

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

British Columbia

All Schools

FSA May/2004

FSA population (N=48,178)

Provincial FSA Item-Level Response Reports include data for all BC students in Grade 4 who wrote a particular FSA test. Both public and independent schools are included. The FSA 2004 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 | 44054 | 14 | N/A |
| Number | 3 | 43842 | 39 | * |
| Number | 4 | 44050 | 15 | N/A |
| Number | 5 | 43861 | 36 | <ul style="list-style-type: none"> Students rounded down, rather than up, in an estimation problem. |
| Number | 7 | 43912 | 48 | <ul style="list-style-type: none"> Students found the wrong term in a question involving addition or multiplication and division |
| Number | 8 | 43778 | 29 | * |
| Number | 11 | 43455 | 61 | <ul style="list-style-type: none"> Students were unable to solve a word problem involving subtraction, multiplication and division |
| Number | 16 | 42337 | 51 | <ul style="list-style-type: none"> Students made a calculation error in a money question that involved finding the amount of change that should be received after a purchase |
| Number | 17 | 41976 | 47 | <ul style="list-style-type: none"> Students made one or more errors in using estimation to find the sum of numbers |
| Number | 20 | 40772 | 50 | <ul style="list-style-type: none"> Students were unable to determine the number of containers needed to hold a number of objects |
| Number | 22 | 43618 | 63 | <ul style="list-style-type: none"> Students performed only one operation (division) in a word problem requiring both division and multiplication |
| Number | 23 | 43757 | 37 | <ul style="list-style-type: none"> Students made a calculation error in a cost problem involving making change. |

| | | | | |
|------------------------|----|-------|----|--|
| Number | 25 | 43699 | 27 | * |
| Number | 27 | 43323 | 37 | * |
| Number | 30 | 43502 | 62 | <ul style="list-style-type: none"> Students rounded a number to the nearest 100 when asked to round to the nearest 1000 |
| Number | 32 | 43232 | 52 | <ul style="list-style-type: none"> Students left one value off the answer in a word problem involving subtraction followed by division |
| Number | 33 | 43400 | 45 | <ul style="list-style-type: none"> Students made an error in an estimation question that involved rounding and division |
| Number | 36 | 42961 | 45 | <ul style="list-style-type: none"> Students didn't correctly estimate the number of square units covered by an irregular shaped figure |
| Number | 38 | 42736 | 18 | N/A |
| Number | 40 | 42088 | 61 | <ul style="list-style-type: none"> Students didn't include one of the conditions needed for two numbers that summed to 36 Students misread the information given about two numbers that summed to 36 |
| Patterns and Relations | 2 | 43919 | 33 | <ul style="list-style-type: none"> Students were not able to place several events in order of occurrence |
| Patterns and Relations | 9 | 43666 | 26 | * |
| Patterns and Relations | 12 | 42811 | 46 | * |
| Patterns and Relations | 15 | 42382 | 39 | * |
| Patterns and Relations | 31 | 43378 | 47 | <ul style="list-style-type: none"> Students found the value of the $(n+1)$ term in a number pattern rather than the n^{th} term. |
| Space and Shape | 6 | 43930 | 29 | * |
| Space and Shape | 13 | 42911 | 62 | <ul style="list-style-type: none"> Students were not successful in a money problem that involved converting from kilograms to grams and then multiplying by a cost factor |
| Shape and Space | 19 | 41594 | 22 | * |
| Space and Shape | 26 | 43367 | 53 | <ul style="list-style-type: none"> Students subtracted a number of minutes from an <u>end</u> time incorrectly on a 12-hour clock in trying to find the <u>start</u> time |
| Shape and Space | 28 | 43170 | 46 | <ul style="list-style-type: none"> Students found the wrong final term in a number pattern |
| Shape and Space | 29 | 43430 | 62 | <ul style="list-style-type: none"> Students made an error in adding hours and minutes in a question involving time of day and the amount of time to complete a task |

| | | | | |
|------------------------------|----|-------|----|--|
| Space and Shape | 35 | 43119 | 63 | <ul style="list-style-type: none"> Students used the wrong metric unit in the answer to a word problem involving multiplication and the conversion of centimetres to metres |
| Space and Shape | 39 | 42618 | 25 | * |
| Statistics and Probabilities | 10 | 43247 | 46 | * |
| Statistics and Probabilities | 14 | 43085 | 35 | * |
| Statistics and Probabilities | 18 | 41845 | 14 | N/A. |
| Statistics and Probabilities | 24 | 43822 | 32 | * |
| Statistics and Probabilities | 34 | 43164 | 33 | * |
| Statistics and Probabilities | 37 | 42977 | 51 | <ul style="list-style-type: none"> Students didn't read and interpret a bar graph correctly |
| Statistics and Probabilities | 41 | 41914 | 45 | <ul style="list-style-type: none"> In a pictograph, students gave the difference in the number of symbols, rather than the difference of their values |

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.