)
Students Achieving Acceptable Standard* (n = 33 842)	38.0	341	6.07 (3175)	2.98 (2252)	5.03 (834)
Students Below Acceptable Standard (n = 13 041)	6.6	734	6.07 (2911)	2.98 (1227)	3.02 (1214)

*Includes those students who achieved the acceptable standard but not the standard of excellence

11. What is 9 – 3.07?

Answer: _____

Common correct response:

Common incorrect responses:

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Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
2	1701	56.3	2479	Multiplication	Solve a problem involving the multiplication of a 2-digit whole number by a 2-digit whole number (Gr.5, N.5).

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	88.6	349	1901 (144)	243 (128)	1620 (82)
Students Achieving Acceptable Standard* (n = 33 842)	56.6	1152	141 (584)	243 (470)	1901 (257)
Students Below Acceptable Standard (n = 13 041)	14.6	2067	141 (1403)	241 (443)	1221 (409)

*Includes those students who achieved the acceptable standard but not the standard of excellence

2. What is 27 × 63?

Answer: _____

Common correct response:

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Common incorrect responses:

27
× 63

27
63

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16
16
12
16
18
16
24
16
30
36
16
42

27
×63
81
162
243

27 / 243

27
+27
54

135
27

+

108

189

243

27
×63
141

Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
5	90.9	81.0	679	Multiplication	Demonstrate an understanding of multiplication of a decimal by a 1-digit whole number multiplier.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	96.6	56	909 (13)	9.09 (79)	10.1 (58)
Students Achieving Acceptable Standard* (n = 33 842)	86.7	176	909 (467)	90.3 (257)	9.09 (239)
Students Below Acceptable Standard (n = 13 041)	53.5	637	90.3 (1041)	30.9 (854)	909 (382)

*Includes those students who achieved the acceptable standard but not the standard of excellence

5. What is 30.3×3?

   Answer: _____

Common correct response:

Common incorrect responses:

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Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
10	1.06	59.4	1144	Division	Demonstrate an understanding of division of a decimal by a 1-digit natural number divisor.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	91.4	65	1.6 (958)	1.01 (97)	106 (48)
Students Achieving Acceptable Standard* (n = 33 842)	62.6	307	1.6 (3163)	1.01 (433)	106 (235)
Students Below Acceptable Standard (n = 13 041)	14.1	1095	1.6 (1689)	1.01 (651)	1.36 (618)

*Includes those students who achieved the acceptable standard but not the standard of excellence

10. What is $6.36 \div 6$?

Answer: _____

Common correct response:

Common incorrect responses:

Item #	Key	% of Students with Correct Solution	# of Unique Errors	Content Reporting Category	Item Description
13	8.29	55.9	1997	Division	Demonstrate an understanding of division of a decimal by a 1-digit natural number divisor.

Standards Achieved by Students on Part A	% of Students with Correct Solution	# of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (n = 16 642)	92.9	215	82.9 (133)	8.27 (71)	8 (70)
Students Achieving Acceptable Standard* (n = 33 842)	56.7	910	82.9 (784)	8 (457)	8.03 (273)
Students Below Acceptable Standard (n = 13 041)	7.2	1781	8 (571)	8.03 (380)	82.9 (293)

*Includes those students who achieved the acceptable standard but not the standard of excellence

13. What is $58.03 \div 7$?

Answer: _____

Common correct response:

Common incorrect responses:

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Sample Questions from the 2018 Grade 6 Mathematics Achievement Test— Part B

The following 14 items illustrate significant performance differences between students who performed at the standard of excellence, at the acceptable standard, and below the acceptable standard.

Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
7	C	61.4	N.3	Low	Identify the prime factors of a number that is less than 100.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	1.9	4.5	91.3	2.2	0.1
Students Achieving Acceptable Standard*	11.5	10.7	63.3	14.4	0.1
Students Below Acceptable Standard	20.5	23.1	32.2	23.5	0.7

*Includes those students who achieved the acceptable standard but not the standard of excellence

A factor tree for the number 36 is shown below.

```
        36
       /  \
      2    18
          /  \
         2    9
             / \
            3   3
```
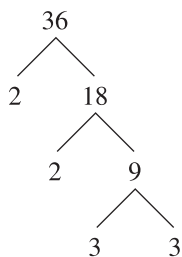
7. Which of the following statements is **correct**?

