

Oneness-Family School - First through Third Grade - Math Benchmarks Overview

*Academy: Math Operations, Geometry and Measurements*

<b>MATH OPERATIONS</b>		
<b>First Grade</b>	<b>Second Grade</b>	<b>Third Grade</b>
<p><b>Place Value</b></p> <p>Recognizes mathematical symbols</p> <p>Demonstrates knowledge of the quantity</p> <p>Demonstrates the concept of place value</p> <p>Identifies the different place values up to 9,999</p> <p>Constructs numbers using concrete materials to 9,999</p> <p>Recognizes the difference between odd and even numbers</p>	<p><b>Place Value</b></p> <p>Accurately uses mathematical symbols in all operations</p> <p>Accurately exchanges numbers to the correct next place value</p> <p>Can accurately read numbers up to 9,999,999</p> <p>Identify place values and constructs numbers using concrete materials to 9,999,999</p> <p>Can count up to 100 using odd and even numbers</p>	<p><b>Place Value</b></p> <p>Recognizes mathematical symbols in a variety of contexts</p> <p>Consistently demonstrates knowledge of the quantity</p> <p>Consistently demonstrates the concept of place value</p> <p>Accurately identifies place values and constructs numbers using concrete materials to 9,999,999</p> <p>Identify place values and constructs numbers using concrete materials to 9,999,999,999</p> <p>Recognizes the difference between odd and even numbers</p>
<p><b>Operations (+ / -)</b></p> <p>Demonstrates and verbalizes a fundamental understanding of addition and subtraction</p> <p>Demonstrates and verbalizes dynamic addition and subtraction with concrete materials</p>	<p><b>Operations (+ / -)</b></p> <p>Completes addition and subtraction problems up to 9,999,999</p>	<p><b>Operations (+ / -)</b></p> <p>Accurately demonstrates and verbalizes a fundamental understanding of addition and subtraction</p>

<p>Demonstrates dynamic addition and subtraction on paper</p> <p>Continuing to memorize addition and subtraction facts up to 9</p>	<p>Can accurately complete more than 3 dynamic addition and subtraction problems unassisted with concrete materials up to 9,999,999</p> <p>Demonstrates and verbalizes dynamic addition and subtraction on paper</p> <p>Memorizes addition and subtraction facts up to 9</p>	<p>Accurately demonstrates and verbalizes dynamic addition and subtraction with concrete materials</p> <p>Accurately demonstrates and verbalizes dynamic addition and subtraction on paper</p> <p>Memorizes addition and subtraction facts</p>
<p><b>Operations</b> (<math>\times / \div</math>)</p> <p>Demonstrates and verbalizes a fundamental understanding of multiplication and division</p> <p>Demonstrates static multiplication and division with concrete materials</p> <p>Demonstrates static multiplication and division on</p> <p>Demonstrates a fundamental understanding of dynamic multiplication and division</p> <p>Demonstrates dynamic multiplication and division with concrete materials</p> <p>Demonstrates accuracy in all operations</p>	<p><b>Operations</b> (<math>\times / \div</math>)</p> <p>Demonstrates and verbalizes a fundamental understanding of multiplication and division</p> <p>Demonstrates and verbalizes static multiplication and division with concrete materials</p> <p>Demonstrates and verbalizes static multiplication and division on paper</p> <p>Demonstrates and verbalizes a fundamental understanding of dynamic multiplication and division</p> <p>Demonstrates and verbalizes dynamic multiplication and division with concrete materials</p> <p>Memorizes multiplication and division facts</p> <p>Demonstrates orderliness and accuracy in all operations</p>	<p><b>Operations</b> (<math>\times / \div</math>)</p> <p>Accurately demonstrates and verbalizes a fundamental understanding of multiplication and division</p> <p>Demonstrates and verbalizes static multiplication and division with concrete materials</p> <p>Accurately demonstrates and verbalizes static multiplication and division on paper</p> <p>Accurately demonstrates and verbalizes a fundamental understanding of dynamic multiplication and division</p> <p>Accurately demonstrates and verbalizes dynamic multiplication and division with concrete materials</p> <p>Completes memorization of multiplication and division facts</p> <p>Demonstrates and solves dynamic multiplication problems on paper</p>

