# Math Test Answer Key and Task Analysis (Grades K-6)

The related math worksheets were taken from the following URL.

http://www.basic-mathematics.com/math-skills-assessment.html

Math Calculation = MC
Math Problem Solving = MPS

Kindergarten Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | 2, **3**, **4**, 5, **6**, 7, **8**, 9, **10** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MC | 2 | *Student should have circled 8 mice.* | - Count whole numbers 1 to 10. |
| MPS | 3 | 12, 10, **8**, 6, **4**, 2, 0 | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MC | 4 | 6 (bananas); 7 (ducks) | - Count whole numbers 1 to 10.<br>- Write whole numbers 1 to 10. |
| MPS | 5 | *Student should have drawn a square.* | - Draw plane figures (square). |
| MPS | 6 | *Student should have drawn a triangle.* | - Draw plane figures (triangle). |
| MPS | 7 | *Student should have identified a circle, rectangle, & triangle.* | - Identify plane figures (circle, rectangle, & triangle). |
| MPS<br>MC | 8 | 7; Thursday; Sunday | - Identify the number of days in a week.<br>- Solve simple problems using days. |
| MPS | 9 | A. 10 cents | - Identify the value of coins (dime). |
| MPS<br>MC | 10 | 7 | - Choose the correct operation.<br>- Solve one-digit addition. |
| MPS | 11 | *Student should have identified a cone, sphere, cube, cylinder, and pyramid.* | - Identify solid figures (cone).<br>- Identify solid figures (sphere).<br>- Identify solid figures (cube).<br>- Identify solid figures (cylinder).<br>- Identify solid figures (pyramid). |
| MPS | 12 | *Student should know left, right, and inside.* | - Identify position relative to an object. |
| MPS | 13 | Lion | - Compare and order by weight. |
| MPS | 14 | Giraffe | - Compare and order by height. |
| MPS | 15 | *Student should have crossed out the blue moon.* | - Sort objects by color. |
| MPS | 16 | *Student should have crossed out the flowers.* | - Sort objects by other criteria. |
| MPS | 17 | *Student should have shaded one-half of each figure.* | - Model fractions in a drawing. |
| MPS | 18 | 3:00 | - Tell time to the hour. |
| MPS | 19 | *Student should have selected Figure #3.* | - Model subtraction in a drawing (one-half). |
| MPS | 20 | 3 inches | - Measure length to the nearest inch. |

First Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | C. 18 | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 2 | B. 10 cents | - Identify the value of coins (dime). |
| MPS | 3 | 8:05 | - Tell time to the nearest five minutes. |
| MPS<br>MC | 4 | 7 pencils | - Choose the correct operation.<br>- Solve simple subtraction without regrouping. |
| MPS | 5 | 34, 36, **38**, 40, **42** | - Describe a repeating pattern.<br>- Extend a repeating pattern.<br>- Count by twos. |
| MPS | 6 | C. 25 cents and 5 nickels | - Identify the value of coins (quarter).<br>- Describe relationships among coins. |
| MPS | 7 | 9 slices | - Choose the correct operation.<br>- One-digit addition. |
| MPS | 8 | D. 50 | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MC | 9 | 33 | - Solve two-digit subtraction without regrouping. |
| MPS | 10 | 4 > 2; 5 < 7 | - Compare one-digit whole numbers. |
| MPS | 11 | *Student should have identified one triangle, two rectangles, and one circle.* | - Identify plane figures (circle, rectangle, & triangle). |
| MPS | 12 | tens place = 5; ones place = 6 | - Identify place value (tens). |
| MC | 13 | 35; 102; 36; 17 | - Solve two-digit addition without regrouping.<br>- Solve two-digit addition with regrouping.<br>- Solve two-digit subtraction without regrouping.<br>- Solve two-digit subtraction with regrouping. |
| MPS | 14 | 4:50 | - Tell time to the nearest ten minutes. |
| MPS | 15 | two; seven; fourteen; twenty-four | - Write whole numbers 1-10.<br>- Write whole numbers 11-20.<br>- Write whole numbers 21-99. |
| MPS | 16 | sphere; cylinder | - Identify solid figures (sphere).<br>- Identify solid figures (cylinder). |
| MPS | 17 | 75, 70, **65**, 60, 55, **50** | - Describe a repeating pattern.<br>- Extend a repeating pattern.<br>- Count by fives. |
| MPS | 18 | two inches | - Measure length to the nearest inch. |
| MPS | 19 | 5 dimes | - Describe the relationship among coins. |
| MPS<br>MC | 20 | 13 (6 + 7) | - Solve word problems with the addition of whole numbers. |

