

## Grade 4 Potential Gaps in Student Pre-Requisite Knowledge

This document indicates pre-requisite knowledge gaps that may exist for Grade 4 students based on what the Grade 3 common core math standards expect. Column four indicates the Grade 4 common core standard which could be affected if the Grade 3 gap exists. Other gaps may exist for other reasons; therefore, it important that teachers diagnose their students' needs as part of the planning process.

Domain	Grade 3 CCSS	Wording of Grade 3 CCSS Potential Gap	Grade 4 CCSS
<b>Operations and Algebraic Thinking (OA)</b>	<b>3.OA.A.3</b>	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	<b>4.OA.A.3</b>
	<b>3.OA.A.4</b>	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times ? = 48</math>, <math>5 = \_ \div 3</math>, <math>6 \times 6 = ?</math></i>	<b>4.OA.A.3</b>
	<b>3.OA.B.5</b>	Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)	<b>4.OA.A.3</b>
<b>Number and Operations – Fractions (NF)</b>	<b>3.NF.A.1</b>	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $a/b$ as the quantity formed by $a$ parts of size $1/b$ .	<b>4.NF.A.1</b> <b>4.NF.B.3</b>
	<b>3.NF.A.2</b>	Understand a fraction as a number on the number line; represent fractions on a number line diagram.	<b>4.NF.A.1</b> <b>4.NF.B.3</b>
	<b>3.NF.A.3</b>	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	<b>4.NF.A.1</b> <b>4.NF.A.2</b> <b>4.NF.B.3</b>
<b>Measurement and Data (MD)</b>	<b>3.MD.B.3</b>	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>	<b>4.NBT.B.4</b>
	<b>3.MD.B.4</b>	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	<b>4.MD.B.4</b>
	<b>3.MD.D.8</b>	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	<b>4.MD.A.3</b>