

## Grade Seven Numeracy: An Item-level Analysis - Multiple Choice (Provincial Level)

**British Columbia      All Schools      FSA February/2008      FSA population  
(N=43,929)**

Provincial FSA Item-Level Response Reports include data for all BC students in Grade 7 who wrote a particular FSA test. Both public and independent schools are included. The FSA 2008 provincial Item-Level Response Reports display the proportion of students who made errors on each test item and a description of the misconception.

Since the English and French versions of the FSA Numeracy tests are identical, the Item-level Analysis – Multiple Choice provincial report includes all students.

Content Area	Item #	Number of Students who Responded to the Item	Percentage of Students who Answered Incorrectly	Specific Curricular Aspect that Needs Attention [>20% selected incorrect response]
Number	1	43832	47%	<ul style="list-style-type: none"> <li>In a percent question involving data in a table, students just selected the number in the table rather than finding what percent it was out of the total.</li> </ul>
Number	4	43766	30%	*
Number	5	43775	56%	<ul style="list-style-type: none"> <li>Students were unable to find the best buy in a question that involved unit pricing.</li> </ul>
Number	8	43645	53%	<ul style="list-style-type: none"> <li>Students' calculations were correct but not complete; only part of the cost-solving problem was solved</li> </ul>
Number	12	43774	22%	*
Number	14	43530	41%	*
Number	15	43598	78%	<ul style="list-style-type: none"> <li>In a word problem involving expenses and profit, students indicated only the profit rather than the total cost needed to achieve the required profit.</li> </ul>
Number	16	43689	35%	*

Number	17	43535	54%	<ul style="list-style-type: none"> <li>Students were not able to understand the relationship between two number patterns. They just divided two numbers in the stem.</li> </ul>
Number	19	43626	63%	<ul style="list-style-type: none"> <li>In a 3-step word problem involving percents, students used only the cost of one of two items to estimate the percent of total spending.</li> <li>In a 3-step word problem involving percents, students made numerical errors in estimating the percent that two items were of the total spending.</li> </ul>
Number	21	43493	27%	*
Number	22	43550	37%	<ul style="list-style-type: none"> <li>Students were not able to use a circle graph to estimate the amount of money that corresponds to an item. The student divided the total amount by the number of items.</li> </ul>
Number	23	43546	46%	<ul style="list-style-type: none"> <li>The student completed the first step in a two-step cost-solving problem correctly but divided by an incorrect number in the second step.</li> </ul>
Number	28	43390	41%	*
Number	33	43231	40%	*
Number	34	43217	60%	<ul style="list-style-type: none"> <li>In a question involving three different number patterns, students were unable to find the first time that the three patterns shared a common number.</li> </ul>
Number	37	43118	40%	*
Patterns and Relations	7	43640	40%	*
Patterns and Relations	9	43673	50%	<ul style="list-style-type: none"> <li>Students were not able to determine a pattern from an arrangement of objects and then find the sum of all objects for the first n terms.</li> </ul>
Patterns and Relations	11	43498	35%	*

Patterns and Relations	13	43590	33%	<ul style="list-style-type: none"> <li>Students were unable to identify how many terms in a number pattern add up to a given value.</li> </ul>
Patterns and Relations	25	43505	60%	<ul style="list-style-type: none"> <li>Students were not able to correctly identify the pattern of increase in a sequence of numbers.</li> </ul>
Patterns and Relations	29	43244	55%	*
Patterns and Relations	30	43385	48%	<ul style="list-style-type: none"> <li>Students were not able to identify and find the next term in a decreasing number pattern.</li> </ul>
Patterns and Relations	35	43211	29%	*
Shape and Space	2	43680	43%	<ul style="list-style-type: none"> <li>Students were not able to solve a multiple step problem involving the conversion of units of mass and multiplying to increase the size of a set of items.</li> </ul>
Shape and Space	3	43681	59%	<ul style="list-style-type: none"> <li>Students were not able to identify the arrangement of a number of square pieces that would produce a figure with the greatest perimeter.</li> </ul>
Shape and Space	27	43467	51%	<ul style="list-style-type: none"> <li>Students were unable to use unit pricing to determine the best buy from a number of packages of a product</li> </ul>
Shape and Space	32	43185	59%	<ul style="list-style-type: none"> <li>Students were not able to determine an end time when given a start time, a rate of travel for a given distance and a rest interval.</li> </ul>
Shape and Space	36	43095	67%	<ul style="list-style-type: none"> <li>In a word problem involving the mass and price of an object, students were able to obtain a unit price, but did not multiply it by the total mass to obtain the total cost.</li> </ul>
Shape and Space	38	43182	22%	*
Shape and Space	40	43051	56%	<ul style="list-style-type: none"> <li>In a question involving two different rates in for the same period of time, students were unable to find the difference between them and extend this to a longer time interval. They</li> </ul>

				<p>just found the sum of two numbers in the stem.</p> <ul style="list-style-type: none"> <li>In a question involving two different rates for the same period of time, students were unable to find the difference between them and extend this to a longer time interval. They just found the product of two numbers in the stem.</li> </ul>
Statistics and Probability	6	43764	48%	<ul style="list-style-type: none"> <li>Students were unable to determine the probability of randomly selecting either of two types of objects from a bag containing a number of different objects.</li> </ul>
Statistics and Probability	10	43741	48%	<ul style="list-style-type: none"> <li>Students were not able to determine the probability of an event. They incorrectly identified the number of possible outcomes.</li> </ul>
Statistics and Probability	18	43680	50%	<ul style="list-style-type: none"> <li>Students were not able to use a diagram to obtain the probability of an event. They did not count all favourable outcomes.</li> </ul>
Statistics and Probability	20	43655	32%	*
Statistics and Probability	24	43533	27%	*
Statistics and Probability	26	43367	51%	<ul style="list-style-type: none"> <li>Students were not able to compare two line graphs to determine the point at which one graph represented a cost situation which was more favourable than the other.</li> </ul>
Statistics and Probability	31	43401	48%	<ul style="list-style-type: none"> <li>Students were not able to obtain the number of favourable outcomes involving two independent events with an additional condition. They multiplied the number of categories for one event with one less the number of categories for the other event.</li> </ul>
Statistics and	39	43033	40%	*

Probability				
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Note: '**N/A**' represents that there were fewer than 20% of the students who incorrectly answered the item; '\*' represents that there was no specific curricular aspect that needed attention since each of the incorrect answers has been chosen by less than 20% of the students.