Second Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | 16, 22, 28, **34**, **40** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 2 | B. Quarter | - Identify the value of coins (quarter). |
| MPS | 3 | *Student should have divided and shaded one-third of the rectangle and three-fourths of the circle.* | - Model fractions in a drawing (fourths). |
| MPS | 4 | C. 24 hours | - Convert days to hours. |
| MPS | 5 | 847, 855, **863**, 871, **879** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 6 | $1.70; $1.05 | - Identify the value of coins (quarter, dime, nickel, and penny).<br>- Identify the value of coin collections.<br>- Solve subtraction problems using money. |
| MPS MC | 7 | 134 meals | - Choose the correct operation.<br>- Solve subtraction without regrouping. |
| MPS | 8 | Figure #3 | - Identify congruent figures. |
| MPS | 9 | 87 > 81; 157 < 211 | - Compare two-digit whole numbers.<br>- Compare three-digit whole numbers. |
| MPS | 10 | D. 512 | - Identify place value (hundreds).<br>- Identify place value (ones). |
| MPS | 11 | tens place = 8; ones place = 5; hundreds place = 9 | - Identify place value (tens).<br>- Identify place value (ones).<br>- Identify place value (hundreds). |
| MC | 12 | 476; 977; 542; 111 | - Solve three-digit addition without regrouping.<br>- Solve three-digit subtraction without regrouping.<br>- Solve three-digit subtraction with regrouping. |
| MPS | 13 | ½; $\frac{3}{8}$ | - Model fractions in a drawing (one-half).<br>- Model fractions in a drawing (eighths). |
| MC MPS | 14 | 42 + 14 = 56; 65 + 33 > 90 | - Solve two-digit addition without regrouping.<br>- Compare numbers. |
| MPS | 15 | twenty-five; forty-eight; one-hundred twenty-four; two hundred fifty-six | - Write whole numbers 21-99.<br>- Write three-digit whole numbers. |
| MPS | 16 | sphere; cone; cylinder | - Identify solid figures (sphere).<br>- Identify solid figures (cone).<br>- Identify solid figures (cylinder). |
| MPS | 17 | 467, 459, **451**, 443, 435, **427** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 18 | one and one-half inches | - Measure length to the nearest half-inch. |
| MPS | 19 | C. 28 – 8 = 18 | - Identify addition and subtraction fact families. |
| MPS MC | 20 | 55 + 64 = 119; 998 | - Solve word problems with the addition of whole numbers.<br>- Solve word problems with the subtraction of whole numbers. |

