

## 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, <b>3</b> , <b>4</b> , 5, 6, 7, <b>8</b> , 9, <b>10</b>	- Describe a repeating pattern. - Extend a repeating pattern.
MC	2	<i>Student should have circled 8 mice.</i>	- Count whole numbers 1 to 10.
MPS	3	12, 10, <b>8</b> , 6, <b>4</b> , 2, 0	- Describe a repeating pattern. - Extend a repeating pattern.
MC	4	6 (bananas); 7 (ducks)	- Count whole numbers 1 to 10. - Write whole numbers 1 to 10.
MPS	5	<i>Student should have drawn a square.</i>	- Draw plane figures (square).
MPS	6	<i>Student should have drawn a triangle.</i>	- Draw plane figures (triangle).
MPS	7	<i>Student should have identified a circle, rectangle, &amp; triangle.</i>	- Identify plane figures (circle, rectangle, & triangle).
MPS MC	8	7; Thursday; Sunday	- Identify the number of days in a week. - Solve simple problems using days.
MPS	9	A. 10 cents	- Identify the value of coins (dime).
MPS MC	10	7	- Choose the correct operation. - Solve one-digit addition.
MPS	11	<i>Student should have identified a cone, sphere, cube, cylinder, and pyramid.</i>	- Identify solid figures (cone). - Identify solid figures (sphere). - Identify solid figures (cube). - Identify solid figures (cylinder). - Identify solid figures (pyramid).
MPS	12	<i>Student should know left, right, and inside.</i>	- Identify position relative to an object.
MPS	13	Lion	- Compare and order by weight.
MPS	14	Giraffe	- Compare and order by height.
MPS	15	<i>Student should have crossed out the blue moon.</i>	- Sort objects by color.
MPS	16	<i>Student should have crossed out the flowers.</i>	- Sort objects by other criteria.
MPS	17	<i>Student should have shaded one-half of each figure.</i>	- Model fractions in a drawing.
MPS	18	3:00	- Tell time to the hour.
MPS	19	<i>Student should have selected Figure #3.</i>	- 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. - 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 MC	4	7 pencils	- Choose the correct operation. - Solve simple subtraction without regrouping.
MPS	5	34, 36, <b>38</b> , 40, <b>42</b>	- Describe a repeating pattern. - Extend a repeating pattern. - Count by twos.
MPS	6	C. 25 cents and 5 nickels	- Identify the value of coins (quarter). - Describe relationships among coins.
MPS	7	9 slices	- Choose the correct operation. - One-digit addition.
MPS	8	D. 50	- Describe a repeating pattern. - 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	<i>Student should have identified one triangle, two rectangles, and one circle.</i>	- 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. - Solve two-digit addition with regrouping. - Solve two-digit subtraction without regrouping. - 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. - Write whole numbers 11-20. - Write whole numbers 21-99.
MPS	16	sphere; cylinder	- Identify solid figures (sphere). - Identify solid figures (cylinder).
MPS	17	75, 70, <b>65</b> , 60, 55, <b>50</b>	- Describe a repeating pattern. - Extend a repeating pattern. - Count by fives.
MPS	18	two inches	- Measure length to the nearest inch.
MPS	19	5 dimes	- Describe the relationship among coins.
MPS 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, <b>34, 40</b>	- Describe a repeating pattern. - Extend a repeating pattern.
MPS	2	B. Quarter	- Identify the value of coins (quarter).
MPS	3	<i>Student should have divided and shaded one-third of the rectangle and three-fourths of the circle.</i>	- Model fractions in a drawing (fourths).
MPS	4	C. 24 hours	- Convert days to hours.
MPS	5	847, 855, <b>863</b> , 871, <b>879</b>	- Describe a repeating pattern. - Extend a repeating pattern.
MPS	6	\$1.70; \$1.05	- Identify the value of coins (quarter, dime, nickel, and penny). - Identify the value of coin collections. - Solve subtraction problems using money.
MPS MC	7	134 meals	- Choose the correct operation. - Solve subtraction without regrouping.
MPS	8	Figure #3	- Identify congruent figures.
MPS	9	$87 > 81$ ; $157 < 211$	- Compare two-digit whole numbers. - Compare three-digit whole numbers.
MPS	10	D. 512	- Identify place value (hundreds). - Identify place value (ones).
MPS	11	tens place = 8; ones place = 5; hundreds place = 9	- Identify place value (tens). - Identify place value (ones). - Identify place value (hundreds).
MC	12	476; 977; 542; 111	- Solve three-digit addition without regrouping. - Solve three-digit subtraction without regrouping. - Solve three-digit subtraction with regrouping.
MPS	13	$\frac{1}{2}$ ; $\frac{3}{8}$	- Model fractions in a drawing (one-half). - Model fractions in a drawing (eighths).
MC MPS	14	$42 + 14 = 56$ ; $65 + 33 > 90$	- Solve two-digit addition without regrouping. - Compare numbers.
MPS	15	twenty-five; forty-eight; one-hundred twenty-four; two hundred fifty-six	- Write whole numbers 21-99. - Write three-digit whole numbers.
MPS	16	sphere; cone; cylinder	- Identify solid figures (sphere). - Identify solid figures (cone). - Identify solid figures (cylinder).
MPS	17	467, 459, <b>451</b> , 443, 435, <b>427</b>	- Describe a repeating pattern. - 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. - Solve word problems with the subtraction of whole numbers.

