

**NUMBER SENSE AND OPERATIONS**  
**Measurement Topic: Number Sense and Number Systems**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
<b>3.5</b>	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Reading, writing, comparing, ordering, and plotting whole numbers, decimals, and fractions in both numerals and words:           <ul style="list-style-type: none"> <li>○ Reading, writing, comparing, and plotting whole numbers up to 1,000,000 in both numerals and words</li> <li>○ Reading, writing, and comparing decimals up to thousandths</li> <li>○ Locating and plotting tenths and hundredths on a number line</li> <li>○ Reading, writing, comparing, ordering, and plotting fractions (including improper fractions and mixed numbers with like or unlike denominators)</li> <li>○ Representing whole numbers (up to 1,000,000) in expanded form</li> <li>○ Modeling and generating equivalent fractions for denominators of two, three, four, and five (e.g., <math>\frac{1}{2} = \frac{2}{4} = \frac{4}{8}</math>)</li> <li>○ Converting between mixed numbers and improper fractions</li> <li>○ Expressing tenths and hundredths as decimals and fractions, and finding fraction decimal equivalents from halves and fourths (e.g., <math>\frac{1}{2} = 0.5 = 0.50</math>, <math>\frac{7}{4} = 1\frac{3}{4} = 1.75</math>)</li> </ul> </li> <li>• Explaining the place value relationships of whole numbers (up to 1,000,000) and decimals (up to thousandths) (e.g., 1,000 is 10 hundreds)</li> <li>• Expressing fractions (including improper fractions and mixed numbers) in simplest terms</li> <li>• Finding factors and multiples of whole numbers through 100:           <ul style="list-style-type: none"> <li>○ Describing and identifying prime and composite numbers</li> <li>○ Determining the factors of any whole number up to 100</li> <li>○ Determining the first ten multiples of a given 1-digit number</li> </ul> </li> <li>• Rounding whole numbers to a given place value and decimals to the nearest tenth or whole number</li> </ul>

<b>2.5</b>	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Divisor</li> <li>○ Improper fraction</li> <li>○ Prime</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ <math>4 \times 1000 + 2 \times 100 + 6 \times 10 + 3</math> written in standard notation is 4,263</li> <li>○ Recognizing the place value of a digit in various whole numbers (up to 1,000,000)</li> <li>○ <math>2\frac{10}{12} = 2\frac{5}{6}</math></li> <li>○ 1, 2, 3, 4, and 6 are factors of 12</li> <li>○ 2, 430 rounded to the nearest thousand is 2,000</li> </ul> </li> </ul>
<b>1.5</b>	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
<b>0.5</b>	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**NUMBER SENSE AND OPERATIONS**  
**Measurement Topic: Addition and Subtraction**  
 Grade Four

Evidence shows student has met or exceeded the learning target

Evidence shows misunderstanding, misconceptions, or omissions

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Adding and subtracting whole numbers (to any place value)</li> <li>• Adding and subtracting fractions with common denominators</li> <li>• Adding and subtracting fractions with denominators that are multiples of each other using models and visual representations</li> <li>• Adding and subtracting decimals (to thousandths)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Thousandth</li> <li>○ Multiple</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ <math>5,250 - 125 = 4,125</math></li> <li>○ <math>3/7 + 2/7 = 5/7</math></li> <li>○ The following example shows <math>1/2 + 1/4</math></li> </ul> <div style="text-align: center; margin: 10px 0;"> </div> </li> <li>○ <math>5.725 - 3.605 = 2.12</math></li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**NUMBER SENSE AND OPERATIONS**  
**Measurement Topic: Multiplication and Division**  
 Grade Four