Third Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | 10055, 10105, 10155, **10205**, **10255** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 2 | C. 13 | - Solve word problems with multiplication of whole numbers. |
| MPS<br>MC | 3 | A. 236 | - Identify place value (hundreds).<br>- Identify place value (tens).<br>- Identify place value (ones).<br>- Solve three-digit addition without regrouping. |
| MPS | 4 | A. 245 | - Read and write three-digit whole numbers. |
| MPS | 5 | 941, 952, **963**, 974, **985** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 6 | D. 911 | - Compare and order three-digit whole numbers. |
| MPS | 7 | C. 4 x 3 | - Model multiplication in a drawing. |
| MPS<br>MC | 8 | C. 24 | - Choose the correct operation.<br>- Solve word problems with division of whole numbers. |
| MPS | 9 | 899 < 901; 1425 > 1424 | - Compare three-digit whole numbers.<br>- Compare four-digit whole numbers. |
| MPS | 10 | B. 484 | - Identify place value (hundreds).<br>- Identify place value (tens).<br>- Identify place value (ones). |
| MPS<br>MC | 11 | 2 x 8 = 16; 4 x 4 = 16 | - Solve word problems with multiplication of whole numbers. |
| MC | 12 | 100,302; 1,112 | - Solve five-digit addition with regrouping.<br>- Solve five-digit subtraction without regrouping. |
| MPS | 13 | sphere; C. cylinder; D. rectangular prism | - Identify solid figures (sphere).<br>- Identify solid figures (cylinder).<br>- Identify solid figures (rectangular prism). |
| MPS<br>MC | 14 | *Any two like the following are acceptable:*<br>36 x 2 = 72; 8 x 9 = 72; 4 x 18 = 72; 6 x 12 = 72 | - Solve word problems with multiplication of whole numbers. |
| MPS | 15 | four thousand five hundred sixty-one;<br>three thousand nine hundred seventy-four | - Write four-digit whole numbers. |
| MPS | 16 | A and D | - Model fractions in a drawing (sixths). |
| MPS | 17 | *Student should draw a rectangle with 6 out of 8 equal parts shaded.* | - Draw plane figures (rectangle).<br>- Model fractions in a drawing (eighths). |
| MC | 18 | D. Hamburger and Sprite | - Solve addition problems using money. |
| MPS | 19 | D. 10 + ( 12 ) | - Understand addition properties (associative). |
| MPS<br>MC | 20 | $432; $120; $40 | - Choose the correct operation.<br>- Solve word problems with multiplication of whole numbers.<br>- Solve word problems with subtraction of whole numbers.<br>- Solve word problems with division of whole numbers. |

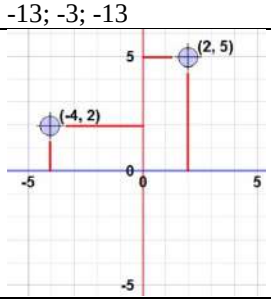
Fourth Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | $\frac{1}{3}$ | - Compare fractions. |
| MPS | 2 | B. 414 | - Describe a repeating pattern.<br>- Extend a repeating pattern. |
| MPS | 3 | A. 363 | - Identify place value (hundreds, tens, and ones).<br>- Solve three-digit addition without regrouping. |
| MPS | 4 | 800; 4,000 | - Round whole numbers to the nearest hundred.<br>- Round whole numbers to the nearest thousand. |
| MPS | 5 | D. 5,022 | - Read and write four-digit whole numbers. |
| MPS | 6 | twenty-five hundredths and 1/4;<br>four tenths and $2/5$ | - Write decimals using words.<br>- Convert decimals to fractions. |
| MPS | 7 | B. 5,707 | - Compare and order four-digit whole numbers. |
| MC | 8 | 8 | - Solve open number sentences (addition). |
| MPS<br>MC | 9 | B. 32 and 5 | - Identify place value (hundreds and tens).<br>- Use place value to solve a problem. |
| MPS<br>MC | 10 | B. 71 cents | - Identify the value of coins (quarter, dime, nickel, & penny).<br>- Solve two-digit addition with regrouping. |
| MC | 11 | C. 3,055 | - Solve multiplication with up to three- by two-digit factors. |
| MPS | 12 | B. 4/5 | - Compare fractions. |
| MPS | 13 | *Any three like the following are acceptable:*<br>2 x 18 = 36; 3 x 12 = 36; 4 x 9 = 36; 6 x 6 = 36 | - Solve word problems with multiplication of whole numbers. |
| MPS | 14 | D. three-ninths | - Model fractions in a drawing (ninths). |
| MC | 15 | 69,435; 923 | - Solve five-digit addition with regrouping.<br>- Solve five-digit subtraction with regrouping. |
| MPS | 16 | trapezoid; B. sphere; D. rectangular prism | - Identify solid figures (trapezoid, sphere, and rectangular prism). |
| MPS | 17 | quarter – highest value | - Describe relationships among coins. |
| MPS | 18 | five thousand six hundred sixty-nine;<br>eight thousand seven hundred sixty-five | - Write four-digit whole numbers. |
| MC | 19 | 59; 68, remainder 1 | - Solve long division with simple divisors (no remainder).<br>- Solve long division with simple divisors (with remainder). |
| MC | 20 | C. A and B | - Add simple fractions. |
| MPS | 21 | *Student should have drawn a circle, split it into 4 pieces, and shaded half.* | - Draw plane figures (circle).<br>- Model fractions in a drawing (fourths). |
| MPS | 22 | *Student should have drawn two circles, split them into 4 pieces, and shaded ¼ and ¾.* | - Draw plane figures (circle).<br>- Model fractions in a drawing (fourths). |
| MPS<br>MC | 23 | * + 4 must equal # + # | - Solve open number sentences (addition).<br>- Evaluate algebraic expressions using addition / subtraction. |
| MPS<br>MC | 24 | C. 40 x 11 | - Solve three-digit addition problems with whole numbers.<br>- Solve two-digit by two-digit multiplication problems. |
| MPS<br>MC | 25 | $5,600; *Student probably multiplied 8 x 7.*<br>$1,100; *Student probably subtracted 67-56.* $110 | - Choose the correct operation.<br>- Solve word problems using multiplication, subtraction, and division of whole numbers. |
| MPS<br>MC | 26 | $40 | - Choose the correct operation.<br>- Solve word problems using division and multiplication. |
| MC | 27 | D. 16 square units | - Calculate area. |
| MPS | 28 | *Student should draw two parallel lines and one perpendicular line.* | - Draws a line (parallel and perpendicular). |
| MPS | 29 | *Student should draw two congruent shapes and two similar shapes.* | - Draws a shape (congruent and similar). |
| MPS | 30 | 4, 20, 100, **500**, **2,500** | - Describe a repeating pattern.<br>- Extend a repeating pattern. |

