

International Benchmarking Mathematics Comparison Examples

Please note:

- This document is not intended to have a one to one correlation between columns.
- Each topic includes the collection of standards addressed by grade levels.
- Portions of the Common Core and CA Standards are listed with the standard number for further reference.

Topic	Composite Standards	Common Core Standards	CA Standards
Fraction concepts	<p>Grade 2</p> <ul style="list-style-type: none"> • Interpret a fraction as part of a whole • Read and write fractions • Compare and order unit fractions <p>Grade 3</p> <ul style="list-style-type: none"> • Recognize and name equivalent fractions • Write equivalent fractions <p>Grade 4</p> <ul style="list-style-type: none"> • Understand mixed numbers and improper fractions 	<p>Grade 3</p> <ul style="list-style-type: none"> • Understand a fraction $1/b$ (3-NF.1) • Understand a fraction as a number on a number line (3-NF.2) • Recognize and generate equivalent fractions (3-NF.3b) • Understand two fractions are equivalent if they are the same size or the same point on the number line (3-NF.3a-c) • Compare fractions with the same denominator (3-NF.3d) <p>Grade 4</p> <ul style="list-style-type: none"> • Compare two fractions with different numerators and denominators (4-NF.2) • Explain fraction equivalence(4-NF.1) 	<p>Grade 2</p> <ul style="list-style-type: none"> • Recognize, name, and compare unit fractions from $1/12$ to $1/2$ (NS 4.1) • Recognize fractions of a whole and parts of a group (NS 4.2, 4.3) <p>Grade 3</p> <ul style="list-style-type: none"> • Compare fractions represented by drawings or concrete materials to show equivalency(NS 3.1) <p>Grade 4</p> <ul style="list-style-type: none"> • Explain different interpretations of fractions (NS 1.5) • Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings (NS 1.7) • Identify fractions on a number line (NS 1.9)

Topic	Composite Standards	Common Core Standards	CA Standards
Fraction Operations	<p>Grade 3</p> <ul style="list-style-type: none"> Add and subtract two related fractions within one whole <p>Grade 4</p> <ul style="list-style-type: none"> Add and subtract like fractions Add and subtract related fractions Multiply proper or improper fraction and a whole number <p>Grade 5</p> <ul style="list-style-type: none"> Add and subtract fractions with unlike denominators Multiply fractions: proper, improper, mixed numbers Divide fractions by whole numbers and whole numbers by fractions <p>Grade 6</p> <ul style="list-style-type: none"> Divide proper fractions by proper fractions Know how to solve simple calculations with both fractions and decimals 	<p>Grade 4</p> <ul style="list-style-type: none"> Add and subtract mixed numbers with like denominators (4-NF.3c,d) Multiply a fraction by a whole number (4-NF.4a-c) <p>Grade 5</p> <ul style="list-style-type: none"> Add and subtract fractions with unlike denominators (5-NF.1,2) Multiply a fraction or whole number by a fraction 5-NS.4a,b) Interpret multiplication as scaling (5-NF.5) Interpret division of a unit fraction by a non-zero whole number and division of a whole number by a unit fraction (5-NF.7a-c) <p>Grade 6</p> <ul style="list-style-type: none"> Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions 6-NS.1) 	<p>Grade 3</p> <ul style="list-style-type: none"> Add and subtract simple fractions (NS 3.2) <p>Grade 4</p> <p>Operations are not covered</p> <p>Grade 5</p> <ul style="list-style-type: none"> Understand the concept of multiplication and division of fractions (NS 2.4) Compute and perform simple multiplication and division of fractions and apply these procedures to solving problems. (NS 2.5) <p>Grade 6</p> <ul style="list-style-type: none"> Solve problems involving addition, subtraction, multiplication and division of positive fractions (NS 2.1) Explain the meaning of multiplication and division of positive fractions and perform the calculations (NS 2.2)