## 2009 Mathematics Tests Standard and Performance Indicator Map with Answer Key Grade 8

| Question | Type | Points | Strand | Content Performance Indicator | Answer Key |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Book 1 |  |  |  |  |  |
| 1 | Multiple Choice | 1 | Algebra | 7.A02 Add and subtract monomials with exponents of one | C |
| 2 | Multiple Choice | 1 | Geometry | 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal | B |
| 3 | Multiple Choice | 1 | Geometry | 7.G05 Identify the right angle, hypotenuse, and legs of a right triangle | B |
| 4 | Multiple Choice | 1 | Number Sense and Operations | 8.N01 Develop and apply the laws of exponents for multiplication and division | C |
| 5 | Multiple Choice | 1 | Geometry | 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal | B |
| 6 | Multiple Choice | 1 | Algebra | 7.A04 Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation | C |
| 7 | Multiple Choice | 1 | Algebra | 8.A03 Describe a situation involving relationships that matches a given graph | D |
| 8 | Multiple Choice | 1 | Geometry | 7.G08 Use the Pythagorean Theorem to determine the unknown length of a side of a right triangle | D |
| 9 | Multiple Choice | 1 | Geometry | 8.G04 Determine angle pair relationships when given two parallel lines cut by a transversal | C |
| 10 | Multiple Choice | 1 | Algebra | 8.A08 Multiply a binomial by a monomial or binomial (integer coefficients) | D |
| 11 | Multiple Choice | 1 | Algebra | 8.A03 Describe a situation involving relationships that matches a given graph | C |
| 12 | Multiple Choice | 1 | Number Sense and Operations | 8.N05 Estimate a percent of quantity, given an application | B |
| 13 | Multiple Choice | 1 | Geometry | 8.G04 Determine angle pair relationships when given two parallel lines cut by a transversal | C |
| 14 | Multiple Choice | 1 | Algebra | 8.A02 Write verbal expressions that match given mathematical expressions | B |
| 15 | Multiple Choice | 1 | Geometry | 8.G01 Identify pairs of vertical angles as congruent | A |

## 2009 Mathematics Tests Standard and Performance Indicator Map with Answer Key Grade 8 (continued)

| Question | Type | Points | Strand | Content Performance Indicator | Answer Key |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Book 1 (continued) |  |  |  |  |  |
| 16 | Multiple Choice | 1 | Algebra | 8.A09 Divide a polynomial by a monomial (integer coefficients) | B |
| 17 | Multiple Choice | 1 | Geometry | 8.G06 Calculate the missing angle measurements when given two intersecting lines and an angle | A |
| 18 | Multiple Choice | 1 | Measurement | 7.M01 Calculate distance using a map scale | D |
| 19 | Multiple Choice | 1 | Algebra | 8.A04 Create a graph given a description or an expression for a situation involving a linear or nonlinear relationship | D |
| 20 | Multiple Choice | 1 | Geometry | 8.G06 Calculate the missing angle measurements when given two intersecting lines and an angle | C |
| 21 | Multiple Choice | 1 | Algebra | 8.A09 Divide a polynomial by a monomial (integer coefficients) | A |
| 22 | Multiple Choice | 1 | Measurement | 7.M01 Calculate distance using a map scale | C |
| 23 | Multiple Choice | 1 | Geometry | 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal | D |
| 24 | Multiple Choice | 1 | Geometry | 8.G03 Calculate the missing angle in a supplementary or complementary pair | C |
| 25 | Multiple Choice | 1 | Measurement | 7.M01 Calculate distance using a map scale | C |
| 26 | Multiple Choice | 1 | Geometry | 7.G05 Identify the right angle, hypotenuse, and legs of a right triangle | A |
| 27 | Multiple Choice | 1 | Geometry | 7.G08 Use the Pythagorean Theorem to determine the unknown length of a side of a right triangle | B |

Book 2

| 28 | Short Response | 2 | Geometry | 8.G06 Calculate the missing angle <br> measurements when given two <br> intersecting lines and an angle | $\mathrm{n} / \mathrm{a}$ |
| :---: | :--- | :---: | :--- | :--- | :---: |
| 29 | Short Response | 2 | Geometry | 8. G05 Calculate the missing angle <br> measurements when given two <br> parallel lines cut by a transversal | $\mathrm{n} / \mathrm{a}$ |
| 30 | Short Response | 2 | Algebra | 7. A10 Write an equation to <br> represent a function from a table of <br> values | $\mathrm{n} / \mathrm{a}$ |
| 31 | Short Response | 2 | Number Sense and Operations | 8.N04 Apply percents to: tax, <br> percent increase/decrease, simple <br> interest, sale price, commission, <br> interest rates, and gratuities | $\mathrm{n} / \mathrm{a}$ |
| 32 | Extended Response | 3 | Algebra | 7.A04 Solve multi-step equations <br> by combining like terms, using the <br> distributive property, or moving <br> variables to one side of the equation | $\mathrm{n} / \mathrm{a}$ |
| 33 | Extended Response | 3 | Geometry | 8.G09 Draw the image of a figure <br> under a reflection over a given line | $\mathrm{n} / \mathrm{a}$ |

# 2009 Mathematics Tests Standard and Performance Indicator Map with Answer Key Grade 8 (continued) 

| Question | Type | Points | Strand | Content Performance Indicator | Answer Key |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Book 3 |  |  |  |  |  |
| 34 | Short Response | 2 | Geometry | 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal | n/a |
| 35 | Short Response | 2 | Algebra | 7.A08 Create algebraic patterns using charts/tables, graphs, equations, and expressions | n/a |
| 36 | Short Response | 2 | Algebra | 8.A06 Multiply and divide monomials | n/a |
| 37 | Short Response | 2 | Measurement | 7.M06 Compare unit prices | $\mathrm{n} / \mathrm{a}$ |
| 38 | Short Response | 2 | Algebra | 8.A07 Add and subtract polynomials (integer coefficients) | $\mathrm{n} / \mathrm{a}$ |
| 39 | Short Response | 2 | Geometry | 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal | n/a |
| 40 | Short Response | 2 | Algebra | 8.A03 Describe a situation involving relationships that matches a given graph | n/a |
| 41 | Short Response | 2 | Geometry | 8.G01 Identify pairs of vertical angles as congruent | n/a |
| 42 | Extended Response | 3 | Geometry | 8.G10 Draw the image of a figure under a translation | $\mathrm{n} / \mathrm{a}$ |
| 43 | Extended Response | 3 | Algebra | 8.A04 Create a graph given a description or an expression for a situation involving a linear or nonlinear relationship | $\mathrm{n} / \mathrm{a}$ |
| 44 | Extended Response | 3 | Number Sense and Operations | 8.N01 Develop and apply the laws of exponents for multiplication and division | n/a |
| 45 | Extended Response | 3 | Algebra | 7.A04 Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation | n/a |

