

# Grade 9 Subject Bulletin Mathematics

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Alberta Provincial Achievement Testing  
2018–2019

This document was written primarily for

Students	
Teachers	✓ Grade 9 Mathematics
Administrators	✓
Parents	
General Audience	
Others	

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You can find [provincial achievement test-related materials](#) on the Alberta Education website.

Additional topics of interest are found in the [General Information Bulletin](#).



# *Grade 9 Mathematics Assessment*

## *Special-format Practice Tests*

To provide students an opportunity to practise provincial achievement test-style questions and content in Braille, audio, large print, or coloured print versions, Alberta Education is making special-format practice tests available. Tests are offered in all subjects with a corresponding provincial achievement test. Alberta schools with registered Alberta K–12 students may place orders for these tests. Braille tests are available in English, and by request in French. All tests are provided free of charge, but limits may be placed on order volumes to ensure access for everyone.

For more information or to place an order, contact

Laura LaFramboise  
Distribution Coordinator, Examination Administration  
780-982-1644 or [Laura.LaFramboise@gov.ab.ca](mailto:Laura.LaFramboise@gov.ab.ca)

## *General Description*

The Grade 9 Mathematics Provincial Achievement Test consists of two parts:

- Part A contains 20 numerical-response questions and assesses students' foundational skills and fluency in mental math, estimation, algebra, square roots, exponent laws, and arithmetic operations on rational numbers without the use of calculators.
- Part B contains 32 multiple-choice questions and 8 numerical-response questions and assesses students' ability to recall concepts and principles and to apply reasoning skills to solve problems.

Questions are categorized according to three levels of complexity: low, moderate, and high. (See Appendix 1 for a more detailed explanation of each complexity level.)

## *Question Format*

The following bullets briefly describe the two question formats:

- Multiple-choice questions provide students with four response options, of which only one is correct.
- Numerical-response questions require students to generate a response (in symbolic form) to a particular problem, rather than selecting a response from a list of four options.

## **\*NEW** *Test Administration*

Students can take a break between the writing of parts A and B. Students may also write the parts in any order and on separate days according to the schedule set by a school authority.

Part A is designed to be administered in 30 minutes; however, each student may have up to 60 minutes.

Part B is designed to be administered in 80 minutes; however, each student may have up to 160 minutes.

## *Use of Calculators and Manipulatives*

Part A: Manipulatives may be used, but use of a calculator is not permitted.

Part B: Students may use calculators and manipulatives; however, use of graphing calculators is not permitted.

An acceptable manipulative is any mathematical tool that can be used by a student to help convert abstract ideas into concrete representations for the purpose of solving a problem (e.g., a ruler, tracing paper, pattern blocks, tiles and cubes, geoboards, tangrams, counters, spinners, number lines). The manipulative cannot perform the mental conversion or provide the solution to a problem. A multiplication table is not an acceptable manipulative for use in completing Part A (except as an accommodation) or Part B.

## *Local Marking of Test* **Part A and Part B**

Marking keys will be provided to teachers for marking purposes. Teachers are expected to record and report the raw scores achieved on the test by their students to parents. Raw scores achieved by students on Part A and Part B are to be reported separately to parents and are not to be combined into a total test score.

# Grade 9 Mathematics Provincial Achievement Test Blueprint

Test Component	Number of Questions	Question Format	Weighting on Total Test Score
Part A	20	Numerical Response	20%
Part B	32 8	Multiple Choice Numerical Response	80%

Content Domain of Test (Strand)	Part A: Percentage of Questions	Part B: Percentage of Questions
Number	70–80%	25–35%
Patterns and Relations	20–30%	35–45%
Shape and Space		20–30%
Statistics and Probability		5–10%

Cognitive Domain of Test (Complexity Level)	Part A: Percentage of Questions	Part B: Percentage of Questions
Low	80–90%	30–40%
Moderate	10–20%	45–55%
High		10–20%

## Description of Mathematics Assessment Standards

The following statements describe what is expected of Grade 9 students at the acceptable standard and the standard of excellence based on outcomes in the [program of studies](#). These statements represent examples of the standards against which student achievement is measured. It is important to remember that one test cannot measure all the outcomes in the program of studies.

