

# Foundations of Mathematics and Pre-Calculus 10

## 2010 – 2011 Sample B

### Provincial Examination — Answer Key

#### Cognitive Processes

Knowing  
Applying  
Reasoning

#### Weightings

47%  
40%  
13%

#### Question Types

**54** = Multiple Choice (MC)  
**6** = Numeric Response (NR)

#### Topics

1. Measurement
2. Algebra and Number
3. Relations and Functions

#### Prescribed Learning Outcomes (PLOs)

A  
B  
C

#### Weightings

25%  
30%  
45%

### Part A: Multiple-Choice Questions (Calculator Not Permitted)

Question Number	Keyed Response	Cognitive Process	Mark	Topic	PLO	Question Type
1.	C	Applying	1	3	C6	MC
2.	A	Applying	1	3	C5	MC
3.	C	Applying	1	3	C9	MC
4.	A	Knowing	1	3	C9	MC
5.	C	Knowing	1	2	B1	MC
6.	C	Knowing	1	2	B1	MC
7.	B	Knowing	1	2	B2	MC
8.	C	Knowing	1	2	B2	MC
9.	B	Knowing	1	2	B3	MC
10.	A	Knowing	1	1	A2	MC
11.	C	Knowing	1	1	A2	MC
12.	B	Knowing	1	1	A4	MC

### Part B: Multiple-Choice Questions (Calculator Permitted)

Question Number	Keyed Response	Cognitive Process	Mark	Topic	PLO	Question Type
13.	C	Applying	1	3	C1	MC
14.	D	Knowing	1	3	C1	MC
15.	D	Knowing	1	3	C2	MC
16.	A	Applying	1	3	C3	MC
17.	A	Applying	1	3	C3	MC
18.	C	Applying	1	3	C3	MC
19.	A	Applying	1	3	C4	MC
20.	C	Applying	1	3	C5	MC

Question Number	Keyed Response	Cognitive Process	Mark	Topic	PLO	Question Type
21.	B	Applying	1	3	C5	MC
22.	C	Knowing	1	3	C6	MC
23.	B	Reasoning	1	3	C6	MC
24.	D	Applying	1	3	C6, C3	MC
25.	A	Knowing	1	3	C7	MC
26.	A	Knowing	1	3	C7	MC
27.	A	Applying	1	3	C7	MC
28.	D	Applying	1	3	C7	MC
29.	C	Knowing	1	3	C8	MC
30.	C	Applying	1	3	C9	MC
31.	A	Applying	1	3	C9	MC
32.	A	Reasoning	1	3	C9	MC
33.	A	Knowing	1	2	B2	MC
34.	C	Knowing	1	2	B2	MC
35.	B	Knowing	1	2	B3	MC
36.	A	Knowing	1	2	B3	MC
37.	A	Applying	1	2	B3	MC
38.	D	Knowing	1	2	B4	MC
39.	B	Applying	1	2	B4	MC
40.	C	Applying	1	2	B4	MC
41.	B	Knowing	1	2	B5	MC
42.	D	Knowing	1	2	B5	MC
43.	C	Applying	1	2	B5	MC
44.	B	Reasoning	1	2	B5	MC
45.	A	Knowing	1	1	A1	MC
46.	A	Knowing	1	1	A1	MC
47.	C	Knowing	1	1	A2	MC
48.	A	Reasoning	1	1	A3	MC
49.	B	Reasoning	1	1	A4, A3	MC
50.	B	Reasoning	1	1	A3	MC
51.	B	Reasoning	1	1	A3	MC
52.	C	Applying	1	1	A4	MC
53.	C	Applying	1	1	A4	MC
54.	D	Applying	1	1	A4	MC

**Part C: Numerical-Response Questions (Calculator Permitted)**

Question Number	Keyed Response	Cognitive Process	Mark	Topic	PLO	Question Type
55.	0.4	Knowing	1	3	C3	NR
56.	-16	Knowing	1	3	C3	NR
57.	960	Knowing	1	3	C8	NR
58.	625	Applying	1	2	B3	NR
59.	339	Applying	1	1	A3	NR
60.	45	Applying	1	1	A4	NR

**Samples of correct student responses for the Numeric-Response Section**

55.	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<b>OR</b>	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
56.	$\begin{matrix} + & - \\ \circ & \bullet \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
57.	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<b>OR</b>	$\begin{matrix} + & - \\ \bullet & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
58.	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
59.	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
60.	$\begin{matrix} + & - \\ \circ & \circ \end{matrix}$	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			