		<p>Demonstrates and solves static division problems on paper</p> <p>Accurately demonstrates orderliness and accuracy in all operations</p>
<p><b>Word Problems</b></p> <p>Beginning to Read and identify the operation in a word problem up to the operation of division</p> <p>Writes the proper equation to solve a word problem</p> <p>Accurately solves and records the answer to a word problem</p>	<p><b>Word Problems</b></p> <p>Reads and identifies the operation in a word problem</p> <p>Writes all of the proper steps in order to solve a word problem</p> <p>Can accurately solve and records the answer to a word problem up to the operation of division</p>	<p><b>Word Problems</b></p> <p>Accurately and consistently demonstrates an understanding and strategy of word problems</p> <p>Reads and correctly identifies the operation in a word problem</p> <p>Consistently writes the proper equation to solve a word problem</p> <p>Accurately solves and records the answer to a word problem, including units</p>
<p><b>Telling Time</b></p> <p>Identifies the basic parts of a clock</p> <p>Reads the hour, half hour, and quarter hour</p> <p>Reads the time in five-minute sequences</p>	<p><b>Telling Time</b></p> <p>Reads a clock in hour, half hour, 15-minute, and five-minute sequences</p> <p>Reads and writes the time to the minute</p>	<p><b>Telling Time</b></p> <p>Consistently tells time by reading a clock in an hour, half hour, quarter hour, and five-minute sequences</p> <p>Accurately reads and writes the time to the minute</p> <p>Solves "Telling Time" word problems</p>
<p><b>Money</b></p> <p>Recognizes the names and values of coins</p> <p>Counts coins by ones, fives, tens, and twenty-five</p> <p>Adds, subtracts, and exchanges coins</p>	<p><b>Money</b></p> <p>Recognizes the names and values of coins and bills</p> <p>Adds and subtracts amounts of money using cents and dollar signs</p>	<p><b>Money</b></p> <p>Consistently recognizes the names and values of coins and bills</p> <p>Accurately adds and subtracts amounts of money using cents and dollar signs</p>

Writes the value of coins with the cents sign	Exchanges coins and makes change	Efficiently exchanges coins and makes change
<b>Graphs &amp; Fractions</b> Identifies and labels the parts of the graph Demonstrates a fundamental understanding of fractions Identifies fractions Identifies the numerator and denominator of fractions	<b>Graphs &amp; Fractions</b> Analyzes and gathers information from different types of graphs Consistently demonstrates a fundamental understanding of fractions Accurately and consistently Identifies fractions Writes fractions	<b>Graphs &amp; Fractions</b> Analyzes and gathers information from different types of complex graphs Demonstrates a fundamental understanding of fractions and fraction equations Identifies fractions and fraction equations Writes fractions and fraction equations