A. The product of two prime numbers is always prime.
B. The only prime factor of the number 36 is 3.
C. The numbers 2 and 3 are prime.
D. The number 9 is prime.

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
12	C	44.1	N.5	High	Identify a ratio that represents the area of part of a design to the area of the entire design.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	8.3	5.1	83.3	3.2	0.1
Students Achieving Acceptable Standard*	28.2	20.1	41.8	9.5	0.4
Students Below Acceptable Standard	34.3	31.0	21.3	12.4	0.9

*Includes those students who achieved the acceptable standard but not the standard of excellence
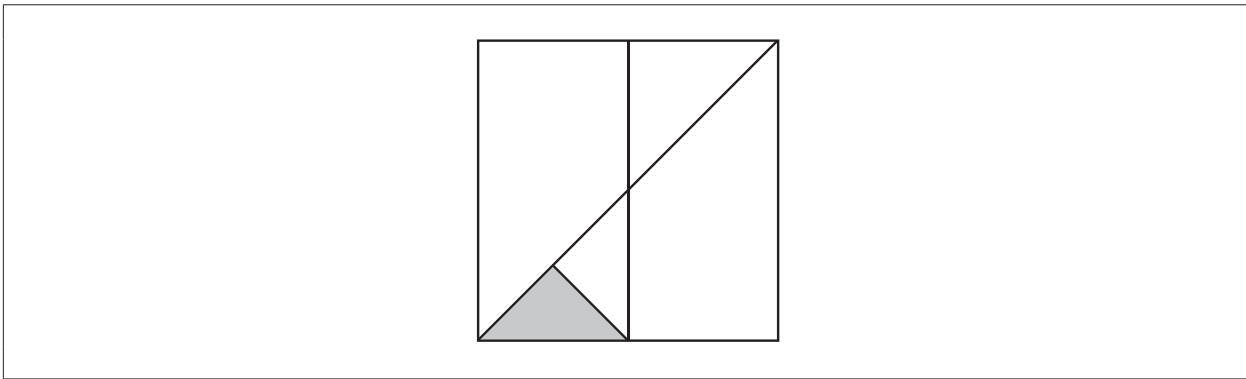
12. Which of the following ratios represents the ratio of the area of the shaded triangle to the area of the entire design shown above?

  A. 1:12
  B. 1:14
  C. 1:16
  D. 1:18

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
17	D	72.4	SS.1	Low	Identify types of angles found in the environment.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	0.2	4.5	0.7	94.5	0.0
Students Achieving Acceptable Standard*	2.5	15.2	5.7	76.5	0.1
Students Below Acceptable Standard	13.7	26.5	17.2	42.0	0.6

*Includes those students who achieved the acceptable standard but not the standard of excellence

A photograph and sketch of a barn at the Echo Dale Regional Park near Medicine Hat, Alberta, are shown below.

Photograph of Barn   **Front View of Barn**

Roof line
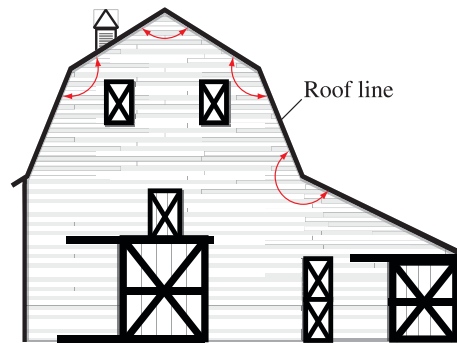
17. What types of angles are indicated in red in the front view of the barn shown above?

A. Acute and right

B. Acute and reflex

C. Obtuse and right

D. Obtuse and reflex

Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
18	A	65.1	PR.2	Moderate	Use a relationship in a table of values to solve a problem.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	95.1	3.5	1.0	0.4	0.0
Students Achieving Acceptable Standard*	68.2	21.9	6.4	3.3	0.1
Students Below Acceptable Standard	31.9	36.1	18.6	12.6	0.8

*Includes those students who achieved the acceptable standard but not the standard of excellence

A Grade 6 class researched the maximum mass of a backpack that a student should carry, based on the student's mass.

