



**2012 Mathematics Tests Standard and Performance Indicator Map Grade 7**

| Question      | Type            | Points | Strand                      | Performance Indicator   |
|---------------|-----------------|--------|-----------------------------|---|
| <b>Book 1</b> |                 |        |                             |   |
| 1             | Multiple Choice | 1      | Measurement                 | 7.M.3 Identify customary and metric units of mass   |
| 2             | Multiple Choice | 1      | Statistics and Probability  | 7.S.6 Read and interpret data represented graphically (pictograph, bar graph, histogram, line graph, double line/bar graphs or circle graph)  |
| 3             | Multiple Choice | 1      | Statistics and Probability  | 7.S.9 Determine the validity of sampling methods to predict outcomes  |
| 4             | Multiple Choice | 1      | Number Sense and Operations | 7.N.11 Simplify expressions using order of operations <i>Note: Expressions may include absolute value and/or integral exponents greater than 0.</i>                                 |
| 5             | Multiple Choice | 1      | Algebra                     | 7.A.1 Translate two-step verbal expressions into algebraic expressions  |
| 6             | Multiple Choice | 1      | Number Sense and Operations | 7.N.7 Compare numbers written in scientific notation  |
| 7             | Multiple Choice | 1      | Geometry                    | 7.G.3 Identify the two-dimensional shapes that make up the faces and bases of three-dimensional shapes (prisms, cylinders, cones, and pyramids)                                     |
| 8             | Multiple Choice | 1      | Algebra                     | 7.A.5 Solve one-step inequalities (positive coefficients only) (See 7.G.10)   |
| 9             | Multiple Choice | 1      | Number Sense and Operations | 7.N.13 Add and subtract two integers (with and without the use of a number line)  |
| 10            | Multiple Choice | 1      | Number Sense and Operations | 7.N.18 Identify the two consecutive whole numbers between which the square root of a non-perfect square whole number less than 225 lies (with and without the use of a number line) |

**2012 Mathematics Tests Standard and Performance Indicator Map Grade 7 (continued)**

| <b>Question</b> | <b>Type</b>     | <b>Points</b> | <b>Strand</b>               | <b>Performance Indicator</b>   |
|-----------------|-----------------|---------------|-----------------------------|--|
| 12              | Multiple Choice | 1             | Geometry                    | 7.G.8 Use the Pythagorean Theorem to determine the unknown length of a side of a right triangle  |
| 20              | Multiple Choice | 1             | Statistics and Probability  | 7.S.3 Convert raw data into double bar graphs and double line graphs   |
| 21              | Multiple Choice | 1             | Geometry                    | 7.G.1 Calculate the radius or diameter, given the circumference or area of a circle  |
| 22              | Multiple Choice | 1             | Statistics and Probability  | 7.S.6 Read and interpret data represented graphically (pictograph, bar graph, histogram, line graph, double line/bar graphs or circle graph) |
| 23              | Multiple Choice | 1             | Statistics and Probability  | 7.S.4 Calculate the range for a given set of data  |
| 24              | Multiple Choice | 1             | Number Sense and Operations | 7.N.12 Add, subtract, multiply, and divide integers  |
| 25              | Multiple Choice | 1             | Number Sense and Operations | 7.N.7 Compare numbers written in scientific notation   |
| 26              | Multiple Choice | 1             | Number Sense and Operations | 7.N.2 Recognize the difference between rational and irrational numbers (e.g., explore different approximations of $\pi$ )                    |
| 27              | Multiple Choice | 1             | Statistics and Probability  | 7.S.10 Predict the outcome of an experiment  |
| 28              | Multiple Choice | 1             | Number Sense and Operations | 7.N.8 Find the common factors and greatest common factor of two or more numbers  |
| 29              | Multiple Choice | 1             | Algebra                     | 7.A.6 Evaluate formulas for given input values (surface area, rate, and density problems)  |
| 30              | Multiple Choice | 1             | Statistics and Probability  | 7.S.2 Display data in a circle graph   |
| 31              | Multiple Choice | 1             | Algebra                     | 7.A.4 Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation   |
| <b>Book 2</b>   |                 |               |                             |  |
| 32              | Multiple Choice | 1             | Number Sense and Operations | 7.N.15 Recognize and state the value of the square root of a perfect square (up to 225)  |