## GEOMETRY & MEASUREMENT

First Grade	Second Grade	Third Grade
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Identifies and discriminates between points, lines, planes, and solids Identifies the qualities and parts of a line Identifies multiple tools used for measurement Draws line segments from the "0" on a ruler Understands and writes abbreviations for units of measure Recognizes and identifies closed figures and polygons of up to 10 sides	Identifies the range of relationships between two lines Recognizes and identifies parts of a triangle Identifies multiple tools used for measurement Measures to the whole value of and to the nearest value of the following units of measure <ul style="list-style-type: none"> <li>● Millimeter</li> <li>● Centimeter</li> <li>● Decimeter</li> <li>● Inch</li> <li>● Foot</li> </ul>	Identifies and describes the parts of an angle Discriminates between acute, right, obtuse, straight, reflex, and whole angles Demonstrates knowledge of the relationship between two angles Identifies the types of angles formed by two straight lines and a transversal Identifies multiple tools for measurement Measures to the whole value of and to the nearest value of the following units of measure:
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<p>Discriminates between types of polygons</p> <p>Demonstrates an understanding of symmetry and probability</p> <p>Measures accurately in inches and feet</p> <p>Measures accurately in millimeters, centimeters, and decimeters</p> <p>Measures accurately to the nearest inch</p> <p>Measures accurately to the nearest centimeter</p> <p>Identifies parts of a polygon</p> <p>Recognizes and identifies closed curves</p> <p>Measures weight accurately in pounds</p> <p>Measures weight accurately in kilograms</p> <p>Measures volume accurately in cups, pints, quarts, and gallons</p>	<p>Measures in halves of an inch</p> <p>Discriminates between the types of trapezoids</p> <p>Demonstrates an understanding of congruence, symmetry, and probability</p> <p>Accurately estimates length in yards, feet, and inches</p> <p>Recognizes and identifies the parts of the following quadrilaterals:</p> <ul style="list-style-type: none"> <li>● Common Quadrilateral</li> <li>● Trapezoid</li> <li>● Parallelogram</li> <li>● Rectangle</li> <li>● Rhombus</li> <li>● Square</li> </ul> <p>Accurately estimates length in meters, centimeters, and decimeters</p> <p>Accurately measures simple perimeter in inches and centimeters</p> <p>Accurately measures the area of a rectangle</p> <p>Recognizes and identifies the parts of a circle</p> <p>Demonstrates knowledge of the relationship between a circle and a straight line</p> <p>Demonstrates knowledge of the relationship between two circles</p> <p>Accurately interchanges cups, pints, quarts, gallons, and milliliters and liters</p>	<ul style="list-style-type: none"> <li>● Millimeter</li> <li>● Centimeter</li> <li>● Decimeter</li> <li>● Kilometer</li> <li>● Inch</li> <li>● Foot</li> <li>● Yard</li> <li>● Mile</li> </ul> <p>Measures in halves and quarters of an inch</p> <p>Estimates length to the nearest inch, foot, yard, centimeter, decimeter, and meter</p> <p>Measures and estimates distances in miles from a travel chart</p> <p>Transposes between inches and feet, expressing distances in both units and their combination</p> <p>Recognizes and identifies the following parts of a triangle:</p> <ul style="list-style-type: none"> <li>● Altitude</li> <li>● Median</li> <li>● Axis</li> <li>● Centers</li> <li>● Sides</li> <li>● Angles</li> </ul> <p>Accurately measures perimeter in inches and centimeters</p> <p>Accurately measures the area of a rectangle and triangle</p> <p>Accurately measures in cubic inches</p>
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	<p>Reads temperatures on a thermometer in Fahrenheit and Celsius Accurately measure the weight of an object in pounds, ounces, grams, and kilograms</p> <p>Accurately measures the volume of liquids in cups, pints, quarts, gallons, grams, and kilograms</p>	<p>Accurately measures weight in ounces, pounds, and tons</p> <p>Accurately estimates the weight of objects in ounces, pounds, and tons</p> <p>Recognizes, identifies, and discriminates between the range of triangles</p> <p>Accurately measures volume in cups, pints, quarts, gallons, milliliters, and liters</p> <p>Accurately interchanges cups, pints, quarts, and gallons</p> <p>Accurately interchanges teaspoons, tablespoons, cups, pints, and gallons</p> <p>Measures in fractions of a cup</p> <p>Accurately estimates the amount of liquid in teaspoons, tablespoons, cups, pints, quarts, and gallons, milliliters, and liters</p> <p>Reads and records temperatures on a thermometer in Fahrenheit and Celsius</p> <p>Accurately demonstrates an understanding of congruence, symmetry, and probability</p>
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