Mass of Student (kg)	Maximum Mass of Backpack (kg)
30	4.5
35	5.25
40	6.0
45	6.75

18. Based on the information above, the maximum mass of a backpack that a student with a mass of 55 kg should carry is

- **A.** 8.25 kg
- **B.** 8.5 kg
- **C.** 9.0 kg
- **D.** 9.75 kg

Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
20	C	77.1	N.6	Low	Express a given percent as a fraction.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	0.1	0.2	99.4	0.4	0.0
Students Achieving Acceptable Standard*	2.8	4.7	84.5	8.0	0.1
Students Below Acceptable Standard	16.6	17.4	36.0	29.3	0.7

*Includes those students who achieved the acceptable standard but not the standard of excellence

A campground has 100 campsites. On the first weekend in May, 25% of the campsites are occupied.

20. What fraction represents the number of campsites in the campground that are occupied?

A. $\dfrac{1}{2}$

B. $\dfrac{1}{3}$

C. $\dfrac{1}{4}$

D. $\dfrac{1}{5}$

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
22	A	74.1	PR.4	Moderate	Identify an expression that represents a given problem.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	98.1	0.7	0.8	0.4	0.0
Students Achieving Acceptable Standard*	79.6	7.3	7.4	5.6	0.1
Students Below Acceptable Standard	37.5	21.4	25.5	14.8	0.8

*Includes those students who achieved the acceptable standard but not the standard of excellence

Monique's parents rent a local skating rink for Monique's birthday party. The rink has a rental fee of $50 for each hour and $5 for each skater ($s$).

22. Which expression represents the total cost of the rental if Monique's parents rent the rink for 2 hours?

- **A.** $2 \times 50 + 5s$
- **B.** $5 \times 50 + 2s$
- **C.** $2 \times 5 + 100s$
- **D.** $s \times 50 + 5 + 2$

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
24	C	25.9	SP.4	High	Identify an action that would result in two experiments having the same theoretical probability of an event occurring.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	12.7	16.1	65.6	5.6	0.1
Students Achieving Acceptable Standard*	40.4	33.3	20.4	5.7	0.1
Students Below Acceptable Standard	53.6	25.8	13.4	6.3	0.8

*Includes those students who achieved the acceptable standard but not the standard of excellence

Two bags of marbles are shown below. Each bag contains red marbles and white marbles.

Bag 1   **Bag 2**

24. How many red marbles need to be added to Bag 2 so that the probability of drawing a red marble is the same for each bag?

  A.   3
  B.   4
  C.   6
 D.   9

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
29	D	63.0	SS.8	Low	Plot points in the first quadrant of the Cartesian plane using whole number ordered pairs.

Standards Achieved by Students on Part B	% of Student Responses				
	A	**B**	**C**	**D**	**No Response**
Students Achieving Standard of Excellence	5.9	4.3	1.1	88.7	0.0
Students Achieving Acceptable Standard*	14.2	13.2	6.9	65.6	0.1
Students Below Acceptable Standard	23.0	22.0	19.2	34.8	1.0

*Includes those students who achieved the acceptable standard but not the standard of excellence

Use the following information to answer question 29.

Gabby created a 2-D design in the first quadrant of the Cartesian plane by plotting the points (0, 9), (8, 9), (5, 6), (8, 3), and (0, 3) and connecting the points in the order given.
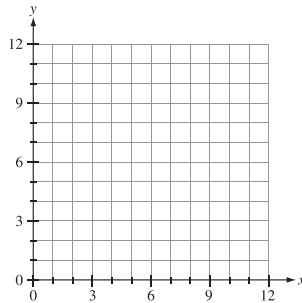
29. Which of the following 2-D designs matches the shape that Gabby created?
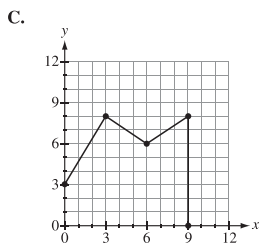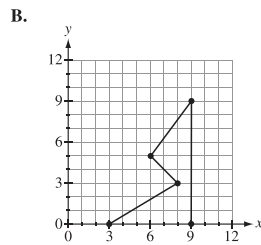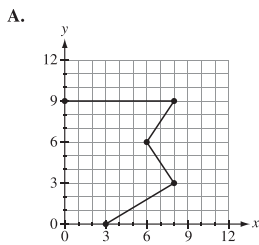
A.

B.

C.

D.

Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
30	B	42.6	SS.3	Moderate	Solve a given problem involving the volume of right rectangular prisms.

