

Threshold Achievement Level Descriptors Grade 4 Mathematics

The student who just enters Level 2 should be able to:	
<p>CONCEPTS AND PROCEDURES Target A: Operations and Algebraic Thinking</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Add and subtract to solve one-step problems involving an unknown number.
<p>CONCEPTS AND PROCEDURES Targets B and C: Operations and Algebraic Thinking</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Determine whether a given whole number in the range of 1–100 is a multiple of a given one-digit number. <input type="checkbox"/> Generate a shape pattern that follows a given rule.
<p>CONCEPTS AND PROCEDURES Targets D and E: Number and Operations – Base Ten</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Look for and use repeated reasoning to generalize place value understanding in order to read and write multi-digit whole numbers less than or equal to 100,000 using base-ten numerals and number names. <input type="checkbox"/> Use place value understanding to add and subtract two- and three-digit whole numbers using a standard algorithm.
<p>CONCEPTS AND PROCEDURES Targets F, G, and H: Number and Operations – Fractions</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Recognize equivalent fractions using visual models. <input type="checkbox"/> Use visual fraction models to represent a problem. <input type="checkbox"/> Express a fraction with denominator 10 as an equivalent fraction with denominator 100.
<p>CONCEPTS AND PROCEDURES Targets I, J, and K: Measurement and Data</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Apply the perimeter formula to rectangles in mathematical problems. <input type="checkbox"/> Use data from a given line plot using fractions $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ to solve one-step problems. <input type="checkbox"/> Recognize whole-number degrees on a protractor.
<p>CONCEPTS AND PROCEDURES Target L: Geometry</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Identify points, lines, line segments, and rays.
<p>PROBLEM SOLVING & MODELING AND DATA ANALYSIS</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Select tools to solve a familiar and moderately scaffolded problem and apply them with partial accuracy. <input type="checkbox"/> Use the necessary elements given in a problem situation to solve a problem. <input type="checkbox"/> Apply mathematics to propose solutions by identifying important quantities and by locating missing information from relevant external resources.
<p>COMMUNICATING REASONING</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Find and identify the flaw in an argument.

The student who just enters Level 3 should be able to:	
<p>CONCEPTS AND PROCEDURES Target A: Operations and Algebraic Thinking</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Multiply and divide to solve one-step problems involving equal groups or arrays.
<p>CONCEPTS AND PROCEDURES Targets B and C: Operations and Algebraic Thinking</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Find factor pairs for whole numbers in the range of 1–100. <input type="checkbox"/> Identify apparent features of a pattern in a problem with scaffolding.
<p>CONCEPTS AND PROCEDURES Targets D and E: Number and Operations – Base Ten</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Read and write multi-digit whole numbers less than or equal to 1,000,000 using base-ten numerals, number names, and expanded form. <input type="checkbox"/> Multiply four-digit whole numbers by a one-digit number.
<p>CONCEPTS AND PROCEDURES Targets F, G, and H: Number and Operations – Fractions</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Generate equivalent fractions using visual models. <input type="checkbox"/> Identify and generate equivalent forms of a fraction with like denominators. <input type="checkbox"/> Add two fractions with respective denominators 10 and 100.
<p>CONCEPTS AND PROCEDURES Targets I, J, and K: Measurement and Data</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. <input type="checkbox"/> Interpret data from a line plot to solve problems involving addition of fractions with like denominators by using information presented in line plots. <input type="checkbox"/> Construct angles between 0 and 180 degrees in whole-number degrees using a protractor.
<p>CONCEPTS AND PROCEDURES Target L: Geometry</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Draw lines of symmetry for two-dimensional figures.
<p>PROBLEM SOLVING & MODELING AND DATA ANALYSIS</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Use appropriate tools to accurately solve problems arising in everyday life, society, and the workplace. <input type="checkbox"/> Apply mathematics to solve problems by identifying important quantities and mapping their relationship and by stating and using logical assumptions.
<p>COMMUNICATING REASONING</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Use stated assumptions, definitions, and previously established results and examples to identify and repair a flawed argument. <input type="checkbox"/> Use previous information to support his or her own reasoning on a routine problem.

The student who just enters Level 4 should be able to:	
<p>CONCEPTS AND PROCEDURES</p> <p>Target A: Operations and Algebraic Thinking</p>	<p><input type="checkbox"/> Assess the reasonableness of answers using mental computation and estimation strategies, including rounding.</p>
<p>CONCEPTS AND PROCEDURES</p> <p>Targets B and C: Operations and Algebraic Thinking</p>	N/A
<p>CONCEPTS AND PROCEDURES</p> <p>Targets D and E: Number and Operations – Base Ten</p>	N/A
<p>CONCEPTS AND PROCEDURES</p> <p>Targets F, G, and H: Number and Operations – Fractions</p>	<p><input type="checkbox"/> Compare two fractions with different numerators and different denominators using $<$, $>$, and $=$.</p> <p><input type="checkbox"/> Compare two decimals to the hundredths using $<$, $>$, and $=$ or a number line and justify the conclusions by using visual models.</p>
<p>CONCEPTS AND PROCEDURES</p> <p>Targets I, J, and K: Measurement and Data</p>	<p><input type="checkbox"/> Apply the perimeter formula to rectangles in real-world problems.</p> <p><input type="checkbox"/> Solve addition problems to find unknown angles on a diagram in mathematical problems.</p>
<p>CONCEPTS AND PROCEDURES</p> <p>Target L: Geometry</p>	N/A
<p>PROBLEM SOLVING & MODELING AND DATA ANALYSIS</p>	<p><input type="checkbox"/> Analyze and interpret the context of an unfamiliar situation for problems of increasing complexity.</p> <p><input type="checkbox"/> Begin to solve problems optimally.</p> <p><input type="checkbox"/> Construct multiple plausible solutions and approaches.</p>
<p>COMMUNICATING REASONING</p>	<p><input type="checkbox"/> Begin to construct chains of logic about abstract concepts autonomously.</p>