

**Principles of Mathematics 10: Shape and Space
Item-Level Response Report (Provincial Level)**

British Columbia

All Schools

June/2009

Provincial Principles of Mathematics 10 Item-Level Response Reports include data for all BC students who wrote the exam in June 2009 (about 26,355 students). Both public and independent schools are included. The Principles of Mathematics 10 June 2009 provincial Item-Level Response Report displays the proportion of students who made errors on each exam item of this domain: Shape and Space.

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	46	MC	C1	26070	45%	<ul style="list-style-type: none"> In a problem involving two right triangles, students correctly found the missing angle but then used the tangent ratio rather than the sine ratio to find the length of the hypotenuse.
A	47	MC	C3	26284	27%	*
A	48	MC	C3	26038	52%	<ul style="list-style-type: none"> Students incorrectly used the Pythagorean Theorem to find the unknown side in a non right triangle.
A	50	MC	C3	26214	36%	*
A	51	MC	C4	26270	30%	*
A	52	MC	C4	26131	73%	<ul style="list-style-type: none"> Students incorrectly applied the formula to determine the distance between two points by

						<p>adding the x-coordinates and the y –coordinates.</p> <ul style="list-style-type: none"> Students correctly applied the formula to determine the distance between two points to find the diagonal of a square but did not know how to obtain the side length of the square or forgot to perform this last step.
A	53	MC	C5	26254	27%	*
A	54	MC	C6	26265	27%	*
A	56	MC	C7	26257	51%	<ul style="list-style-type: none"> Students did not recognize that the equation of a vertical line does not contain the variable y.
A	57	MC	C7	26276	54%	<ul style="list-style-type: none"> When asked to determine the equation in standard form of a line, given the slope and x-intercept, students made sign errors or guessed.
A	58	MC	C7	26206	40%	*
A	59	MC	C8	26278	44%	<ul style="list-style-type: none"> Students correctly identified the slope of a line parallel with another line but could not find the y-intercept.
A	60	MC	C8	26268	76%	<ul style="list-style-type: none"> Students selected an equation of a line perpendicular to a given line, but the line did not pass through a given point as required.

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.