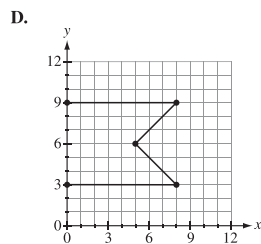| Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	17.4	78.2	2.1	2.3	0.0
Students Achieving Acceptable Standard*	32.8	39.6	11.3	16.1	0.2
Students Below Acceptable Standard	35.6	24.7	18.3	20.1	1.2

*Includes those students who achieved the acceptable standard but not the standard of excellence

Pizzas have been put into boxes and are ready for delivery, as shown below.

40.5 cm

40 cm

40 cm
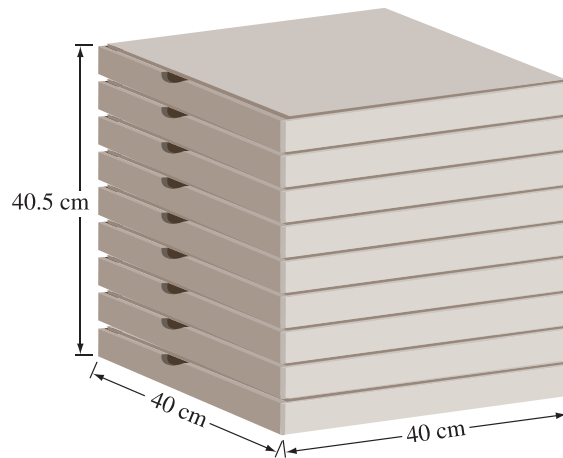
Pizza delivery bags, like the one shown below, will be used to deliver the pizzas.
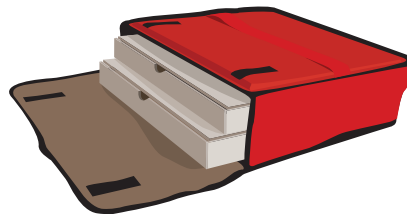
30. What is the minimum volume that the delivery bag shown above needs to be if **2** pizza boxes are placed in it?

    A.   7 200 cm^3

    B.   14 400 cm^3

    C.   21 600 cm^3

    D.   64 800 cm^3

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
34	B	58.8	PR.4	Moderate	Express a given problem as an equation in which a letter variable is used to represent an unknown number.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	2.4	92.9	4.2	0.5	0.0
Students Achieving Acceptable Standard*	18.1	60.0	16.8	4.9	0.2
Students Below Acceptable Standard	33.1	28.6	24.1	12.9	1.3

*Includes those students who achieved the acceptable standard but not the standard of excellence

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Dana joins an art club that meets once a week for 6 weeks. There is a one-time cost of $25.00 to join the club. At the beginning of each class, there is a $3 fee paid to cover the cost of materials. Dana attends 4 out of the 6 classes.

34. Which equation represents the total amount (n) that Dana pays to join the art club and attend classes?

A. $25 + (4 \times 6) = n$

B. $25 + (4 \times 3) = n$

C. $25 \times 4 + 3 = n$

D. $25 \times 4 = n$

Alberta Education, Provincial Assessment Sector   22   Mathematics 6

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
35	D	56.8	N.9	Low	Apply the order of operations to determine the value of an expression.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	0.0	14.5	1.2	84.2	0.0
Students Achieving Acceptable Standard*	2.8	27.8	10.0	59.2	0.2
Students Below Acceptable Standard	13.4	27.4	30.0	28.0	1.2

*Includes those students who achieved the acceptable standard but not the standard of excellence

35. The value of $12 + (24 \div 4) \times 6$ is

    A.   120

    B.   108

    C.   54

    D.   48

Alberta Education, Provincial Assessment Sector   23   Mathematics 6

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
37	C	62.1	SS.2	Moderate	Determine the measure of an unknown angle by applying knowledge of a straight angle and the sum of interior angles in a triangle.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	0.3	1.6	89.9	8.2	0.1
Students Achieving Acceptable Standard*	3.3	6.1	62.9	27.6	0.1
Students Below Acceptable Standard	15.3	16.1	38.0	29.4	1.2