<i>Acceptable Standard</i>	<i>Standard of Excellence</i>
<p>Students who meet the acceptable standard in Grade 9 Mathematics are typically able to:</p> <ul style="list-style-type: none"> <li>• recall and apply a moderate number of mathematical properties to solve routine problems</li> <li>• use familiar problem-solving strategies to solve routine problems</li> <li>• connect and apply personal experiences and problem-solving strategies to solve routine problems</li> <li>• recall and apply mathematical concepts and operational terms to solve routine problems</li> <li>• apply computation skills and formal mathematics vocabularies to solve routine problems</li> <li>• recognize and describe numerical and non-numerical patterns</li> <li>• use semantic knowledge to construct correct mental representations of word problems</li> <li>• use logical processes to analyze and solve routine problems</li> <li>• recognize and use mathematical patterns to make predictions when solving routine problems</li> <li>• test generalizations from patterns to reach conclusions</li> </ul>	<p>Students who meet the standard of excellence in Grade 9 Mathematics are typically able to:</p> <ul style="list-style-type: none"> <li>• recall and apply a variety of mathematical properties to solve novel problems</li> <li>• use a variety of problem-solving strategies to solve novel problems</li> <li>• connect and apply personal experiences and strategies to check and verify solutions to novel problems</li> <li>• apply abstract thinking skills to reframe mathematical concepts to solve novel problems</li> <li>• generate linguistic and nonlinguistic representations of knowledge to solve novel problems</li> <li>• demonstrate fluency in working with patterns represented concretely, pictorially, or symbolically</li> <li>• use semantic knowledge to construct and reframe correct mental representations of word problems</li> <li>• use logical processes to analyze complex problems, reach conclusions, and justify or defend conclusions</li> <li>• recognize, extend, create, and use mathematical patterns to make and justify predictions when solving novel problems</li> <li>• make generalizations from patterns to reach conclusions</li> </ul>



# *Preparing Students for the Mathematics Test*

## *Suggestions for Preparing Students*

The best way to prepare students for writing the provincial achievement test is to teach the curriculum well and to ensure that students know what is expected. Many of the skills and attitudes that support test writing are, in fact, good skills and strategies for approaching all kinds of learning tasks.

Note that most of the questions on the mathematics test are placed in real-life contexts.

Teachers are encouraged to familiarize their students with the types of questions that will appear on the test. [Released items](#) from previously secured tests are available on the Alberta Education website.

Teachers are also encouraged to share the following information with their students to help them prepare for the Grade 9 Mathematics Provincial Achievement Test.

## *Suggestions for Answering Questions*

- Before you begin, find out how much time you have.
- Ask questions if you are unsure of anything.
- Skim through the whole test before beginning. Find out how many questions there are and plan your time accordingly.
- Answer the easier questions first; then go back to the more difficult ones.
- Do not spend too much time on any one question. Make a mark (\* or ?) beside any questions you have difficulty with and go back to them if you have time.
- Read each question carefully, underline or highlight key words, and try to determine an answer before looking at the choices.
- Read all the choices and see which one best fits the answer.
- When you are not sure which answer is correct, cross out any choices that are wrong, and then select the best of the remaining choices.
- If time permits, recheck your answers.
- Double-check to make sure that you have answered everything before handing in the test.
- Read the information given using the strategy that works best for you. You should either
  - look at all the information and think carefully about it before you try to answer the question

### **OR**

- read the questions first and then look at the information, keeping in mind the question(s) you need to answer.
- Make sure that you look at all forms of the information given. Information may be given in words, charts, pictures, graphs, or maps.
- When information is given for more than one question, go back to the information before answering each question.
- Check your work when you calculate an answer, even when your answer is one of the choices.
- When answering “best answer” questions, be sure to carefully read all four alternatives (A, B, C, and D) before choosing the answer that you think is best. These questions will always include a bold-faced qualifier such as **best**, **most strongly**, or **most clearly** in their stems. All the alternatives (A, B, C, and D) are, to some degree, correct, but one of the alternatives will be “best” in that it takes more of the information into account or can be supported most strongly by reference to the information.

# *Opportunities to Participate in Test Development Activities*

## *Field Testing*

All Provincial Achievement Test questions are field tested before use. By “testing” the test questions, students who write field tests have an opportunity for a practice run at writing questions that could be used on future provincial achievement tests. As well, the teachers have an opportunity to comment on the appropriateness and quality of the test questions.

