

**2011 OUTCOME ANALYSIS**  
**Intermediate Mathematics Provincial Assessments**

Item	2010 Curriculum Outcome	Cognitive Level	Curricular Content
1	9N1	Level 1	Represent repeated multiplication using powers
2	9N1	Level 2	Evaluate powers with rational number bases
3	9N2	Level 2	Apply the laws of exponents to simplify expressions involving powers
4	9N2	Level 2	Apply the laws of exponents to simplify expressions involving powers
5	9N3	Level 3	Compare and order rational numbers
6	9N4(70-71)	Level 1	Identify which operation must be performed first in a given problem
7	9N5(70-71)	Level 2	Determine the square root of a rational, perfect square number
8	9PR2	Level 1	Match a given equation with a linear relation with its corresponding graph
9	9PR1 (76-78)	Level 2	Write a linear equation representing a pattern in a given table of values
10	9PR2 (80-82)	Level 1	Describe the relation in a graph
11	9PR3 (106-108)	Level 1	Identify the expression for a model of a given polynomial
12	9PR6 (90-94)	Level 2	Simplify polynomial expression

**L1 – Knowledge/Comprehension    L2 – Applications    L3 – Analysis/Synthesis/Evaluation**

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13	9PR6 (90-94)	Level 2	Simplify polynomial expression
14	9PR7(96-100)	Level 2	Identify the model of multiplication of a monomial by a polynomial
15	9PR3(106-108)	Level 2	Solve a given linear equation
16	9PR4(110-114)	Level 2	Solve a linear inequality
17	9SS5 (124-130)	Level 1	Determine the number of lines of symmetry in a given 2-D shape
18	9SS5	Level 1	Determine the order and angle of rotation symmetry for a given picture
19	9SS1(136-140)	Level 1	Identify the tangent
20	9SS1(136-140)	Level 2	Solve the unknown values using circle properties
21	9SS1(136-140)	Level 2	Solve the unknown values using circle properties
22	9SS1(136-140)	Level 2	Solve the unknown values using circle properties
23	9SS1(136-140)	Level 2	Solve the unknown values using circle properties
24	9SP1(152)	Level 2	Identify a potential problem in a given case study
25	9SP4(146-150)	Level 1	Identify situations which involve probability

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26	9N3\4	Level 3	Solve a given problem by applying order of operations on rational numbers
27	9N5	Level 2	Determine the square root of a positive rational number that is a perfect square in a problem solving situation
28	9N6	Level 2	Determine the square root of a positive rational number
29	9PR1	Level 3	Describe a pattern and write a linear equation for a given table of values
30	9PR3	Level 3	Represent and solve a given problem using linear equations
31	9PR3/4	Level 2	Solve a given inequality within a problem solving context
32	9PR6/7	Level 2	Solve a problem that required addition, subtraction, multiplication and division of polynomial expressions
33	9SS4	Level 2	Draw a 2-D shape to scale
34	9SS3	Level 3	Solve a given problem using the properties of similar polygons
35	9SS2	Level 2	Determine the surface area of composite 3-D shapes to solve a given problem
36	9SP2	Level 3	Select and defend the choice of using either a population or a sample of a population

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**Cognitive Levels of Learning**

<b>Level 1</b>	<i>Knowledge</i>	The ability to recall learned materials. It can range from the recall of simple facts to complete theories. It represents the lowest level of learning outcome, requiring only that the student recall previously learned information.
	<i>Comprehension</i>	The ability to grasp the meaning of material learned. The student may show understanding of the material by translating it from one form to another by conveying meaning, or by making summary statements about it.
<b>Level 2</b>	<i>Application</i>	The ability to use learned materials in new and concrete situations. The student is required to apply rules, concepts, principles, laws, or theories.
<b>Level 3</b>	<i>Analysis</i>	The ability to break material down into its component parts so that its organizational structure may be understood. The student demonstrated attainment of objectives through the ability to identify parts, show relationships, and recognize organizational principles.
	<i>Synthesis</i>	The ability to put parts together to form a new whole. The student demonstrated an ability to devise a new plan of operation, or to produce a set of abstract relations.
	<i>Evaluation</i>	The ability to judge the value of materials. The student might be required to judge the value of a statement, a piece of prose, a poem, an advertisement or a research report.

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