Evidence shows student has met or exceeded the learning target

Evidence shows misunderstanding, misconceptions, or omissions

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Applying divisibility rules to determine if a number is divisible by 2, 5, or 10</li> <li>• Multiplying whole numbers:           <ul style="list-style-type: none"> <li>○ Multiplying 2- and 3-digit whole numbers by 1- and 2-digit whole numbers</li> <li>○ Explaining how the multiplication algorithm works using physical models, visual representations, and the distributive property</li> </ul> </li> <li>• Dividing multi-digit whole numbers by 1- and 2-digit whole numbers using models and algorithms</li> <li>• Modeling multiplication of fractions and decimals by whole numbers</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Quotient</li> <li>○ Dividend</li> <li>○ Distributive Property</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ Numbers ending in a 5 or a 0 are always divisible by 5</li> <li>○ <math>15 \times 10 = 150</math></li> <li>○ <math>100 \div 4 = 25</math></li> <li>○ The following example shows <math>3 \times \frac{2}{7}</math></li> </ul> </li> </ul> <div style="text-align: right; margin-top: 10px;"> </div>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**NUMBER SENSE AND OPERATIONS**  
**Measurement Topic: Operations, Computations, and Estimation**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Applying basic properties of real numbers:           <ul style="list-style-type: none"> <li>○ Applying the Commutative and Associative properties of addition and multiplication</li> <li>○ Modeling and using the Distributive Property</li> </ul> </li> <li>• Applying the order of operations for addition, subtraction, multiplication, and division:           <ul style="list-style-type: none"> <li>○ Explaining and applying the order of operations for addition, subtraction, multiplication, and division</li> <li>○ Using parentheses to indicate which operation to perform first when writing expressions</li> </ul> </li> <li>• Estimating solutions to computations with whole numbers</li> <li>• Using mental arithmetic to multiply and divide 2-digit whole numbers</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Distributive Property</li> <li>○ Order of Operations</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ The following example <math>5(3 + 4) = 15 + 20</math> shows the distributive property</li> <li>○ Given the expression <math>4 \times 3 - 5 + 4</math>, the operations are done left to right, multiplication first, subtraction next, and addition last</li> <li>○ <math>234 \times 27 = 6318</math> using front-end estimation with rounding would be: <math>200 \times 30 = 6000</math>; without rounding would be: <math>200 \times 20 = 4000</math></li> <li>○ <math>12 \times 12 = 144</math></li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
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**ALGEBRA AND FUNCTIONS**  
**Measurement Topic: Basic Patterns**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Representing patterns using words, tables, graphs and rules</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements																
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Rule</li> <li>○ Variable</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ the following table shows the rule “add 4”</li> </ul> </li> </ul> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Input</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> </tr> <tr> <td style="text-align: center;">Output</td> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td style="text-align: center;">9</td> <td style="text-align: center;">10</td> <td style="text-align: center;">11</td> </tr> </table>	Input	1	2	3	4	5	6	7	Output	5	6	7	8	9	10	11
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**ALGEBRA AND FUNCTIONS**  
**Measurement Topic: Functions and Equations**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Writing simple algebraic expressions and number sentences:           <ul style="list-style-type: none"> <li>○ Writing simple algebraic expression in one variable</li> <li>○ Using symbols to represent unknown quantities in number sentences</li> </ul> </li> <li>• Evaluating algebraic expressions by substitution</li> <li>• Modeling and solving equations containing whole numbers (e.g., <math>a \times 3 = 15</math>, <math>b + 26 = 95</math>, <math>15 \div c = 3</math>)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Algebraic expression</li> <li>○ Substitution</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ Recognizing simple algebraic expressions and number sentences</li> <li>○ <math>x + 5</math>, solve for <math>x = 2</math>; solution: 7</li> <li>○ <math>a \times 3 = 15</math>; solution: <math>a = 15 \div 3 = 5</math></li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
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**ALGEBRA AND FUNCTIONS**  
**Measurement Topic: Algebraic Representations and Mathematical Models**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Writing equations for problem situations</li> <li>• Graphing simple inequalities on the number line (e.g., <math>t &gt; 15</math>, <math>y &lt; 6</math>)</li> <li>• Finding locations on a map or grid using ordered pairs (positive ordered pairs only)</li> </ul>

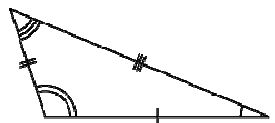
2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Ordered pair</li> <li>○ Inequality</li> <li>○ Equation</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ Problem situation: There are six cookies for Jill and Jane to share, how many will they both get? Number sentence: <math>6 \div 2 = ?</math></li> <li>○ The graph for <math>y &lt; 6</math> includes all numbers less than 6 on the number line</li> <li>○ On a 3 x 3 grid, the pair (2, 2) is directly in the center of the grid</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
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**GEOMETRY**  
**Measurement Topic: Lines, Angles, and Geometric Objects**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Analyzing and classifying angles, triangles, quadrilaterals, and polygons:           <ul style="list-style-type: none"> <li>○ Identifying, describing, and classifying angles (e.g., right, acute, obtuse, straight)</li> <li>○ Classifying triangles based on angle measures (right, equiangular, acute, and obtuse) and side length (isosceles, scale, and equilateral)</li> <li>○ Classifying quadrilaterals using their properties (e.g., those with two sets of parallel lines: square, rectangle, parallelogram, rhombus)</li> <li>○ Describing and classifying polygons (e.g., pentagon, hexagon)</li> </ul> </li> <li>• Drawing angles, triangles, quadrilaterals, polygons, and parts of a circle:           <ul style="list-style-type: none"> <li>○ Drawing angles (e.g., right, acute, obtuse, straight)</li> <li>○ Drawing triangles, quadrilaterals, and polygons</li> <li>○ Drawing the parts of a circle (e.g., chord, diameter, radius, center)</li> </ul> </li> </ul>