Through the online field test request system, teachers can create and modify field test requests and check the status of these requests. Information regarding the field-test process and the request system is available at [Provincial Achievement Tests](#).

Once the completed requests are received by the Provincial Assessment Sector, classes will be selected to ensure that a representative and sufficiently large sample of students from across the province take part in the field test. Every effort will be made to place field tests as requested; however, because field tests are administered to a prescribed number of students, it may not be possible to fill all requests.

For further information about provincial achievement field testing, see the Field Testing section of the [General Information Bulletin](#).

## *Working Groups*

Teacher involvement in the development of provincial achievement tests is important because it helps to ensure the validity and appropriateness of the assessments.

To be selected to participate in a working group, a teacher must be nominated by a school administrator or superintendent, and that nomination must be approved by the superintendent. To ensure that selected working-group members have appropriate subject matter training and teaching experience, nominees are asked to provide their information to their school administrator so that it can be forwarded to the Provincial Assessment Sector at Alberta Education through the superintendent.

## ***Test Development***

Teacher working groups are used throughout the test development process to create raw forms of test questions, and to review and revise draft forms of provincial achievement tests. These working groups usually meet for one or two days, two or three times per year. Occasionally, these meetings are held on weekends or in the summer.

To be eligible to serve on a test development working group, a teacher must currently be teaching Grade 9 Mathematics and must have a minimum of two years' experience teaching the course.

Teachers participating in test development and/or test review working groups are selected from the working-group nominees provided by superintendents of school jurisdictions.

# Appendix 1

## Levels of Item Complexity

### Low Complexity

Items in this category require students to rely heavily on recalling and recognizing previously learned concepts and principles. Items typically specify what students are to do, which is often to carry out some procedure that can be performed mechanically. Students would not be expected to come up with original methods for finding a particular solution. The following list illustrates some of the demands that items of low complexity may require of students:

- Recall or recognize a fact, term, or property
- Recognize an example of a concept
- Perform a specified procedure
- Evaluate an expression in an equation or formula for a single variable
- Solve a one-step word problem
- Draw or measure simple 2-D shapes or 3-D objects
- Retrieve information from a graph, table, or figure

### Moderate Complexity

Items in this category involve more flexibility of thinking and choice among alternatives than do those in the low-complexity category. They require a response that goes beyond the habitual, is not specified, and may require more than a single step. The student is expected to decide what to do, using informal methods of reasoning and problem-solving strategies, and to bring together skill and knowledge from various domains. The following list illustrates some of the demands that items of moderate complexity may require of students:

- Solve a word problem requiring multiple steps
- Compare figures or statements
- Provide a justification for steps in a solution process
- Interpret a visual representation
- Retrieve information from a graph, table, or figure and use it to solve a problem requiring multiple steps
- Interpret a simple argument
- Generalize a pattern

### High Complexity

Items in this category make heavy demands on students by requiring them to engage in more-abstract reasoning, planning, analysis, judgment, and creative thought. The following list illustrates some of the demands that items of high complexity may require of students:

- Perform a procedure having multiple steps and multiple decision points
- Analyze similarities and differences between procedures and concepts
- Formulate an original problem, given a situation
- Solve a problem in more than one way
- Explain and justify a solution to a problem
- Describe, compare, and contrast solution methods
- Formulate a mathematical model for a complex situation
- Analyze the assumptions made in a mathematical model
- Analyze or produce a deductive argument
- Provide a mathematical justification

Adapted from Norman L. Webb, Wisconsin Center for Educational Research, “Depth-of-Knowledge Levels for Four Content Areas,” March 28, 2002.

## Appendix 2

### Grade 9 Mathematics Formula Sheet

The following information may be useful in writing this test.

#### Area (A)

Circle  $A = \pi r^2$

Rectangle  $A = lw$

Triangle  $A = \frac{bh}{2}$

#### Volume (V)

Right Cylinder  $V = \pi r^2 h$

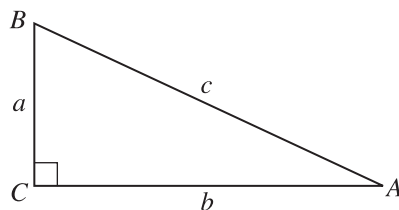
Prism  $V = (\text{Base Area})(h)$

#### Circumference (C)

Circle  $C = \pi d$  or  $2\pi r$

#### Pythagorean Theorem

$c^2 = a^2 + b^2$  where  $c$  is the hypotenuse



Fold and tear along perforation.

