Grade 6
Assessment Highlights
Mathematics

Alberta Provincial Achievement Testing 2018–2019

Alberta

This document was written primarily for:

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

Alberta Education, Government of Alberta

2018–2019

Mathematics 6 Assessment Highlights

Distribution: This document is posted on the Alberta Education website.

Contents

You can find provincial achievement test-related materials on the Alberta Education website.

Additional topics of interest are found in the *General Information Bulletin*.

This document contains assessment highlights from the *2019 Grade 6 Mathematics Provincial Achievement Test*.

Assessment Highlights provides information about the overall test, the test blueprint, and student performance on the provincial achievement test that was administered in 2019. Also provided is information on student performance at the acceptable standard and the standard of excellence on selected items from the *2019 Grade 6 Mathematics Provincial Achievement Test*. This information is intended for teachers and is best used in conjunction with multi-year and detailed school reports that are available to schools via the Stakeholder File Exchange (SFX). *Assessment Highlights* for all provincial 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 Stakeholder File Exchange (SFX).

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The *2019 Grade 6 Mathematics Provincial Achievement Test*

This report provides teachers, school administrators, and the public with an overview of the performance of those students who wrote the *2019 Grade 6 Mathematics Provincial Achievement Test*. It complements the detailed school and jurisdiction reports.

How many students wrote the test?

A total of 49 753 students in Alberta wrote the *2019 Grade 6 Mathematics Provincial Achievement Test*.

What was the test like?

The *2019 Grade 6 Mathematics Provincial Achievement Test* consisted of two parts: *Part A* and *Part B*.
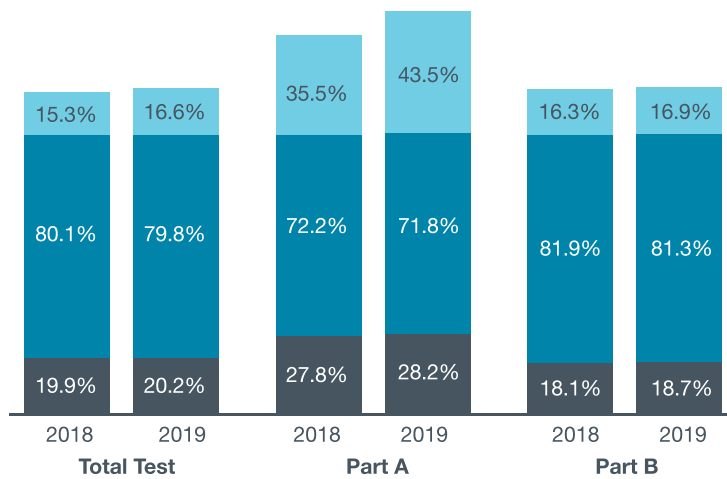
Part A consisted of 15 questions and represented 10% of the final overall test score. There were three addition questions, four subtraction questions, four multiplication questions, and four division questions. The format of the questions was numerical response, which required students to generate a response without the use of calculators (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*.

How well did students do?

The percentages of students meeting the acceptable standard and the standard of excellence in 2019 are shown in the graph below. The examination statistics that are included in this document represent both French and English writers. If you would like to obtain English-only or French-only statistics that apply to your school, please refer to the detailed reports that are available on the Stakeholder File Exchange (SFX).

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

	2018 Total Test	2019 Total Test	2018 Part A	2019 Part A	2018 Part B	2019 Part B
Standard of excellence	15.3%	16.6%	35.5%	43.5%	16.3%	16.9%
Acceptable standard	80.1%	79.8%	72.2%	71.8%	81.9%	81.3%
Below acceptable standard	19.9%	20.2%	27.8%	28.2%	18.1%	18.7%

The percentage of students in the province who met the standard of excellence on the *2019 Grade 6 Provincial Mathematics Achievement Test* (based on those who wrote)

The percentage of students in the province who met the acceptable standard on the *2019 Grade 6 Mathematics Provincial 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 *2019 Grade 6 Mathematics Provincial Achievement Test* (based on those who wrote)

2019 Test Blueprint and Student Achievement

In 2019, 79.8% of students who wrote the *Grade 6 Mathematics Provincial Achievement Test* achieved the acceptable standard, and 16.6% of students who wrote achieved the standard of excellence. There was a very strong positive correlation between student performance on *Part A* and performance on *Part B*. This suggests a strong relationship 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.