Fifth Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS<br>MC | 1 | 10 | - Evaluate algebraic expressions.<br>- Apply order of operations.<br>- Solve equations using addition, multiplication, and subtraction. |
| MPS | 2 | D. 21 | - Solve word problems using division. |
| MPS | 3 | -20, -12, 5, 50 | - Use integers.<br>- Compare and order integers. |
| MPS | 4 | B. Circumference | - Describe circumference. |
| MPS<br>MC | 5 | A. 7 | - Calculate an average.<br>- Solve two-digit addition with whole numbers.<br>- Solve word problems with division of whole numbers. |
| MC | 6 | 3; -3; -13; 13 | - Add integers. |
| MPS | 7 | > | - Compare decimals. |
| MPS<br>MC | 8 | perimeter = 24 units<br>area = 35 square units | - Solve problems using perimeter.<br>- Solve problems using area. |
| MPS | 9 | heads or tails; ½; 50%; 0.5 | - Determine the possible outcomes.<br>- Determine the probability of an event.<br>- Write probability as a fraction.<br>- Write probability as a percent.<br>- Write probability as a decimal. |
| MPS<br>MC | 10 | $\frac{9}{6}$ | - Find the least common denominator.<br>- Find an equivalent fraction.<br>- Add fractions with a common denominator. |
| MPS | 11 | 1½; $\frac{3}{2}$ | - Convert improper fractions to a mixed number.<br>- Reduce fractions. |
| MC | 12 | 523 | - Solve long division problems with two-digit divisors (and no remainder). |
| MPS | 13 | *Any picture representing the problem is acceptable;* C. 12 | - Solve a problem using a picture.<br>- Determine the possible outcomes. |
| MPS | 14 | C. Multiply by 4 and then add 3. | - Use an input-output table. |
| MPS | 15 | B. Centimeter | - Identify the appropriate unit for measuring length. |
| MPS<br>MC | 16 | 901 | - Solve open number sentences (addition and subtraction).<br>- Evaluate algebraic expressions using addition / subtraction. |
| MPS<br>MC | 17 | D. 22 or 26 | - Describe an isosceles triangle.<br>- Calculate perimeter. |
| MPS | 18 | C. How much money Noemy had before buying the apples. | - Solve word problems with addition. |
| MPS | 19 | C. Compared to 1970, computers cost half as much in 2010. | - Analyze data in a bar graph. |
| MPS | 20 | no; $166; 2/3 | - Solve word problems using division. |