Third Grade Math Test

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

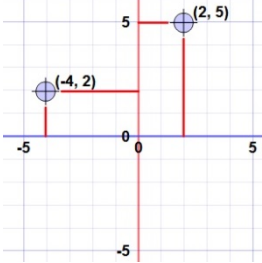
Fourth Grade Math Test

Type	#	Answer	Skill
MPS	1	$\frac{1}{3}$	- Compare fractions.
MPS	2	B. 414	- Describe a repeating pattern. - Extend a repeating pattern.
MPS	3	A. 363	- Identify place value (hundreds, tens, and ones). - Solve three-digit addition without regrouping.
MPS	4	800; 4,000	- Round whole numbers to the nearest hundred. - 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 $\frac{1}{4}$ ; four tenths and $\frac{2}{5}$	- Write decimals using words. - 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 MC	9	B. 32 and 5	- Identify place value (hundreds and tens). - Use place value to solve a problem.
MPS MC	10	B. 71 cents	- Identify the value of coins (quarter, dime, nickel, & penny). - Solve two-digit addition with regrouping.
MC	11	C. 3,055	- Solve multiplication with up to three- by two-digit factors.
MPS	12	B. $\frac{4}{5}$	- Compare fractions.
MPS	13	<i>Any three like the following are acceptable:</i> $2 \times 18 = 36$ ; $3 \times 12 = 36$ ; $4 \times 9 = 36$ ; $6 \times 6 = 36$	- 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. - 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; 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). - Solve long division with simple divisors (with remainder).
MC	20	C. A and B	- Add simple fractions.
MPS	21	<i>Student should have drawn a circle, split it into 4 pieces, and shaded half.</i>	- Draw plane figures (circle). - Model fractions in a drawing (fourths).
MPS	22	<i>Student should have drawn two circles, split them into 4 pieces, and shaded <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math>.</i>	- Draw plane figures (circle). - Model fractions in a drawing (fourths).
MPS MC	23	* + 4 must equal # + #	- Solve open number sentences (addition). - Evaluate algebraic expressions using addition / subtraction.
MPS MC	24	C. $40 \times 11$	- Solve three-digit addition problems with whole numbers. - Solve two-digit by two-digit multiplication problems.
MPS MC	25	\$5,600; <i>Student probably multiplied <math>8 \times 7</math>.</i> \$1,100; <i>Student probably subtracted <math>67-56</math>.</i> \$110	- Choose the correct operation. - Solve word problems using multiplication, subtraction, and division of whole numbers.
MPS MC	26	\$40	- Choose the correct operation. - Solve word problems using division and multiplication.
MC	27	D. 16 square units	- Calculate area.
MPS	28	<i>Student should draw two parallel lines and one perpendicular line.</i>	- Draws a line (parallel and perpendicular).
MPS	29	<i>Student should draw two congruent shapes and two similar shapes.</i>	- Draws a shape (congruent and similar).
MPS	30	4, 20, 100, <b>500, 2,500</b>	- Describe a repeating pattern. - Extend a repeating pattern.

Fifth Grade Math Test

Type	#	Answer	Skill
MPS MC	1	10	- Evaluate algebraic expressions. - Apply order of operations. - Solve equations using addition, multiplication, and subtraction.
MPS	2	D. 21	- Solve word problems using division.
MPS	3	-20, -12, 5, 50	- Use integers. - Compare and order integers.
MPS	4	B. Circumference	- Describe circumference.
MPS MC	5	A. 7	- Calculate an average. - Solve two-digit addition with whole numbers. - Solve word problems with division of whole numbers.
MC	6	3; -3; -13; 13	- Add integers.
MPS	7	>	- Compare decimals.
MPS MC	8	perimeter = 24 units area = 35 square units	- Solve problems using perimeter. - Solve problems using area.
MPS	9	heads or tails; $\frac{1}{2}$ ; 50%; 0.5	- Determine the possible outcomes. - Determine the probability of an event. - Write probability as a fraction. - Write probability as a percent. - Write probability as a decimal.
MPS MC	10	$\frac{9}{6}$	- Find the least common denominator. - Find an equivalent fraction. - Add fractions with a common denominator.
MPS	11	$1\frac{1}{2}$ ; $\frac{3}{2}$	- Convert improper fractions to a mixed number. - Reduce fractions.
MC	12	523	- Solve long division problems with two-digit divisors (and no remainder).
MPS	13	<i>Any picture representing the problem is acceptable; C. 12</i>	- Solve a problem using a picture. - 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 MC	16	901	- Solve open number sentences (addition and subtraction). - Evaluate algebraic expressions using addition / subtraction.
MPS MC	17	D. 22 or 26	- Describe an isosceles triangle. - 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; $\frac{2}{3}$	- Solve word problems using division.

Sixth Grade Math Test

Type	#	Answer	Skill
MPS	1	$x = 10$	- Apply order of operations. - 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 MC	8	perimeter = 16 units; area = $13\frac{2}{9}$	- Calculate perimeter and area. - Add fractions. - Multiply fractions.
MPS	9	1,2,3,4,5,6; $\frac{1}{2}$ ; $\frac{1}{2}$ ; $\frac{1}{2}$	- Determine the possible outcomes. - 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. - Evaluate algebraic expressions.
MPS	15	composites = 12, 14, 15, 16, 18; <i>Student should pick one of the composites and identify all the factors</i> ; prime numbers = 11, 13, 17, 19	- Identify composite numbers. - Factor a number.
MPS	16	4 lines of symmetry	- Identify lines of symmetry.
MPS	17	C. perimeter = $8\pi$ and area = $16\pi$	- 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. - 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. - 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. - Determine the probability of an event.
MPS	23	<i>Congruence: equal in shape and size. Student should draw such. Similarity: equal in shape but not necessarily size. Student should draw such.</i>	- Describe congruence and draw congruent figures. - Describe similarity and draw similar figures.
MPS	24	$\frac{1}{8}$	- Determine the probability of an event.
MPS	25	200	- Apply order of operations. - 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 area = 52 inches squared	- Calculate volume of a rectangular prism. - 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.