The blueprints below show the reporting categories by which 2019 summary data are reported to schools and school authorities. The blueprints also show the provincial average of student achievement by both raw score and percentage.

Part A Test Blueprint

Program of Study Strand	Reporting Category: Number Operations				Provincial Student Achievement (Average Raw Score and Percentage)
	Addition	Subtraction	Multiplication	Division	
Number	3	4	4	4	10.5/15 (70.0%)
Provincial Student Achievement (Average Raw Score and Percentage)	2.4/3 (80.0%)	2.5/4 (62.5%)	2.9/4 (72.5%)	2.7/4 (67.5%)	

Part B Test Blueprint

Program of Study Strand	Level of Complexity*			Provincial Student Achievement (Average Raw Score and Percentage)
	Low	Moderate	High	
Number	4	11	0	9.5/15 (63.3%)
Patterns and Relations	3	3	3	6.3/9 (70.0%)
Shape and Space	2	8	1	6.1/11 (55.5%)
Statistics and Probability	1	4	0	3.3/5 (66.0%)
Provincial Student Achievement (Average Raw Score and Percentage)	7.1/10 (71.0%)	15.8/26 (60.8%)	2.2/4 (55.0%)	Raw Score 25.2/40 (63.0%)

*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 *2019-2020 Mathematics 6 Subject Bulletin.*

Sample Questions from the *2019 Grade 6 Mathematics Provincial Achievement Test—Part A*

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

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
3	702	69.3	1 676	Multiplication	N.2 - Solve a problem involving the multiplication of a 2-digit whole number by a 2-digit whole number (Gr.5, N.5)

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	94.0	122	602 (50)	802 (44)	216 (43)
Students Achieving Acceptable Standard* (*n* = 14 075)	74.6	952	216 (799)	62 (540)	802 (442)
Students Below Acceptable Standard (*n* = 13 937)	32.4	1 277	62 (1 032)	216 (249)	512 (234)

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

3. What is 54×13?

    Answer: _____

Common correct response:

$$
\begin{array}{r}
1 \\
54 \\
\times 13 \\
\hline
162 \\
+540 \\
\hline
702
\end{array}
$$

	10	+	3
50	500		150
4	40		12

$$
\begin{array}{r}
500 \\
+150 \\
\hline
650 \\
+40 \\
\hline
690 \\
+12 \\
\hline
702
\end{array}
$$

Common incorrect responses:

$$
\begin{array}{r}
1 \\
54 \\
\times 13 \\
\hline
+162 \\
440 \\
\hline
602
\end{array}
$$

$$
\begin{array}{r}
54 \\
\times 13 \\
\hline
1162 \\
+54 \\
\hline
216
\end{array}
$$

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
4	76	74.1	1 781	Division	N.2 - Solve a problem involving division of a whole number by a 1-digit divisor (Gr.5, N.6)

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	96.4	89	86 (37)	75 (30)	91 (27)
Students Achieving Acceptable Standard* (*n* = 14 075)	81.0	957	71 (353)	75 (242)	86 (235)
Students Below Acceptable Standard (*n* = 13 937)	34.2	1 380	71 (165)	111 (146)	1 (139)

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

4. What is $456 \div 6$?

Answer: _____

Common correct response:

Common incorrect responses:

Answer: 86

$$6\overline{)456}$$

86

6)4'56
− 48↓
036
− 36
00

$6 + 6 = 12 + 12 \cdot 24 + 24 = 48 + 48 = 106 + 106 =$

$212 + 212 = 424 + 24 = 448 + 70 = 71$

75

6)456
0↓
45
42
036
36
0

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
6	3.04	62.8	957	Subtraction	N.2 - Solve a problem involving the subtraction of decimal numbers, with regrouping (Gr.5, N.11)

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	95.3	48	3.16 (192)	2.04 (20)	3.4 (18)
Students Achieving Acceptable Standard* (*n* = 14 075)	67.8	462	3.16 (4 956)	3.08 (530)	3.1 (370)
Students Below Acceptable Standard (*n* = 13 937)	19.9	823	3.16 (2 920)	3.08 (368)	3.68 (290)

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

6.   What is 6.8 – 3.76?

   Answer: _____

Common correct response:

$$
\begin{array}{r}
6.8\overset{7}{\cancel{8}}{}^{1}0 \\
-3.76 \\
\hline
3.04
\end{array}
$$

