# 2008 Mathematics Tests Standard and Performance Indicator Map with Answer Key
## Grade 7

| Question | Type | Points | Strand | Content Performance Indicator | Answer Key |
|---|---|---|---|---|---|
| **Book 1** | | | | | |
| 1 | Multiple Choice | 1 | Geometry | 6.G10 Identify and plot points in all four quadrants | D |
| 2 | Multiple Choice | 1 | Measurement | 7.M02 Convert capacities and volumes within a given system | B |
| 3 | Multiple Choice | 1 | Algebra | 6.A04 Solve and explain two-step equations involving whole numbers using inverse operations | B |
| 4 | Multiple Choice | 1 | Geometry | 6.G11 Calculate the area of basic polygons drawn on a coordinate plane (rectangles and shapes composed of rectangles having sides with integer lengths) | C |
| 5 | Multiple Choice | 1 | Algebra | 7.A06 Evaluate formulas for given input values (surface area, rate, and density problems) | B |
| 6 | Multiple Choice | 1 | Number Sense and Operations | 7.N02 Recognize the difference between rational and irrational numbers (i.e., explore different approximations of $\pi$) | B |
| 7 | Multiple Choice | 1 | Number Sense and Operations | 7.N09 Determine multiples and least common multiple of two or more numbers | D |
| 8 | Multiple Choice | 1 | Statistics and Probability | 7.S06 Read and interpret data represented graphically (pictograph, bar graph, histogram, line graph, double line/bar graphs, or circle graph) | D |
| 9 | Multiple Choice | 1 | Algebra | 6.A02 Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three) | C |
| 10 | Multiple Choice | 1 | Statistics and Probability | 7.S10 Predict the outcome of an experiment | B |
| 11 | Multiple Choice | 1 | Number Sense and Operations | 7.N11 Simplify expressions using order of operations Note: Expressions may include absolute value and/or integral exponents greater than 0 | D |
| 12 | Multiple Choice | 1 | Geometry | 7.G01 Calculate the radius or diameter, given the circumference or area of a circle | B |
| 13 | Multiple Choice | 1 | Number Sense and Operations | 7.N06 Translate numbers from scientific notation into standard form | A |
| 14 | Multiple Choice | 1 | Statistics and Probability | 7.S04 Calculate the range for a given set of data | B |
| 15 | Multiple Choice | 1 | Algebra | 6.A03 Translate two-step verbal equations into algebraic equations | A |
| 16 | Multiple Choice | 1 | Statistics and Probability | 7.S12 Compare actual results to predicted results | C |

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|---|---|---|---|---|---|
| **Book 1 (continued)** | | | | | |
| 17 | Multiple Choice | 1 | Number Sense and Operations | 7.N18 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) | B |
| 18 | Multiple Choice | 1 | Statistics and Probability | 7.S10 Predict the outcome of an experiment | D |
| 19 | Multiple Choice | 1 | Measurement | 7.M04 Convert mass within a given system | B |
| 20 | Multiple Choice | 1 | Number Sense and Operations | 7.N08 Find the common factors and greatest common factor of two or more numbers | C |
| 21 | Multiple Choice | 1 | Statistics and Probability | 7.S06 Read and interpret data represented graphically (pictograph, bar graph, histogram, line graph, double line/bar graphs, or circle graph) | B |
| 22 | Multiple Choice | 1 | Statistics and Probability | 7.S08 Interpret data to provide the basis for predictions and to establish experimental probabilities | D |
| 23 | Multiple Choice | 1 | Measurement | 7.M11 Estimate surface area | D |
| 24 | Multiple Choice | 1 | Statistics and Probability | 6.S10 Determine the probability of dependent events | C |
| 25 | Multiple Choice | 1 | Number Sense and Operations | 7.N12 Add, subtract, multiply, and divide integers | B |
| 26 | Multiple Choice | 1 | Number Sense and Operations | 7.N07 Compare numbers written in scientific notation | B |
| 27 | Multiple Choice | 1 | Measurement | 7.M09 Determine the tool and technique to measure with an appropriate level of precision: mass | D |
| 28 | Multiple Choice | 1 | Statistics and Probability | 7.S09 Determine the validity of sampling methods to predict outcomes | A |
| 29 | Multiple Choice | 1 | Measurement | 7.M02 Convert capacities and volumes within a given system | D |
| 30 | Multiple Choice | 1 | Geometry | 7.G03 Identify the two-dimensional shapes that make up the faces and bases of three-dimensional shapes (prisms, cylinders, cones, and pyramids) | A |

# 2008 Mathematics Tests Standard and Performance Indicator Map with Answer Key
## Grade 7 (continued)

| Question | Type | Points | Strand | Content Performance Indicator | Answer Key |
|---|---|---|---|---|---|
| **Book 2** | | | | | |
| 31 | Extended Response | 3 | Number Sense and Operations | 7.N13 Add and subtract two integers (with and without the use of a number line) | n/a |
| 32 | Short Response | 2 | Algebra | 6.A05 Solve simple proportions within context | n/a |
| 33 | Short Response | 2 | Algebra | 7.A01 Translate two-step verbal expressions into algebraic expressions | n/a |
| 34 | Extended Response | 3 | Statistics and Probability | 6.S03 Construct Venn diagrams to sort data | n/a |
| 35 | Extended Response | 3 | Geometry | 7.G02 Calculate the volume of prisms and cylinders, using a given formula and calculator | n/a |
| 36 | Short Response | 2 | Number Sense and Operations | 7.N10 Determine the prime factorization of a given number and write in exponential form | n/a |
| 37 | Short Response | 2 | Measurement | 7.M08 Draw central angles in a given circle using a protractor (circle graphs) | n/a |
| 38 | Extended Response | 3 | Statistics and Probability | 6.S02 Record data in a frequency table | n/a |