2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Quadrilateral</li> <li>○ Chord</li> <li>○ Obtuse</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ A quadrilateral is a polygon with four sides</li> <li>○ The following triangle is scalene</li> </ul> </li> </ul> <div style="text-align: center;">  </div>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
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**GEOMETRY**  
**Measurement Topic: Transformations, Congruency, and Similarity**  
 Grade Four

Evidence shows student has met or exceeded the learning target

Evidence shows misunderstanding, misconceptions, or omissions

4.0	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Determining whether a figure exhibits reflection symmetry and drawing lines of symmetry</li> <li>• Identifying congruent figures and explaining why two figures are considered congruent (e.g., using side lengths, angles, parallels, and perpendiculars)</li> <li>• Drawing transformations of basic two-dimensional figures (translation, reflection, rotation)</li> <li>• Analyzing and predicting transformations of basic two-dimensional figures (translation, reflection, rotation)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Rotation</li> <li>○ Symmetry</li> <li>○ Congruent</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ The following picture shows a line of symmetry in a pentagon  </li> <li>○ Two quadrilaterals are congruent if they have corresponding sides that are the same  </li> <li>○ A triangle rotated 90° to the right would look like the second figure  </li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
1.0	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**MEASUREMENT**  
**Measurement Topic: Measurement Systems**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Selecting and applying appropriate units and tools to measure and estimate lengths using U.S. customary and metric units (to the nearest quarter-inch, eighth-inch, and millimeter)</li> <li>• Selecting and applying appropriate units and tools to measure and estimate weight/mass using U.S. customary and metric units</li> <li>• Selecting and applying appropriate units and tools to measure and estimate capacity using U.S. customary and metric units</li> <li>• Carrying out simple unit conversions (length, weight/mass, capacity) and expressing in symbolic form (e.g., _ inches = _ feet x 12)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Unit Conversion</li> <li>○ Metric units of capacity</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ A person is often measured in feet and inches</li> <li>○ A balance scale is often used to determine if one object has more mass than another</li> <li>○ Teaspoons and tablespoons are common tools for measuring the amount of ingredients for food recipes</li> <li>○ 24 inches = 2 feet x 12</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
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**MEASUREMENT**  
**Measurement Topic: Time, Temperature, and Money**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Selecting and applying appropriate units and tools to measure and estimate time and temperature</li> <li>• Calculating elapsed time in hours, half-hours, and minutes</li> <li>• Adding and subtracting money in decimal notation</li> <li>• Determining the amount of change from a purchase</li> <li>• Carrying out simple unit conversions (money, time)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Decimal notation</li> <li>○ Elapsed time</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ A thermometer calibrated for temperatures between 50 and 500 degrees Fahrenheit would not be capable of measuring the temperature of ice water</li> <li>○ The elapsed time between 10:15 am and 6:35 pm is 8 hours 20 minutes</li> <li>○ Solving simple addition and subtraction problems with money in decimal notation</li> <li>○ Determining the amount of change from a purchase up to \$10 using paper money and coins</li> <li>○ 4 quarters = 1 dollar</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**MEASUREMENT**  
**Measurement Topic: Perimeter, Area, and Volume**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Finding and estimating the area and perimeter of regular polygons</li> <li>• Finding and estimating the volume of rectangular prisms using unit cubes</li> <li>• Finding the length of a side for squares and rectangles given the perimeter or area and one side length</li> <li>• Investigating the basic characteristics of perimeter, area, volume, and capacity:           <ul style="list-style-type: none"> <li>○ Selecting and applying the appropriate units and tools to measure perimeter, area, and volume</li> <li>○ Demonstrating that two rectangles may have the same perimeter but different areas or may have the same area, but different perimeters</li> <li>○ Describing the difference between volume and capacity</li> </ul> </li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Perimeter formula for triangle</li> <li>○ Perimeter formula for quadrilateral</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ A polygon with sides of 4, 4, 3, and 3 has perimeter of 14</li> <li>○ Using a square with an known area of 9, a larger rectangle that can fit two squares inside would have an area of 18 (9 + 9)</li> <li>○ Using a cube with a known volume of 27, a larger object that can fit three cubes inside would have a volume of 81 (27 + 27 + 27)</li> <li>○ Two figures can have the same perimeter but different areas</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**DATA ANALYSIS AND PROBABILITY**  
**Measurement Topic: Data Organization and Interpretation**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Collecting and organizing data from observations, survey, or experiments</li> <li>• Constructing and interpreting stem-and-leaf plots</li> <li>• Computing the mean, median, mode, and range for a set of simple data</li> <li>• Comparing different representations of the same data and determining the most appropriate way to display the data</li> <li>• Organizing, displaying, and interpreting data using tables, pictographs, graphs (line and bar), line plots, and Venn diagrams</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:             <ul style="list-style-type: none"> <li>○ Stem-and-leaf plot</li> <li>○ Line plot</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:             <ul style="list-style-type: none"> <li>○ A tally chart can be used to collect data from the class to determine if they enjoyed a recent movie</li> <li>○ In a stem-and-leaf plot, the tens digit is the stem and the ones digit is the leaf (<i>e.g., 3   5 6 8 means 35, 36, and 38</i>)</li> <li>○ When there are an even number of numbers in a set of data, the median is the mean of the middle two values</li> <li>○ Recognizing various ways to represent data</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