### *Part A: Instructions Pages*

Duplication of this test in any manner or its use for purposes other than those authorized and scheduled by Alberta Education is strictly prohibited.

# Mathematics

## Part A

## 2019

Fill in the corresponding circles

### Example 2

Answer: 9.2

Record 9.2 on the answer sheet →

9	.	2	
---	---	---	--

Fill in the corresponding circles

	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

### Example 3

Answer: -0.3

Record -0.3 on the answer sheet →

-	0	.	3
---	---	---	---

Fill in the corresponding circles

	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

### Example 4

Answer:

$\frac{9}{10}$  (Record the **numerator** in the **first** column.)  
 (Record the **fraction bar** in the **second** column.)  
 (Record the **denominator** in the **third** and **fourth** columns.)

Record 9/10 on the answer sheet →

9	/	1	0
---	---	---	---

Fill in the corresponding circles

	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

### Example 5

Answer:

$-\frac{3}{5}$  (Record the **negative sign** in the **first** column and the **numerator** in the **second** column.)  
 (Record the **fraction bar** in the **third** column.)  
 (Record the **denominator** in the **fourth** column.)

Record -3/5 on the answer sheet →

-	3	/	5
---	---	---	---

Fill in the corresponding circles

	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

### Example 6

Answer:

(Record the **whole number** in the **first** column.)

$\boxed{8} \boxed{1} \boxed{2}$  (Record the **numerator** in the **second** column.)  
 (Record the **fraction bar** in the **third** column.)  
 (Record the **denominator** in the **fourth** column.)

Record 8 1/2 on the answer sheet

Fill in the corresponding circles

8	1	/	2
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0

### Example 7

$$78.5 - 24.2 = 5\_ .3$$

In the equation above, which digit could be placed in the blank space to make the equation correct?

Answer: 5\_ .3

(Record **only the missing digit** on the answer sheet.)

Answer: 54.3

Record 4 on the answer sheet

Fill in the corresponding circles

4			
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0

### Example 8

$$786.5 - 244.2 = 5\_ \_ .3$$

In the equation above, which two digits could be placed in the blank spaces to make the equation correct?

Answer: 5\_ \_ .3

(Record **only the two missing digits, in order**, on the answer sheet.)

Answer: 542.3

Record 42 on the answer sheet

Fill in the corresponding circles

4	2		
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0



## Part A: Sample Questions

1. What is  $(-2) \times (-1) \times (-3)$ ?

**Answer:** \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

2. Evaluate  $(-1)^2 - (-1)^3 - 1^4$ .

**Answer:** \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

3. What is the value of  $\frac{(-4)^2 \times (-4)^3 \times (-4)^4}{(-4)^6}$ ?

**Answer:** \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

4. What is the value of  $\frac{1}{5} + 0.2 \times \frac{2}{3}$  expressed as a fraction in simplest form?

**Answer:**


 (Record the **numerator** in the **first** column)  
(Record the **fraction bar** in the **second** column)  
(Record the **denominator** in the **third** column)

(Record your answer on the answer sheet.)

5. What is the value of  $\frac{25}{75} \times \frac{16}{24} \div \frac{8}{27}$  expressed as a fraction in simplest form?

**Answer:**


 (Record the **numerator** in the **first** column)  
(Record the **fraction bar** in the **second** column)  
(Record the **denominator** in the **third** column)

(Record your answer on the answer sheet.)

6. What is the value of  $\frac{1}{8} + 0.25 + 0.5$  expressed as a fraction in simplest form?

**Answer:**


 (Record the **numerator** in the **first** column)  
(Record the **fraction bar** in the **second** column)  
(Record the **denominator** in the **third** column)

(Record your answer on the answer sheet.)

