

Grade 1 Diagnostic Test of CC Math Skills

Operations and Algebraic Thinking

1. Representing and solving involving addition and subtraction

Standard	Score	Percent
1 a&c. Solving problems involving addition	1 /2	
1 b&d. Solving problems involving subtraction	0 /2	
1e. Solving addition word problem	0 /1	
1e. Representing with a drawing or manipulative	1 /1	
1f. Solving subtraction word problem	1/1	
1f. Representing with drawing or manipulative	1/1	
	4/8	

2. Work with addition and subtraction with equations

Standard	Score	Percent
2. a,c,e. Solving problems with addition	1/3	
2 b,d,f. Solving problems with subtraction	0/3	
	1/6	

3-5 Numbers and Operations in Base Ten

Standard	Score	Percent
3. Understanding place value	3/3	
4. Extend the counting sequence	3/3	
5. Use place value to compare values	4/4	
	10/10	

6. Geometry

Standard	Score	Percent
Name the shapes	4/4	
Attributes of shapes (orally)	2/3	

	6/7	
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7-8 Measurement and Data

Standard	Score	Percent
7. Measure lengths to the nearest inch	0/3	
8. Measure time to the nearest hour	2/2	
8. Measure time to the nearest $\frac{1}{2}$ hour	2/2	
	4/7	
TEST TOTAL		
	25/38	

Grade 2 Diagnostic Test of CC Math Skills

Operations and Algebraic Thinking

1.Representing and solving involving addition and subtraction

Standard	Score	Percent	Comments
1. a&c Solving problems involving addition	0/2		
1.b&d Solving problems involving subtraction	2/2		
1.e Solving addition word problem writing an equation	0/1		
1.f Solving subtraction word problem writing an equation	0/1		

Numbers and Operations in Base Ten**2-4 Understand place value**

Standard	Score	Percent	Comments
2.a-b Place value to 100's	2/2		
3.a-d Compare whole numbers	3/4		
4.a-d Extends numbers patterns	4/4		

5- 7. Use place value understanding and properties of operations to + and -

Standard	Score	Percent	Comments
5.a-b Add up to 4 digits using strategies	1/2		
6.a-d Adding and subtracting with models	2 /4		
7.a-d Mentally add or subtract 10 or 100	2/4		
	/10		

8-12. Measurement and Data

Standard	Score	Percent	Comments
8a. Estimate and Measure objects	4/4		
8b. Words problem	0/1		
9.a-b Relate addition and subtraction to length	0/2		
10.a-d Tell time to the nearest 5 min. using am or pm	3/4		
11.a-b Solving word problems involving money	0/2		
12.a-c Complete the bar graph and interpret the data	2/3		
	/16		

13-14 Geometry

Standard	Score	Percent	Comments
13a. Recognize shapes (draw shapes with specific attributes)	1/1		
13b. Recognize shapes (identify triangles and quadrilaterals)	8/10		
14.a-b Draw and partition a circle and rectangle into equal parts	1/4		
	/15		
TEST TOTAL	3/57		

Grade 3 Diagnostic Test of CC Math Skills

Operations and Algebraic Thinking

1-4 Representing and solving problems involving multiplication and division

Standard	Score	Percent	Comments
1. Interpreting products of whole numbers	0 /3		
2. Use multiplication within a 100 to solve word problems	2 /2		
3. Use division within a 100 to solve word problems	0/2		
4. Determining the unknown whole number in a multiplication and division problem	0/4		
	/11		

5-6 Understanding properties of multiplication and the relationship between multiplication and division

Standard	Score	Percent	Comments
5. Applying properties of operations as strategies to multiply and divide	0/3		
6. Understand division as an unknown factor problem	1/2		
	/5		

7-8 Solving problems involving 4 operations/ identifying patterns in arithmetic

Standard	Score	Percent	Comments
7. Solve a two step word problem using the 4 operations	0/2		
8. Identifying arithmetic patterns by filling in the missing number	0/2		

	/4		
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Numbers and Operations in Base Ten

9-10 Using place value understanding and properties to perform multi-digit arithmetic

Standard	Score	Percent	Comments
9. Rounding to the nearest 100th	3/4		
10a/b. Fluently add and subtract within a 1000	0/3		
10c. Multiply 1 digit numbers by multiples of 10	0/1		
	/8		

Numbers and Operations-Fractions

11-12 Developing understanding of fractions in numbers.

