

**Principles of Mathematics 10: Patterns and Relations
Item-Level Response Report (Provincial Level)**

British Columbia

All Schools

June/2008

Provincial Principles of Mathematics 10 Item-Level Response Reports include data for all BC students who wrote the exam in June 2008 (about 26,690 students). Both public and independent schools are included. The Principles of Mathematics 10 June 2008 provincial Item-Level Response Report displays the proportion of students who made errors on each exam item of this domain: Patterns and Relations.

Click [here](#) to view the Prescribed Learning Outcomes

Form	Item #	Question type	Prescribed Learning Outcomes	Number of Students who Responded to the Item	Percentage of Students who Answered Incorrectly	Specific Curricular Aspect that Needs Attention [$>20\%$ selected incorrect response]
A	16	MC	B1	26613	28	*
A	17	MC	B1	26575	26	*
A	18	MC	B2	26599	54	<ul style="list-style-type: none"> Students calculated the last term instead of the sum of terms in an arithmetic sequence.
A	19	MC	B12	26609	59	<ul style="list-style-type: none"> When adding the values of a function in two points, students gave the sum of the two values of x as result. When adding the values of a function in two points, students likely added the values of x and next used the graph to identify the corresponding value of the function.
A	21	MC	B12	26577	50	<ul style="list-style-type: none"> Students made several errors in using the function notation to find the coefficients of a linear function.

A	22	MC	B11	26657	28	*
A	23	MC	B11	26684	34	<ul style="list-style-type: none"> Students did not recognize that a relation was a partial variation and they chose a graph showing a direct variation.
A	24	MC	B13	26636	37	*
A	25	MC	B13	26574	57	<ul style="list-style-type: none"> Students confused the x-intercept and y-intercept when selecting a linear function.
A	26	MC	B13	26661	49	<ul style="list-style-type: none"> Students selected a standard form of a linear equation in which the slope had opposite sign than required.
A	27	MC	B13	26671	49	*
A	28	MC	B15	26677	11	N/A
A	29	MC	B16	26633	13	N/A
A	31	MC	B4	26640	30	*
A	32	MC	B4	26639	26	*
A	34	MC	B5	26675	19	N/A
A	35	MC	B5	26654	37	*
A	36	MC	B6	26501	57	<ul style="list-style-type: none"> Students did not recognize the components of a division statement and they thought that the ratio between remainder and divisor was the remainder.
A	37	MC	B6	26575	64	<ul style="list-style-type: none"> Students made numerical mistakes in obtaining the quotient when dividing two polynomials, by incorrectly subtracting the terms.
A	38	MC	B7	26651	30	*

A	39	MC	B7	26545	38	*
A	40	MC	B8	26636	38	*
A	42	MC	B9	26618	58	<ul style="list-style-type: none"> When dividing 2 rational expressions, students did not invert the second fraction and also made a sign error. When dividing 2 rational expressions, students did not invert the second fraction.
A	43	MC	B9	26585	52	<ul style="list-style-type: none"> When adding two rational expressions, students correctly found the lowest common denominator but simply added the two numerators as if the original denominators were the same.
A	44	MC	B10	26500	42	*
A	45	MC	B10	26414	49	<ul style="list-style-type: none"> Students likely did not know how to solve a word problem involving distance, speed and time or made mistakes in solving an equation with rational expressions.

Note:

(1) A description of the misconception is given when more than 20% of students answered the item incorrectly (i.e. selected a distractor).

(2) 'N/A' indicates that fewer than 20% of students answered the item incorrectly. Therefore, no description is provided.

(3) '*' indicates that more than 20% of students answered the item incorrectly, but no single distractor was selected by more than 20% of the students. Therefore, no description is provided.