7. Given  $(4 \times 5)^7 = 4^{\blacksquare} \times 5^7$ , what is the value of  $\blacksquare$ ?

**Answer:**  $\blacksquare =$  \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

8. In simplest form, what is the value of  $\left(3.25 + \frac{3}{4}\right) \div 0.25$ ?

**Answer:** \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

9. Solve  $\frac{3}{x} = 0.5$ .

Answer:  $x =$  \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

10. Solve for  $x$  in the following equation.

$$2.6 + x = 4x + 1.4.$$

Express your answer to the nearest tenth.

Answer:  $x =$  \_\_\_\_\_

(Record your answer on the answer sheet.)

11. Solve for  $x$  in the following equation.

$$-2(3x - 4) = 2(x + 6).$$

Express your answer to the nearest tenth.

Answer:  $x =$  \_\_\_\_\_

(Record your answer on the answer sheet.)

12. Solve for  $x$  in the following equation.

$$0.4(20 - 10x) = 14x - 28$$

Answer:  $x =$  \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

13. Evaluate the expression  $-4(7 - 2x)$ , where  $x = -1$ .

Answer: \_\_\_\_\_

(Record your answer as an **integer** value on the answer sheet.)

14. What is the approximate square root of

$$\sqrt{\frac{145}{4}}$$
 to the nearest whole number?

Answer: \_\_\_\_\_

(Record your answer on the answer sheet.)

15. Order the following rational numbers from **smallest** value to **greatest** value, using the numbers **1, 2, 3, and 4**.

Use the number **1** to represent the **smallest** value and the number **4** to represent the **greatest** value.

Answer: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 $\sqrt{\frac{4}{9}}$      $-1.\overline{5}$      $-1.75$      $-\frac{8}{5}$

(Record all **four digits** of your answer on the answer sheet.)

16. Order the following rational numbers from **smallest** value to **greatest** value, using the numbers **1, 2, 3, and 4**.

Use the number **1** to represent the **smallest** value and the number **4** to represent the **greatest** value.

Answer: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 $-0.75$      $\frac{-3}{-5}$      $-0.\overline{6}$      $-\left(\frac{-5}{-2}\right)$

(Record all **four digits** of your answer on the answer sheet.)

17. What is the value of  $0.4 \div 2 + \sqrt{\frac{9}{36}} \times 1\frac{1}{5}$  expressed as a fraction in simplest form?

Answer: 


 (Record the **numerator** in the **first** column)  
 (Record the **fraction bar** in the **second** column)  
 (Record the **denominator** in the **third** column)

(Record your answer on the answer sheet.)

Use the following information to answer question 18.

Inequality Symbols			
Symbol 1	Symbol 2	Symbol 3	Symbol 4
$>$	$\geq$	$<$	$\leq$

18. Solve the inequality  $10 - 2x \geq -4$ .

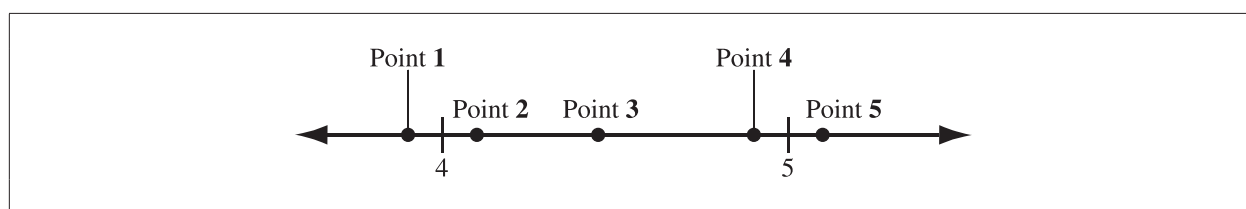
Answer:  $x$  \_\_\_\_\_

Symbol number	Value
(Record in the first box)	(Record in the second box)

(Record **both digits** of your answer on the answer sheet.)

\_\_\_\_\_

Use the following information to answer question 19.