Standard	Score	Percent	Comments
11. Identify the fraction on a whole	1/3		
12a. Explaining the equivalence of a fraction using a numberline	0/1		
12b. Representing a fraction on a number line/ comparing fractions with the same denominator	0/4		
12c. Comparing fractions with a same numerator	0/1		
	/9		

Measurement and Data 13- 16

Standard	Score	Percent	Comments
13. Solving problems involving measurement	1/2		
14a. Generate measurement data by determining the scale	0/1		
14b Solve a one step problem using data on a bar graph	0/1		

15. Measure area by counting square units	5/9		
16. Solve real world problems involving perimeter	0/1		
	/14		

Geometry 17 Reasons with shapes and their attributes

Standard	Score	Percent	Comments
17a. Understand and recognize shapes in different categories	1/4		
17b. Express area of a shape as a unit fraction	0/1		
	/5		
TEST TOTAL	/55		

Grade 4 Diagnostic Test of CC Math Skills

Operations and Algebraic Thinking 4.OA

1- 4 Using the four operations with whole numbers to solve problems.

Standard	Score	Percent	Comments
1. Interpreting multiplication equations	/3		
2a. Multiplying to solve word problems by using drawings	/1		
2b. Solve multi-step word problems with whole numbers using the 4 operations	/1		
3. Find all factor pairs for a whole number range 1-100	/2		
4. Generate a number or shape pattern that follows a given rule.	/1		
	/8		

Numbers and Operations in Base Ten 4.NBT

5-7 Generalizing place value understanding for multi-digit whole numbers.

Standard	Score	Percent	Comments
5. Recognize that in a multi-digit whole number place value to the right is 10 times greater	/1		
6.a-c Write and comparing multi-digit whole numbers in standard, expanded and word form	/3		
6d. Compare whole numbers	/1		
7. Use place value to round multi-digit numbers	/3		
	/8		

8-10 Use place value understanding and properties of operations to perform multi-digit arithmetic

Standard	Score	Percent	Comments
8. Add and subtract multi-digit whole numbers using the standard algorithm	/3		
9a-d. Multiply whole numbers: 4-digit by 1-digit/2-digit by 2-digit.	/3		
9e. Interpret the multiplication expression given an array.	/1		
10a. Interpret the multiplication and division problem given an array.	/2		
10b. Given a divisor, dividend, and quotient from a fact family construct a division equation.	/1		
10c. Given a word problem use division strategies to solve.	/1		
	/11		

Numbers and Operations-Fractions 4.NF

11-12 Extend understanding of fraction equivalence and ordering

Standard	Score	Percent	Comments
11a. Use a number line to compare fractions.	/1		
11b. Given a fraction, generate an equivalent fraction.	/1		
12a-d. Compare two fractions with different numerators and denominators.	/4		
	/6		

13-14 Build fractions from unit fractions by applying and extending previous understanding so operations on whole numbers

Standard	Score	Percent	Comments
13a. Decompose a fraction into a sum of fractions with the same denominator.	/1		
13b. Subtract mixed numbers with like denominators.	/1		
14a. Use a number line to show fraction multiplication as repeated addition.	/1		
14b. Given fraction models and the multiplication problem they represent, write an addition expression.	/1		
14c-d. Given a word problem and fraction models, solve a fraction multiplication problem.	/2		
	/6		

15 - 17-Understand decimal notation for fractions, and compare decimal fractions

Standard	Score	Percent	Comments
15. Express a fraction with a denominator of 10 as a fraction with a denominator of 100.	/3		
16. Use decimal notation for fractions with denominators of 10 and 100.	/4		
17. Compare decimals to the hundredths.	/1		
	/8		

Measurement and Data 4.MD

18 Solve problems involving measurement and converting from larger unit to smaller.

Standard	Score	Percent	Comments
18a. Know relative sizes of measurement units. Record in a two-column table.	/4		
18b. Use operations to solve word problems. Represent measurement quantities using diagrams that feature a measurement scale.	/1		
18c. Apply area/perimeter formulas for solving real world problems.	/1		
	/6		

19 Represent and interpret data.

Standard	Score	Percent	Comments
19a, b. Use addition and subtraction to interpret information on a line plot.	/2		
	/2		

20-22 Geometric measurement: understand concepts of angles and measure angles.