Common incorrect responses:

$$
\begin{array}{r}
6.8 \\
-3.76 \\
\hline
3.16
\end{array}
$$

$$
\begin{array}{r}
3.7\overset{6}{\cancel{7}}\overset{16}{\cancel{6}} \\
-\ \ 68 \\
\hline
3.08
\end{array}
$$

$$
\begin{array}{r}
3.\overset{6}{\cancel{7}}\overset{16}{\cancel{6}} \\
6.08 \\
\hline
3.68
\end{array}
$$

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
7	22.1	80.0	1 200	Division	N.8 - Demonstrate an understanding of division of a decimal by a 1-digit natural number divisor

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	97.9	39	221 (41)	22.4 (26)	22 (13)
Students Achieving Acceptable Standard* (*n* = 14 075)	87.0	482	221 (598)	22.4 (486)	22 (369)
Students Below Acceptable Standard (*n* = 13 937)	43.1	1 046	22.4 (254)	221 (246)	22 (245)

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

7. What is 88.4 ÷ 4?

Answer: _____

Common correct response:

Common incorrect responses:

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
10	2.07	57.7	1 522	Division	N.8 - Demonstrate an understanding of division of a decimal by a 1-digit natural number divisor

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	89.1	69	2.7 (588)	207 (38)	2.08 (28)
Students Achieving Acceptable Standard* (*n* = 14 075)	62.2	731	2.7 (4 562)	20.7 (578)	207 (439)
Students Below Acceptable Standard (*n* = 13 937)	17.6	1 304	2.7 (1 016)	2.49 (303)	20.7 (256)

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

10. What is $14.49 \div 7$?

Answer: _____

Common correct response:

Common incorrect responses:

$$
\begin{array}{r}
2.7 \\
7\,\overline{)14.49} \\
-14\downarrow \\
\hline
04 \\
-0 \\
\hline
49\downarrow \\
-49 \\
\hline
0
\end{array}
$$

$$
\begin{array}{r}
20.7 \\
7.\,\overline{)14.49} \\
-14\downarrow \\
\hline
004 \\
0\downarrow \\
\hline
49 \\
49 \\
\hline
0
\end{array}
$$

$$
\begin{array}{r}
2.49 \\
7\,\overline{)19.49} \\
-14 \\
\hline
04 \\
-8 \\
\hline
99 \\
-4.4 \\
\hline
09 \\
18
\end{array}
$$

Answer: _____

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
12	1.07	54.3	851	Subtraction	N.2 - Solve a problem involving the subtraction of a decimal number from a whole number, with regrouping

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	92.8	64	2.93 (197)	2.07 (105)	1.7 (42)
Students Achieving Acceptable Standard* (*n* = 14 075)	57.5	432	2.93 (4 227)	5.86 (2 855)	2.07 (758)
Students Below Acceptable Standard (*n* = 13 937)	12.1	739	2.93 (1 903)	5.86 (1 780)	5.94 (612)

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

12. What is $7 - 5.93$?

Answer: _____

Common correct response:

$$
\begin{array}{r}
\overset{6}{\cancel{7}}.\overset{9}{\cancel{0}}\overset{}{\cancel{0}} \\
-\ 5\ .\ 9\ 3 \\
\hline
1\ .\ 0\ 7
\end{array}
$$

Common incorrect responses:

$$
\begin{array}{r}
7 \\
-\ 5\ .\ 9\ 3 \\
\hline
2\ .\ 9\ 3
\end{array}
$$

$$
\begin{array}{r}
5\ .\ 9\ 3 \\
-\ \ \ \ \ \ 7 \\
\hline
5\ .\ 8\ 6
\end{array}
$$

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
13	6.45	58.9	1 834	Division	N.8 - Demonstrate an understanding of division of a decimal number by a 1-digit natural number divisor

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	91.7	133	6.49 (90)	6.5 (71)	6.35 (62)
Students Achieving Acceptable Standard* (*n* = 14 075)	64.0	1 113	64.5 (815)	6.5 (640)	6 (623)
Students Below Acceptable Standard (*n* = 13 937)	15.9	1 496	6 (313)	64.5 (308)	6.05 (177)

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

13. What is $58.05 \div 9$?

Answer: _____

Common correct response:

Common incorrect responses:

$$64.5$$
$$9\overline{)58.05}$$
$$-54.05$$
$$4.05$$

$$\overset{1}{18}$$
$$18$$
$$\overline{36}$$

$$\overset{1}{36}$$
$$18$$
$$\overline{54}$$

~~$9\overline{)58.05}$~~

$$6.5$$
$$9\overline{)58.05}$$
$$54\downarrow$$
$$4$$

---

13. What is $58.05 \div 9$?

Answer: **6.05**

$$060.5$$
$$9\overline{)58.05}$$
$$-0$$
$$\overline{58}$$
$$-54$$
$$\overline{04}$$
$$-0$$
$$\overline{4.05}$$
$$4.95$$
$$\overline{4.40}$$

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
14	4.51	73.3	776	Subtraction	N.2 - Solve a problem involving subtraction of decimal numbers, with regrouping. (Gr.5, N.11)

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	95.2	66	5.51 (42)	4.49 (34)	4.61 (31)
Students Achieving Acceptable Standard* (*n* = 14 075)	79.3	370	5.49 (1 018)	4.69 (497)	5.51 (482)
Students Below Acceptable Standard (*n* = 13 937)	6.9	664	5.49 (1 421)	4.69 (427)	5.51 (223)

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

14. What is 8.50 – 3.99?

Answer: _____

Common correct response:

$$
\begin{array}{r}
\overset{7}{\cancel{8}}.\overset{14}{\cancel{5}}\overset{4}{\cancel{0}} \\
-\,3.99 \\
\hline
4\ 5! \\
\end{array}
$$

Common incorrect responses:

$$
\begin{array}{r}
\overset{0}{8}.50 \\
-\,3.99 \\
\hline
5.49 \\
\end{array}
$$

$$
\begin{array}{r}
\overset{7}{\cancel{8}}.\overset{14}{\cancel{4}}\overset{10}{\cancel{0}} \\
-\,3.99 \\
\hline
5.51 \\
\end{array}
$$

$$
\begin{array}{r}
\overset{7}{\cancel{8}}.\overset{15}{\cancel{5}}0 \\
-\,3.99 \\
\hline
4.69 \\
\end{array}
$$

Item	Key	% of Students with Correct Solution	Number of Unique Errors	Content Reporting Category	Item Description
15	52	73.3	696	Multiplication	N.8 - Demonstrate an understanding of multiplication of a decimal by a 1-digit whole number multiplier

Standard Achieved by Students on *Part A*	% of Students with Correct Solution	Number of Unique Errors	Three Most Common Errors (Number of Students)		
Students Achieving Standard of Excellence (*n* = 21 651)	95.9	54	520 (53)	5.2 (40)	50.2 (36)
Students Achieving Acceptable Standard* (*n* = 14 075)	79.5	337	50.2 (620)	50.4 (596)	5.2 (505)
Students Below Acceptable Standard (*n* = 13 937)	35.2	603	50.4 (948)	12 (524)	50.2 (336)

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

15. What is 10.4×5?

Answer: _____

Common correct response:

Common incorrect responses:

$$
\begin{array}{r}
10.4 \\
\times\ 5 \\
\hline
50.4
\end{array}
$$

$$
\begin{array}{r}
10.4 \\
\times\ 5. \\
\hline
50.20
\end{array}
$$

Answer: 50.2

$10 \times 5 = 50$

$5 \times .4 =$

$$
\begin{array}{r}
\overset{2}{10}.4 \\
\times\quad 5 \\
\hline
12.0
\end{array}
$$

Sample Questions from the *2019 Grade 6 Mathematics Provincial Achievement Test—Part B*

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

**Strands:** Number (N); Patterns and Relations (PR); Shape and Space (SS); Statistics and Probability (SP)

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
2	B	64.6	N.2	Moderate	Solve a given problem involving operations on whole numbers and decimal numbers

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	1.0	94.2	0.7	4.0	3.7
Students Achieving Acceptable Standard*	11.2	66.3	8.6	13.7	0.2
Students Below Acceptable Standard	27.7	32.4	24.2	15.0	0.7

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

A hurdles course is set up as shown below. The height of each hurdle is 0.70 m. The first hurdle is set 10 m from the start line. The distance between hurdles is 14.5 m, and it is 11.5 m from the final hurdle to the finish line.
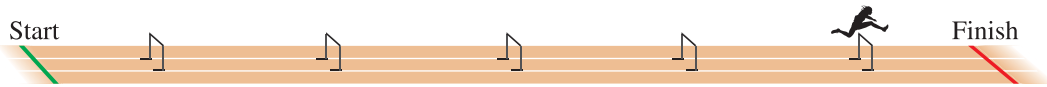
2. What is the total distance of the hurdles course from the start line to the finish line?