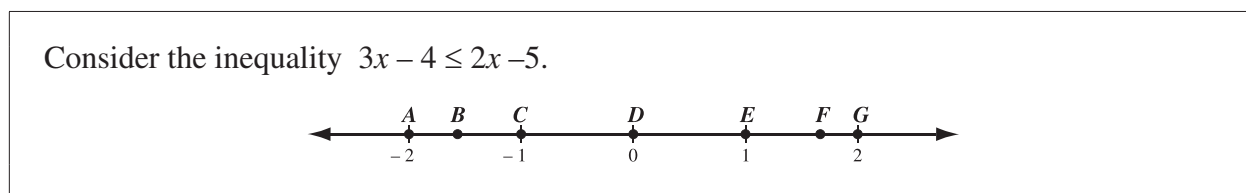
19. Which points **best** represent an approximate value for  $\sqrt{17}$ ,  $\sqrt{23}$ , and  $\sqrt{27}$ ?

Answer: **Point:** \_\_\_\_\_  
**Number:**  $\sqrt{17}$   $\sqrt{23}$   $\sqrt{27}$

(Record all **three digits** of your answer on the answer sheet.)

\_\_\_\_\_

Use the following information to answer question 20.



20. How many of the points labelled with a letter on the number line above satisfy the inequality?

Answer: \_\_\_\_\_ **points**

(Record your answer on the answer sheet.)

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# GRADE 9 MATHEMATICS Part A

<p>1 <input type="text" value="-"/> <input type="text" value="6"/> <input type="text"/></p>	<p>2 <input type="text" value="1"/> <input type="text"/></p>	<p>3 <input type="text" value="-"/> <input type="text" value="6"/> <input type="text" value="4"/></p>	<p>4 <input type="text" value="1"/> <input type="text" value="/"/> <input type="text" value="3"/></p>	<p>5 <input type="text" value="3"/> <input type="text" value="/"/> <input type="text" value="4"/></p>	<p>6 <input type="text" value="7"/> <input type="text" value="/"/> <input type="text" value="8"/></p>	<p>7 <input type="text" value="7"/> <input type="text"/></p>
<p>8 <input type="text" value="1"/> <input type="text" value="6"/> <input type="text"/></p>	<p>9 <input type="text" value="6"/> <input type="text"/></p>	<p>10 <input type="text" value="0"/> <input type="text" value="."/> <input type="text" value="4"/></p>	<p>11 <input type="text" value="-"/> <input type="text" value="0"/> <input type="text" value="."/> <input type="text" value="5"/></p>	<p>12 <input type="text" value="2"/> <input type="text"/></p>	<p>13 <input type="text" value="-"/> <input type="text" value="3"/> <input type="text" value="6"/></p>	<p>14 <input type="text" value="6"/> <input type="text"/></p>
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# Appendix 4

## Part B: Instructions Pages

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### Grade 9 Provincial Achievement Test

## Mathematics Part B

### Description

There are 32 multiple-choice questions and 8 numerical-response questions on this test.

**Time: 80 minutes.** You have up to 160 minutes to complete this test should you need it.

*You may write in this booklet if you find it helpful. Make sure that your answers to the multiple-choice and numerical-response questions are placed on the answer sheet.*

**2019**

### Instructions

- Use **only** an **HB** pencil to mark your answer.
- You may use a ruler, manipulatives, and a calculator; however, a graphing calculator is **not** permitted. Use of a protractor is also **not** permitted.
- Read each question carefully and choose the **correct** or **best** answer.
- Try to answer every question.
- If you change an answer, **erase** your first mark **completely**.
- Now read the detailed instructions for answering multiple-choice and numerical-response questions.
- When you have completed the test, please answer the **survey question**, which appears after the last test question.

## Multiple Choice

- Each question has four possible answers from which you are to choose the **correct** or **best** answer.
- Locate the question number on the separate answer sheet provided and fill in the circle that corresponds to your choice.

### Example

If  $x = 3$ , what is the value of  $x + 8$ ?

- A. 10
- B. 11
- C. 12
- D. 13

Answer: 11

Answer Sheet

(A) (B) (C) (D)

## Numerical Response

- Record your answer on the answer sheet provided by writing it in the boxes and then by filling in the corresponding circles.
- Enter your answer, one digit per box, beginning in the left-hand box. A decimal point, if needed, goes in its own box. Leave any unused boxes blank.**

### Calculation Question and Solution

#### Example 1

What is  $5 - 1$ ?

Answer: 4

Record 4 on the answer sheet

4			
---	--	--	--

	0	0	0	0
	1	1	1	1
	2	2	2	2
	3	3	3	3
	4	4	4	4
	5	5	5	5
	6	6	6	6
	7	7	7	7
	8	8	8	8
	9	9	9	9

Fill in the corresponding circles

#### Example 2

If  $x = 4.6$ , then what does  $2x$  equal?