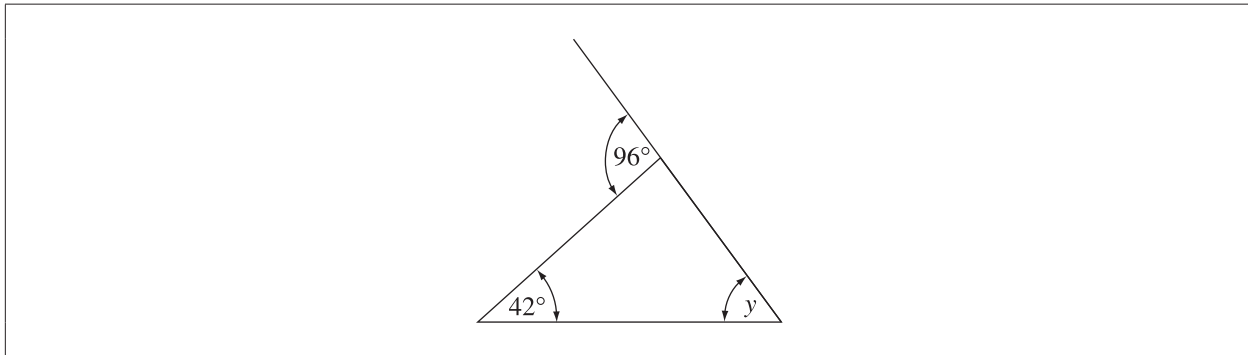*Includes those students who achieved the acceptable standard but not the standard of excellence

37. What is the measure of angle y in the diagram shown above?

A. 96°

B. 84°

C. 54°

D. 42°

Alberta Education, Provincial Assessment Sector   24   Mathematics 6

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
38	A	73.3	N.3	Low	Identify the factors of a number that are less than 100 to solve a given problem.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	98.8	0.6	0.2	.04	0.0
Students Achieving Acceptable Standard*	78.6	8.7	5.9	6.6	0.1
Students Below Acceptable Standard	36.2	23.0	20.9	18.6	1.2

*Includes those students who achieved the acceptable standard but not the standard of excellence

A physical education class of 24 students prepares to play a game. Students are to be divided into teams of equal numbers.

38. Based on the information above, students can be divided into teams of equal groups of

    A.   3, 4, 6, or 8 players

    B.   3, 4, 8, or 9 players

    C.   4, 6, 7, or 8 players

    D.   4, 6, 8, or 9 players

Alberta Education, Provincial Assessment Sector   25   Mathematics 6

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Item #	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
39	A	58.3	N.7	Low	From a given set of integers represented pictorially, identify the diagrams that represent a value that is between two integer values.

Standards Achieved by Students on Part B	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	91.6	6.9	0.4	1.1	0.0
Students Achieving Acceptable Standard*	61.0	28.6	3.7	6.6	0.1
Students Below Acceptable Standard	23.9	44.5	14.4	16.1	1.2

*Includes those students who achieved the acceptable standard but not the standard of excellence
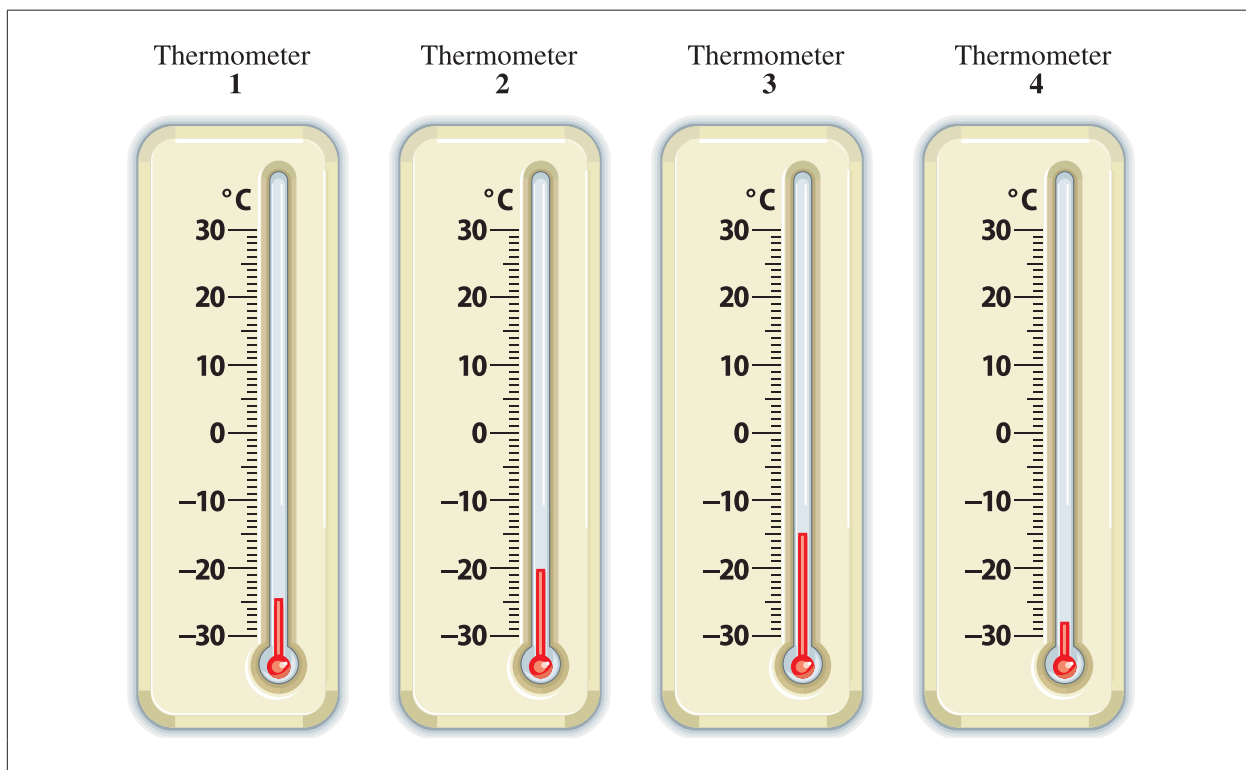
39. Which two thermometers shown above have a temperature reading that is between −19 °C and −26 °C?