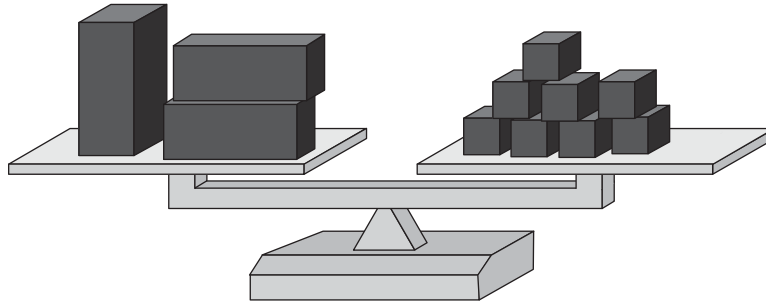   A.   68.0 m
   B.   79.5 m
   C.   80.2 m
   D.   94.0 m

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
7	B	72.1	PR.5	Moderate	Apply knowledge of the preservation of equality to determine the mass of one object on one side of a given balance scale

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	0.7	98.1	0.9	0.3	0.0
Students Achieving Acceptable Standard*	8.3	77.1	10.0	4.6	0.0
Students Below Acceptable Standard	27.5	31.6	25.7	14.7	0.5

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

The cubes on the right side of the balance scale are identical. Each cube has a mass of 60 g.

7. If the rectangular prisms on the left side of the balance scale are identical, what is the mass of 1 rectangular prism?

    A.   120 g
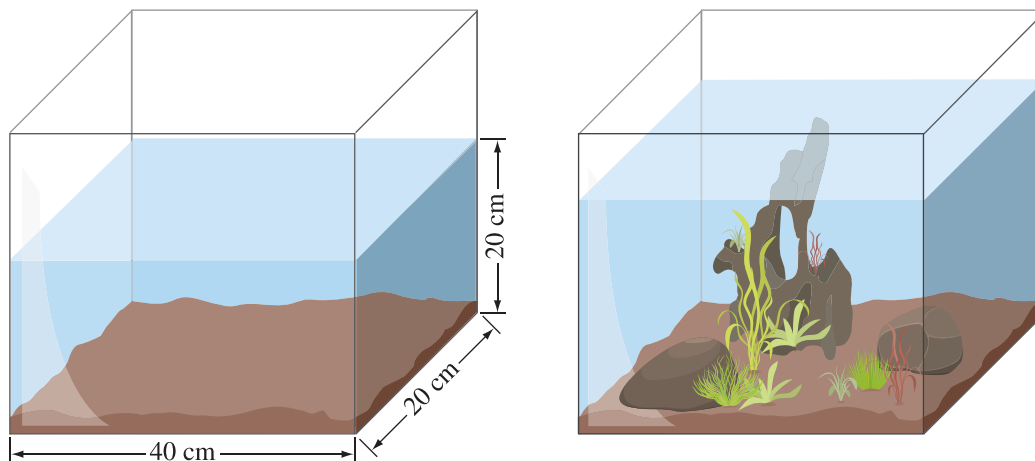
    B.   160 g

    C.   180 g

    D.   240 g

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
13	C	50.0	SS.3	Moderate	Solve a problem involving the volume of a right rectangular prism

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	5.7	2.7	88.7	2.9	0.0
Students Achieving Acceptable Standard*	12.7	23.6	49.4	14.0	0.3
Students Below Acceptable Standard	30.2	39.2	17.0	12.8	0.8

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

Use the following information to answer question 13.

Ami places gravel and water in the fish tank shown below. She measures the height that the water reaches in the tank. After placing rock and plant decorations in the tank, Ami discovers that the height of the water in the tank has risen by 7 cm.

13. What is the **total** volume of the water, gravel, and decorations that have been placed in the fish tank?

A. $5\ 600\ \text{cm}^3$

B. $16\ 280\ \text{cm}^3$

C. $21\ 600\ \text{cm}^3$

D. $112\ 000\ \text{cm}^3$

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
31	D	29.7	N.4	Moderate	Solve a problem involving mixed fractions and whole numbers

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	20.5	2.5	5.3	71.7	0.0
Students Achieving Acceptable Standard*	42.1	10.3	22.5	24.9	0.2
Students Below Acceptable Standard	47.9	24.4	18.7	8.1	0.9

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

Use the following information to answer question 31.

A Grade 6 class is having a pizza party. Each pizza is cut into 10 equal slices. At the end of the party, the students have $2\frac{3}{5}$ pizzas left over.