**2012 Mathematics Tests Standard and Performance Indicator Map Grade 7 (continued)**

| <b>Question</b> | <b>Type</b>     | <b>Points</b> | <b>Strand</b>               | <b>Performance Indicator</b>  |
|-----------------|-----------------|---------------|-----------------------------|---|
| 33              | Multiple Choice | 1             | Measurement                 | 7.M.4 Convert mass within a given system  |
| 34              | Multiple Choice | 1             | Measurement                 | 7.M.9 Determine the tool and technique to measure with an appropriate level of precision: mass  |
| 35              | Multiple Choice | 1             | Measurement                 | 7.M.4 Convert mass within a given system  |
| 36              | Multiple Choice | 1             | Number Sense and Operations | 7.N.19 Justify the reasonableness of answers using estimation   |
| 37              | Multiple Choice | 1             | Number Sense and Operations | 7.N.6 Translate numbers from scientific notation into standard form   |
| 38              | Multiple Choice | 1             | Algebra                     | 7.A.6 Evaluate formulas for given input values (surface area, rate, and density problems)   |
| 39              | Multiple Choice | 1             | Geometry                    | 7.G.7 Find a missing angle when given angles of a quadrilateral   |
| 40              | Multiple Choice | 1             | Geometry                    | 7.G.2 Calculate the volume of prisms and cylinders, using a given formula and a calculator  |
| 41              | Multiple Choice | 1             | Statistics and Probability  | 7.S.7 Identify and explain misleading statistics and graphs   |
| 42              | Multiple Choice | 1             | Geometry                    | 7.G.10 Graph the solution set of an inequality (positive coefficients only) on a number line (See 7.A.5)  |
| 51              | Multiple Choice | 1             | Number Sense and Operations | 7.N.1 Distinguish between the various subsets of real numbers (counting/natural numbers, whole numbers, integers, rational numbers, and irrational numbers) |
| 52              | Multiple Choice | 1             | Statistics and Probability  | 7.S.8 Interpret data to provide the basis for predictions and to establish experimental probabilities   |
| 53              | Multiple Choice | 1             | Number Sense and Operations | 7.N.8 Find the common factors and greatest common factor of two or more numbers   |
| 54              | Multiple Choice | 1             | Statistics and Probability  | 7.S.8 Interpret data to provide the basis for predictions and to establish experimental probabilities   |
| 55              | Multiple Choice | 1             | Number Sense and Operations | 7.N.12 Add, subtract, multiply, and divide integers   |

**2012 Mathematics Tests Standard and Performance Indicator Map Grade 7 (continued)**

| <b>Question</b> | <b>Type</b>       | <b>Points</b> | <b>Strand</b>               | <b>Performance Indicator</b>  |
|-----------------|-------------------|---------------|-----------------------------|---|
| 56              | Multiple Choice   | 1             | Statistics and Probability  | 7.S.12 Compare actual results to predicted results  |
| 57              | Multiple Choice   | 1             | Measurement                 | 7.M.4 Convert mass within a given system  |
| 58              | Multiple Choice   | 1             | Number Sense and Operations | 7.N.10 Determine the prime factorization of a given number and write in exponential form  |
| 59              | Multiple Choice   | 1             | Statistics and Probability  | 7.S.10 Predict the outcome of an experiment   |
| 60              | Multiple Choice   | 1             | Measurement                 | 7.M.2 Convert capacities and volumes within a given system  |
| 61              | Multiple Choice   | 1             | Number Sense and Operations | 7.N.11 Simplify expressions using order of operations <i>Note: Expressions may include absolute value and/or integral exponents greater than 0.</i> |
| 62              | Multiple Choice   | 1             | Statistics and Probability  | 7.S.6 Read and interpret data represented graphically (pictograph, bar graph, histogram, line graph, double line/bar graphs or circle graph)        |
| <b>Book 3</b>   |                   |               |                             |   |
| 63              | Short Response    | 2             | Algebra                     | 7.A.2 Add and subtract monomials with exponents of one  |
| 64              | Short Response    | 2             | Number Sense and Operations | 7.N.10 Determine the prime factorization of a given number and write in exponential form  |
| 65              | Short Response    | 2             | Geometry                    | 7.G.2 Calculate the volume of prisms and cylinders, using a given formula and a calculator  |
| 66              | Short Response    | 2             | Measurement                 | 7.M.8 Draw central angles in a given circle using a protractor (circle graphs)  |
| 67              | Short Response    | 2             | Statistics and Probability  | 7.S.12 Compare actual results to predicted results  |
| 68              | Extended Response | 3             | Geometry                    | 7.G.7 Find a missing angle when given angles of a quadrilateral   |
| 69              | Extended Response | 3             | Number Sense and Operations | 7.N.13 Add and subtract two integers (with and without the use of a number line)  |
| 70              | Extended Response | 3             | Statistics and Probability  | 7.S.3 Convert raw data into double bar graphs and double line graphs  |

**2012 Mathematics Tests Standard and Performance Indicator Map Grade 7 (continued)**

| <b>Question</b> | <b>Type</b>       | <b>Points</b> | <b>Strand</b>              | <b>Performance Indicator</b>  |
|-----------------|-------------------|---------------|----------------------------|---|
| 71              | Extended Response | 3             | Statistics and Probability | 7.S.8 Interpret data to provide the basis for predictions and to establish experimental probabilities |