Standard	Score	Percent	Comments
20. An angle that turns through n one-degree angles is said to have a measure of n degrees.	/1		
21. Measure angles in whole-number degrees using a protractor.	/2		
22. Solve addition/subtraction problems to find unknown angles on a diagram.	/1		
	/4		

Geometry 4.G

23 Draw / Identify lines and angles, and classify shapes by their properties.

Standard	Score	Percent	Comments
23a. Identify two-dimensional figures with perpendicular lines.	/1		
23b. Classify two-dimensional figures based on presence of parallel sides.	/1		
	/2		
TEST TOTAL	/72		

Grade 5 Diagnostic Test of CC Math Skills

Operations and Algebraic Thinking 5.OA

1a-2c Write and interpret numerical expressions

Standard	Score	Percent	Comments
1a-d. Write simple expressions that record calculations with numbers.	/4		
2a-c. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	/3		
	/7		

3a-c Analyze patterns and relationships

Standard	Score	Percent	Comments
3a-c. Generate two numerical patterns, identify relationships between the corresponding terms, create ordered pairs, and graph on a coordinate plane.	/3		
	/3		

Number Operations in Base Ten 5.NBT

4a-7c Understand the place value system

Standard	Score	Percent	Comments
4a. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and one tenth of what it represents in the place to the left.	/1		
5a-d. Multiply and divide whole numbers and decimals by powers of ten.	/4		
6a. Write a number in expanded form in numeral form.	/1		
6b. Compare decimals to the thousandths based on place value.	/1		

7a-c. Use place value understanding to round decimals to any place.	/3		
	/10		

8a- 8e Perform operations with multi-digit whole numbers and with decimals to the hundredths

Standards	Score	Percent	Comments
8a. Find a whole number quotient of a division problem with a 4-digit dividend and a 2-digit divisor.	/1		
8b. Find a whole number quotient with a 2-digit divisor and express answer as the rows and columns of an array.	/1		
8c-d. Add and subtract decimals using strategies based on place value.	/2		
8e. Shade an area model to represent multiplying a decimal by a decimal and write the product in numerical form.	/2		
	/6		

Number and Operations- Fractions 5.NF

9a-10b Use equivalent fractions as a strategy to add and subtract fractions

Standard	Score	Percent	Comments
9a-b. Add and subtract proper fractions with unlike denominators.	/2		
10a-b. Solve word problems involving addition and subtraction of mixed numbers.	/2		
	/4		

11a- 14b Apply and extend previous understandings of multiplication and division to multiply and divide fractions

Standard	Score	Percent	Comments
11a-b. Interpret a fraction as division of the numerator and the denominator.	/2		
11c. Solve word problems involving division of whole	/1		

numbers leading to answers in the form of fractions and mixed numbers.			
12a-b. Multiply proper fractions and mixed numbers.	/2		
12c. Find the area of a rectangle with fractional side lengths.	/1		
13a-c. Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	/3		
14a. Solve real world problems involving multiplication of fractions and mixed numbers using an equation.	/1		
14b. Solve real world problems involving multiplication. of fractions and mixed numbers using models.	/1		
15a. Divide a unit fraction by a whole number.	/1		
15b. Divide a whole number by a unit fraction.	/1		
15c. Solve real world problems involving division of unit fractions with a visual model.	/1		
	/14		

Measurement and Data 5.MD

16a-b Convert like measurement units within a given measurement system

Standard	Score	Percent	Comments
16a. Convert different-sized standard measurement units within a given measurement system.	/5		
16b. Use conversions within the same measurement system to solve a multi-step real world problem.	/1		
	/6		

17a-b Represent and interpret data

Standard	Score	Percent	Comments
17a-b. Use fraction operations to solve problems involving information presented in line plots.	/2		
	/2		

Geometry 5.G

18a-d Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition

Standard	Score	Percent	Comments
18a. Volume is an attribute of solid figures in which the solid figure can be packed with unit cubes with no gaps or overlaps.	/1		
18b. Find the volume of a right rectangular prism by counting cubes to get side lengths of the base to find the area, then count the cubes for height and recognize that the layers can be added to get the volume.	/3		
18c. Find volume using the formula: $V = l \times w \times h$	/1		
18d. Recognize that volume is additive. Find the volume of a composite figure made up of two rectangular prisms.	/1		
	/6		

19a-d Graph points on the coordinate plane to solve real-world and mathematical problems

Standard	Score	Percent	Comments
19a. Use a pair of perpendicular number lines, called axes, to define a coordinate system and locate a point on that coordinate system.	/1		
19b-c. Represent real world and mathematical problems by graphing points in the first quadrant and interpret the coordinate values in the context of a situation.	/3		
	/4		

Classify two-dimensional figures into categories based on their properties

Standard	Score	Percent	Comments
20. Understand that attributes belonging to a category of two-dimensional figures also belong to subcategories of that category.	/1		
21. Classify two-dimensional figures in a hierarchy based on properties.	/1		
	/2		
TEST TOTAL	/64		