Answer: 9.2

Record 9.2 on the answer sheet

9	.	2	
---	---	---	--

	0	0	0	0
	1	1	1	1
	2	2	2	2
	3	3	3	3
	4	4	4	4
	5	5	5	5
	6	6	6	6
	7	7	7	7
	8	8	8	8
	9	9	9	9

Fill in the corresponding circles





Name

Apply Label With Student's Name

To be completed by/for ALL students.

LAST NAME (please print)

FIRST NAME

To be completed ONLY for students without labels.

ALBERTA STUDENT NUMBER

SCHOOL NAME

SCHOOL CODE

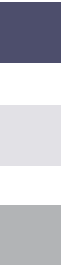
BIRTH DATE (Year/Month/Day)

ACCOMMODATIONS USED  
(mark all applicable)

- 1 ☐ 6 ☐  
2 ☐ 7 ☐  
3 ☐ 8 ☐  
4 ☐ 9 ☐  
5 ☐ 10 ☐

INITIALS OF  
EXAM SUPERVISOR  
(if any used)

SEE ACCOMMODATIONS IN THE  
GENERAL INFORMATION BULLETIN  
FOR MORE INFORMATION.



HOME EDUCATED FOR  
THIS SUBJECT

☐

COMPLETED THE COURSE  
IN A YEAR OTHER THAN  
THE YEAR OF TESTING

☐

IMPORTANT INSTRUCTIONS FOR  
MARKING ANSWERS

1. USE HB PENCIL ONLY.
2. MAKE HEAVY BLACK MARKS TO FILL CIRCLE COMPLETELY.
3. TO CHANGE AN ANSWER, ERASE THE OLD MARK CLEANLY BEFORE FILLING IN THE NEW CIRCLE.
4. DO NOT MAKE ANY STRAY MARKS ON THIS PAPER.

GRADE 9  
PROVINCIAL ACHIEVEMENT TEST  
MATHEMATICS  
Part B

EXAMPLE

What is  
5.4 – 5.1?

RIGHT  
0 . 3

Answer:  
0.3

1 (1) 1 (1)  
2 (2) 2 (2)  
3 (3) 3 (3)  
4 (4) 4 (4)  
5 (5) 5 (5)  
6 (6) 6 (6)  
7 (7) 7 (7)  
8 (8) 8 (8)  
9 (9) 9 (9)

EXAMPLE

Alberta is a

RIGHT  
1 (A) (B) (D) WRONG  
2 (A) (B) (D) WRONG  
3 (A) (B) (D) WRONG  
4 (A) (B) (D) WRONG

Alberta

PAT9110001M.03

Fold and tear along perforation.

# GRADE 9 MATHEMATICS Part B

## MULTIPLE CHOICE

1	(A) (B) (C) (D)	12	(A) (B) (C) (D)	23	(A) (B) (C) (D)
2	(A) (B) (C) (D)	13	(A) (B) (C) (D)	24	(A) (B) (C) (D)
3	(A) (B) (C) (D)	14	(A) (B) (C) (D)	25	(A) (B) (C) (D)
4	(A) (B) (C) (D)	15	(A) (B) (C) (D)	26	(A) (B) (C) (D)
5	(A) (B) (C) (D)	16	(A) (B) (C) (D)	27	(A) (B) (C) (D)
6	(A) (B) (C) (D)	17	(A) (B) (C) (D)	28	(A) (B) (C) (D)
7	(A) (B) (C) (D)	18	(A) (B) (C) (D)	29	(A) (B) (C) (D)
8	(A) (B) (C) (D)	19	(A) (B) (C) (D)	30	(A) (B) (C) (D)
9	(A) (B) (C) (D)	20	(A) (B) (C) (D)	31	(A) (B) (C) (D)
10	(A) (B) (C) (D)	21	(A) (B) (C) (D)	32	(A) (B) (C) (D)
11	(A) (B) (C) (D)	22	(A) (B) (C) (D)		

## NUMERICAL RESPONSE

1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Day

☐ January ☐ May ☐ June

Time Taken:

Fold and tear along perforation.