31. How many slices of pizza are left over at the end of the party?
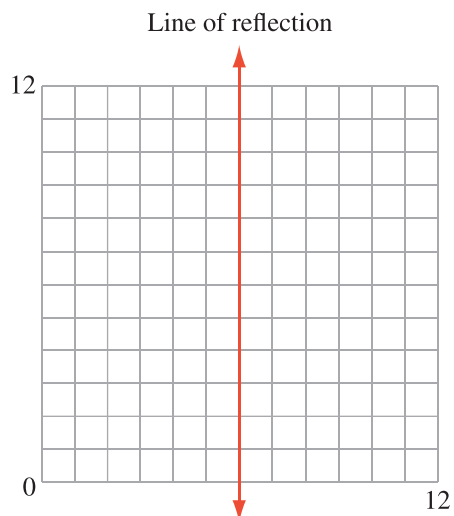
  A. 13
  B. 16
  C. 23
  D. 26

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
32	D	58.2	SS.9	Moderate	Perform a single transformation of a 2-D shape in the first quadrant of the Cartesian plane and identify the ordered pair of one of the vertices of the 2-D shape

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	1.1	3.2	1.9	93.8	0.0
Students Achieving Acceptable Standard*	10.5	14.3	14.2	60.7	0.3
Students Below Acceptable Standard	21.4	32.0	28.3	17.3	1.0

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

Plot points at (5, 3), (4, 0), and (2, 7) on the grid shown below. Then create a triangle by connecting the points.

Line of reflection

32. After the triangle is reflected over the line of reflection, the ordered pair of the point farthest from the line of reflection is

    A. (4, 12)

    B. (12, 4)

    C. (7, 10)

    D. (10, 7)

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
34	C	65.9	SP.4	Moderate	Determine the theoretical probability of an outcome in a real-life context

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	2.4	0.6	93.4	3.6	0.0
Students Achieving Acceptable Standard*	7.4	2.0	68.2	22.3	0.1
Students Below Acceptable Standard	10.0	9.1	32.8	47.1	1.0

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

Jars containing pieces of bubble gum are set up at a school math fair.

Jar W

10 Bubble gum pieces   2 are yellow

Jar X

15 Bubble gum pieces   3 are yellow

Jar Y

25 Bubble gum pieces   15 are yellow

Jar Z

50 Bubble gum pieces   20 are yellow

34. From which jar would you have the **greatest** probability of randomly choosing a yellow piece of bubble gum on your first try?

   A. Jar W
   B. Jar X
   C. Jar Y
   D. Jar Z

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
37	C	70.0	N.2	Moderate	Solve a given problem involving operations on whole numbers and decimal numbers

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	1.5	0.7	97.3	0.5	0.0
Students Achieving Acceptable Standard*	11.2	8.3	74.7	5.7	0.1
Students Below Acceptable Standard	27.5	24.6	29.2	17.9	0.8

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

Jamal compares the cost of two different sizes of juice bottles, as shown below.

37. How much would Jamal save if he buys 1 large bottle of juice instead of 4 small bottles of juice?

    A. $0.40

    B. $3.18

    C. $5.57

    D. $7.57

Item	Key	% of Students with Correct Solution	Strand & Outcome	Item Complexity	Item Description
40	A	71.8	N.6	Moderate	Match given fractions to their equivalent percentage values

Standard Achieved by Students on *Part B*	% of Student Responses				
	A	B	C	D	No Response
Students Achieving Standard of Excellence	97.2	0.4	2.1	0.2	0.1
Students Achieving Acceptable Standard*	75.2	4.1	18.1	2.1	0.5
Students Below Acceptable Standard	36.9	17.6	30.0	13.7	1.8

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

Liam's results on four assignments are shown below.
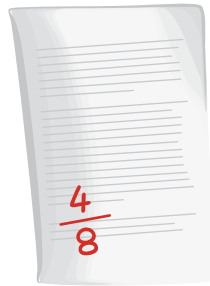
| Assignment **1** | Assignment **2** | Assignment **3** | Assignment **4** |

40. Which of the following rows correctly shows the percentage Liam received on each of his assignments?

Row	Assignment 1	Assignment 2	Assignment 3	Assignment 4
A.	75%	80%	50%	60%
B.	75%	8%	40%	60%
C.	75%	80%	50%	55%
D.	60%	8%	40%	20%

Provincial Achievement Testing Program Support Documents

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

Provincial 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 provincial 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.