A. Thermometers 1 and 2

B. Thermometers 2 and 3

C. Thermometers 3 and 4

D. Thermometers 1 and 4

Alberta Education, Provincial Assessment Sector   26   Mathematics 6

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Provincial Achievement Testing Program Support Documents

The Alberta Education website contains several documents that provide valuable information about various aspects of the Provincial Achievement Test program. To access these documents, go to the Alberta Education website. Click on one of the specific links to access the following documents.

Achievement Testing Program *General Information Bulletin*
The *General Information Bulletin* is a compilation of several documents produced by Alberta Education and is intended to provide superintendents, principals, and teachers with easy access to information about all aspects of the Provincial Achievement Test program. Sections in the bulletin contain information pertaining to schedules and significant dates; security and test rules; test administration directives, guidelines, and procedures; calculator and computer policies; test accommodations; test marking and results; field testing; resources and web documents; forms and samples; and Provincial Assessment Sector contacts.

Subject Bulletins
At the beginning of each school year, subject bulletins are posted on the Alberta Education website for all Provincial Achievement Test subjects for grades 6 and 9. Each bulletin provides descriptions of assessment standards, test design and blueprinting, and scoring guides (where applicable), as well as suggestions for preparing students to write the tests and information about how teachers can participate in test development activities.

Examples of the Standards for Students' Writing
For Provincial Achievement Tests in grades 6 and 9 English Language Arts and Français/French Language Arts, writing samples are designed for teachers and students to enhance students' writing and to assess this writing relative to the standards inherent in the scoring guides. The exemplars documents contain sample responses with scoring rationales that relate student work to the scoring categories and scoring criteria.

Previous Achievement Tests and Answer Keys
All January Provincial Achievement Tests (parts A and B) for Grade 9 semestered students are secured and must be returned to Alberta Education. All May/June Provincial Achievement Tests are secured except Part A of grades 6 and 9 English Language Arts and Français/French Language Arts. Unused or extra copies of only these Part A tests may be kept at the school after administration. Teachers may also use the released items and/or tests that are posted on the Alberta Education website.

Parent Guides
Each school year, versions of the *Alberta Provincial Achievement Testing Parent Guide* for grades 6 and 9 are posted on the Alberta Education website. Each guide answers frequently asked questions about the Provincial Achievement Test program and provides descriptions of and sample questions for each Provincial Achievement Test subject.

Involvement of Teachers
Teachers of grades 6 and 9 are encouraged to take part in activities related to the Provincial Achievement Test program. These activities include item development, test validation, field testing, and marking. In addition, arrangements can be made through the Alberta Regional Professional Development Consortia for teacher in-service workshops on topics such as interpreting Provincial Achievement Test results to improve student learning.