# DATA ORGANIZATION AND PROBABILITY

## Measurement Topic: Probability

Grade Four

Evidence shows student has met or exceeded the learning target

Evidence shows misunderstanding, misconceptions, or omissions

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Conducting and summarizing results of simple probability experiments or simulations in a clear and organized way</li> <li>• Expressing outcomes of experimental probability situations verbally and numerically (e.g., likely, unlikely, 3 out of 4, <math>\frac{3}{4}</math>)</li> <li>• Predicting possible outcomes of a given situation or event</li> <li>• Using tree diagrams to list and count all the possible combinations of several sets (maximum 3 members in each set) (e.g., number of outfits from 3 shirts, 2 shorts, and 2 pair of shoes)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements																																																	
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:             <ul style="list-style-type: none"> <li>○ Combination</li> <li>○ Probability</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:             <ul style="list-style-type: none"> <li>○ When rolling a single die it is equally likely for any of the six numbers to appear</li> <li>○ A probability of 3 out of 4 can also be expressed as <math>\frac{3}{4}</math></li> <li>○ The following chart shows all possible outcomes for the sum of two dice</li> </ul> </li> </ul> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">+</td> <td style="padding: 2px 5px;"><b>1</b></td> <td style="padding: 2px 5px;"><b>2</b></td> <td style="padding: 2px 5px;"><b>3</b></td> <td style="padding: 2px 5px;"><b>4</b></td> <td style="padding: 2px 5px;"><b>5</b></td> <td style="padding: 2px 5px;"><b>6</b></td> </tr> <tr> <td style="padding: 2px 5px;"><b>1</b></td> <td style="padding: 2px 5px;">2</td> <td style="padding: 2px 5px;">3</td> <td style="padding: 2px 5px;">4</td> <td style="padding: 2px 5px;">5</td> <td style="padding: 2px 5px;">6</td> <td style="padding: 2px 5px;">7</td> </tr> <tr> <td style="padding: 2px 5px;"><b>2</b></td> <td style="padding: 2px 5px;">3</td> <td style="padding: 2px 5px;">4</td> <td style="padding: 2px 5px;">5</td> <td style="padding: 2px 5px;">6</td> <td style="padding: 2px 5px;">7</td> <td style="padding: 2px 5px;">8</td> </tr> <tr> <td style="padding: 2px 5px;"><b>3</b></td> <td style="padding: 2px 5px;">4</td> <td style="padding: 2px 5px;">5</td> <td style="padding: 2px 5px;">6</td> <td style="padding: 2px 5px;">7</td> <td style="padding: 2px 5px;">8</td> <td style="padding: 2px 5px;">9</td> </tr> <tr> <td style="padding: 2px 5px;"><b>4</b></td> <td style="padding: 2px 5px;">5</td> <td style="padding: 2px 5px;">6</td> <td style="padding: 2px 5px;">7</td> <td style="padding: 2px 5px;">8</td> <td style="padding: 2px 5px;">9</td> <td style="padding: 2px 5px;">10</td> </tr> <tr> <td style="padding: 2px 5px;"><b>5</b></td> <td style="padding: 2px 5px;">6</td> <td style="padding: 2px 5px;">7</td> <td style="padding: 2px 5px;">8</td> <td style="padding: 2px 5px;">9</td> <td style="padding: 2px 5px;">10</td> <td style="padding: 2px 5px;">11</td> </tr> <tr> <td style="padding: 2px 5px;"><b>6</b></td> <td style="padding: 2px 5px;">7</td> <td style="padding: 2px 5px;">8</td> <td style="padding: 2px 5px;">9</td> <td style="padding: 2px 5px;">10</td> <td style="padding: 2px 5px;">11</td> <td style="padding: 2px 5px;">12</td> </tr> </table> <ul style="list-style-type: none"> <li>○ Tree diagrams can be used to display possible outcomes</li> </ul>	+	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>1</b>	2	3	4	5	6	7	<b>2</b>	3	4	5	6	7	8	<b>3</b>	4	5	6	7	8	9	<b>4</b>	5	6	7	8	9	10	<b>5</b>	6	7	8	9	10	11	<b>6</b>	7	8	9	10	11	12
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**PROBLEM SOLVING**  
**Measurement Topic: Strategies and Reasoning**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<p><b>Student exhibits no major errors or omissions and demonstrates understanding by:</b></p> <ul style="list-style-type: none"> <li>• Analyzing problems individually or as a group by identifying relationships, distinguishing relevant from irrelevant information, sequencing and prioritizing information, and observing patterns</li> <li>• Selecting and applying appropriate strategies to solve problems individually or as a group (e.g., modeling with pictures or manipulatives, breaking into simpler parts, solving a simpler problem, work backwards, trial and error)</li> <li>• Expressing solutions clearly and logically and determining whether an approximate or exact answer is appropriate:           <ul style="list-style-type: none"> <li>○ Expressing solutions clearly and logically, supporting with appropriate verbal and symbolic work (what you did and how you did it)</li> <li>○ Indicating the relative advantages of exact and approximate solutions to problems and giving answers to a specified degree of accuracy</li> </ul> </li> <li>• Analyzing basic problem solving methods:           <ul style="list-style-type: none"> <li>○ Evaluating the efficiency of different representations and solution methods of a problem, and describing the advantages and disadvantages of each</li> <li>○ Noting the method of finding the solution and showing a conceptual understanding of the method by solving similar problems</li> </ul> </li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<p><b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b></p> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Trial and error</li> <li>○ Working backwards</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ Recognizing examples of relevant and irrelevant information</li> <li>○ Choosing examples of simpler problems to help solve more complex problems</li> <li>○ Recognizing examples of clear and logical examples</li> <li>○ Recognizing the method used to solve a given problem</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements

**PROBLEM SOLVING**  
**Measurement Topic: Validity of Results**  
 Grade Four

**Evidence shows student has met or exceeded the learning target**

**Evidence shows misunderstanding, misconceptions, or omissions**

<b>4.0</b>	<b>In addition to score 3.0, in-depth inferences and applications that go beyond what was taught</b>
3.5	In addition to score 3.0, in-depth inferences and applications with partial success
<b>Score 3.0</b>	<b>Student exhibits no major errors or omissions and demonstrates understanding by:</b> <ul style="list-style-type: none"> <li>• Making precise calculations and evaluate the reasonableness of the solution in the context of the problem</li> <li>• Explaining and justifying the reasoning and strategies used to solve a problem (what you did and why you chose to do it that way)</li> </ul>

2.5	No major errors or omissions regarding score 2.0 elements with partial knowledge of score 3.0 elements
<b>Score 2.0</b>	<b>Student exhibits major errors or omissions with score 3.0 elements. No major errors or omissions regarding the simpler details and processes such as:</b> <ul style="list-style-type: none"> <li>• Recognizing and recalling specific terminology such as:           <ul style="list-style-type: none"> <li>○ Justify</li> <li>○ Precise</li> </ul> </li> <li>• Performing basic processes and recognizing and recalling the accuracy of basic solutions and information such as:           <ul style="list-style-type: none"> <li>○ Recognizing correct calculations and basic ways to check for validity</li> <li>○ Recognizing different ways to solve a problem</li> </ul> </li> </ul>
1.5	Partial knowledge of score 2.0 elements Major errors or omissions regarding score 3.0 elements
<b>1.0</b>	<b>With assistance, student demonstrates partial understanding of some of score 2.0 elements and some of score 3.0 elements</b>
0.5	With assistance, a partial understanding of some of score 2.0 elements but not score 3.0 elements