Sixth Grade Math Test

| Type | # | Answer | Skill |
|---|---|---|---|
| MPS | 1 | x = 10 | - Apply order of operations.<br>- Evaluate algebraic expressions. |
| MPS | 2 | C. 30 – k | - Write a subtraction expression for a word problem. |
| MPS | 3 | B. 1 inch | - Solve for corresponding parts in similar figures. |
| MC | 4 | D. 125 | - Calculate exponents. |
| MPS | 5 | average = $7\frac{3}{7}$; median = 6; mode = 6; range = 13 | - Find the mean, median, mode, and range. |
| MC | 6 | -13; -3; -13 | - Subtract integers. |
| MPS | 7 |  | - Plot points on the coordinate plane. |
| MPS<br>MC | 8 | perimeter = 16 units; area = $13\frac{2}{9}$ | - Calculate perimeter and area.<br>- Add fractions.<br>- Multiply fractions. |
| MPS | 9 | 1,2,3,4,5,6; ½; ½; ½ | - Determine the possible outcomes.<br>- Identify odd, even, and prime numbers. |
| MC | 10 | $\frac{31}{35}$ | - Add fractions with different denominators. |
| MPS | 11 | C. thousandths | - Identify place value (thousandths). |
| MPS | 12 | x = 450 | - Solve two-step equations. |
| MPS | 13 | $-\frac{2}{4}$, -.50, $-\frac{1}{4}$, 0.20, $\frac{3}{4}$, 0.90, 1.50, $\frac{7}{4}$ | - Compare and order fractions. |
| MPS | 14 | 4x + 50; B. 130 dollars | - Write an expression for a real-world situation.<br>- Evaluate algebraic expressions. |
| MPS | 15 | composites = 12, 14, 15, 16, 18; *Student should pick one of the composites and identify all the factors; prime numbers = 11, 13, 17, 19* | - Identify composite numbers.<br>- Factor a number. |
| MPS | 16 | 4 lines of symmetry | - Identify lines of symmetry. |
| MPS | 17 | C. perimeter = 8π and area = 16π | - Calculate the perimeter and area of a circle. |
| MPS | 18 | John has 32 dollars, and Peter has 8 dollars. | - Write an equation for a real-world situation.<br>- Solve a system of equations. |
| MPS | 19 | B. $\frac{5000}{6} = \frac{x}{15000}$ | - Set up a proportion. |
| MPS | 20 | $138 | - Solve for a percent of a whole.<br>- Solve addition problems using money. |
| MPS | 21 | 4 inches | - Set up a proportion, and solve a proportion. |
| MPS | 22 | A. $\frac{4}{20}$; red | - Determine the possible outcomes.<br>- Determine the probability of an event. |
| MPS | 23 | *Congruence: equal in shape and size. Student should draw such. Similarity: equal in shape but not necessarily size. Student should draw such.* | - Describe congruence and draw congruent figures.<br>- Describe similarity and draw similar figures. |
| MPS | 24 | $\frac{1}{8}$ | - Determine the probability of an event. |
| MPS | 25 | 200 | - Apply order of operations.<br>- Solve multistep equations. |
| MPS | 26 | 540 degrees | - Measure the interior angles of a polygon. |
| MPS | 27 | 42 inches | - Convert feet to inches. |
| MPS | 28 | volume = 24 inches cubed<br>area = 52 inches squared | - Calculate volume of a rectangular prism.<br>- Calculate surface area of a rectangular prism. |
| MPS | 29 | A. rectangular prism | - Identify solid figures (rectangular prism). |
| MPS | 30 | $56 | - Solve word problems with percents. |