## Contacts 2018–2019

### Provincial Assessment Sector

Dan Karas, Executive Director  
Provincial Assessment Sector  
780-422-4848  
[Dan.Karas@gov.ab.ca](mailto:Dan.Karas@gov.ab.ca)

### Grade 3, 6, and 9 Provincial Assessment

Nicole Lamarre, Director  
Student Learning Assessments and  
Provincial Achievement Testing  
780-427-6204  
[Nicole.Lamarre@gov.ab.ca](mailto:Nicole.Lamarre@gov.ab.ca)

Gilbert Guimont, Director  
French Assessment  
780-422-3535  
[Gilbert.Guimont@gov.ab.ca](mailto:Gilbert.Guimont@gov.ab.ca)

### Senior Managers

Julia Lee-Schuppli  
Gr. 3 English Language/Literacy  
780-422-3338  
[Julia.LeeSchuppli@gov.ab.ca](mailto:Julia.LeeSchuppli@gov.ab.ca)

Renate Taylor Majeau  
Gr. 3 Numeracy (English and French)  
780-422-2656  
[Renate.TaylorMajeau@gov.ab.ca](mailto:Renate.TaylorMajeau@gov.ab.ca)

Peggy Lee Peters  
Gr. 3 Francophone and  
French Immersion Literacy  
780-422-5464  
[PeggyLee.Peters@gov.ab.ca](mailto:PeggyLee.Peters@gov.ab.ca)

Robyn Pederson  
Gr. 6 English Language Arts and Social Studies  
780-415-2023  
[Robyn.Pederson@gov.ab.ca](mailto:Robyn.Pederson@gov.ab.ca)

Denis Dinel  
Gr. 6 and 9 Français/French Language Arts  
780-422-9424  
[Denis.Dinel@gov.ab.ca](mailto:Denis.Dinel@gov.ab.ca)

Kelly Rota  
Gr. 6 and 9 Mathematics  
780-422-4365  
[Kelly.Rota@gov.ab.ca](mailto:Kelly.Rota@gov.ab.ca)

Kelty Findlay  
Gr. 6 and 9 Science  
780-415-6120  
[Kelty.Findlay@gov.ab.ca](mailto:Kelty.Findlay@gov.ab.ca)

Harvey Stables  
Gr. 9 English Language Arts and Social Studies  
780-422-2913  
[Harvey.Stables@gov.ab.ca](mailto:Harvey.Stables@gov.ab.ca)

Ray Shapka  
Knowledge & Employability (K&E)  
780-422-2786  
[Ray.Shapka@gov.ab.ca](mailto:Ray.Shapka@gov.ab.ca)

### Exam Administration

Pascal Couture, Director  
Exam Administration and Production  
780-492-1462  
[Pascal.Couture@gov.ab.ca](mailto:Pascal.Couture@gov.ab.ca)

Pamela Klebanov, Senior Manager  
Business Operations and Special Cases  
780-492-1443  
[Pamela.Klebanov@gov.ab.ca](mailto:Pamela.Klebanov@gov.ab.ca)

Steven Diachuk, Coordinator  
Field Testing, Special Cases, and GED  
780-492-1453  
[Steven.Diachuk@gov.ab.ca](mailto:Steven.Diachuk@gov.ab.ca)

Special Cases Team  
Exam Administration  
[special.cases@gov.ab.ca](mailto:special.cases@gov.ab.ca)

Inquiries about field testing  
can be sent by email to  
[field.test@gov.ab.ca](mailto:field.test@gov.ab.ca)

### Provincial Assessment Sector Mailing Address

Provincial Assessment Sector, Alberta Education  
44 Capital Boulevard  
10044 108 Street NW  
Edmonton AB T5J 5E6

Telephone: 780-427-0010  
Toll-free within Alberta: 310-0000  
Fax: 780-422-4200  
Alberta Education website:  
[education.alberta.ca](http://education.alberta.ca)

### Client Services Help Desk:

Telephone: 780-427-5318  
Toll-free within Alberta: 310-0000  
Email: [cshelpdesk@gov.ab.ca](mailto:cshelpdesk@gov.ab.ca)  
Office Hours:  
Monday through Friday, 8:15 a.m. to 4:30 p.m.  
The office is open during the lunch hour.

**\*NEW**