

Camelot Learning Mathematics Program

Fractions and Decimals

Correlation to the District of Columbia Public Schools Curriculum Content Standards

Lesson #	Quest	Standard	Strand	Substrand	Activity
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Lessons 1, 2 Understanding Basic Fraction Concepts	How can you use fractional models to understand wholes and fractional parts?	3.NSO-F.5. 4.NSO-F.9. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Fractions Fractions Computation and Operations	<ul style="list-style-type: none"> Identify and represent fractions as parts of unit wholes and parts of a collection. Demonstrate an understanding of fraction as parts of unit wholes, as parts of a collection, and as locations on a number line. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 3, 4 Understanding Fractional Parts of a Whole and a Group	How can fraction benchmarks help you understand fractional parts?	3.NSO-F.5. 3.NSO-F.6. 5.NSO-E.23 5.DASP.2. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations Data Analysis, Statistics, and Probability Number Sense and Operations	Fractions Fractions Estimation Data Analysis Computation and Operations	<ul style="list-style-type: none"> Identify and represent fractions as parts of unit wholes and parts of a collection. Recognize, name, and use equivalent fractions with denominators 2,3,4, and 8; compare and order them. Estimate sums and differences of positive fractions (benchmarks 0, $\frac{1}{2}$, and 1) Construct, draw conclusions, and make predictions from bar graphs. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 5, 6 Learning How to Add Like Fractions	How do you add fractions with like denominators?	3.NSO-F.8. 3.NSO-C.12 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Fractions Computation and Operations Computation and Operations	<ul style="list-style-type: none"> Know that any fraction can be written as a sum of a unit of fractions. Use concrete objects and visual models to add common fractions with like denominators. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 7, 8 Learning How to	How do you subtract fractions	3.NSO-C.12	Number Sense and Operations	Computation and Operations	<ul style="list-style-type: none"> Use concrete objects and visual models to subtract common fractions

Subtract Like Fractions	with like denominators?	2.NSO-C.13	Number Sense and Operations	Computation and Operations	with like denominators. <ul style="list-style-type: none"> Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 9, 10 Understanding Simplest Form Fractions	How can you change a fractional number to its simplest form?	4.NSO-F.12	Number Sense and Operations	Fractions	<ul style="list-style-type: none"> Select, use, and explain models to relate common fractions and find equivalent fractions. Recognize, name, and use equivalent fractions with denominators 2,3,4, and 8; compare and order them. Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
		3.NSO-F.6.	Number Sense and Operations	Fractions	
		3.NSO-C.16	Number Sense and Operations	Computation and Operations	
Lessons 11, 12 Understanding of Important Fraction Concepts	How can you use factors to change a fractional number to its simplest form?	4.NSO-N.6.	Number Sense and Operations	Number Sense	<ul style="list-style-type: none"> Determine if a whole number is a multiple of a given one-digit whole number and if a one-digit whole number is a factor of a given whole number. Find all factors of a whole number up to 50. Apply the number theory concept of common factors and common multiples to solve problems. Simplify fractions in cases when both the numerator and the denominator have a common factor. Show that two fractions are or are not equivalent by reducing to simpler forms or by finding a common denominator. Use the relationship between multiplication and division to simplify computations (fractions) and check results.
		4.NSO-N.7.	Number Sense and Operations	Computation and Operations	
		5.NSO-N.5	Number Sense and Operations	Computation and Operations	
		5.NSO-C.18.	Number Sense and Operations	Computation and Operations	
Lessons 13, 14 Using Fractions to	How can you write a fraction	4.NSO-C.27.	Number Sense and Operations	Computation and Operations	<ul style="list-style-type: none"> Classify outcomes as certain, likely, unlikely, or impossible.
		3.DASP.4.	Data Analysis, Statistics, and	Probability	

Express the Probability of an Occurrence	to represent the probability of an event?	4.DASP.4. 2.NSO-C.13	Probability Data Analysis, Statistics, and Probability Number Sense and Operations	Probability Computation and Operations	<ul style="list-style-type: none"> • Represent the possible outcomes for a simple probability solution (deck of cards) written as a fraction. • Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
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Lessons 15, 16 Writing a Probability as a Fraction	How do you write a fraction to express the probability of an event displayed on a frequency table?	4.NSO-F.11. 4.DASP.4 5.DASP.2 5.NSO-F.8. 2.NSO-C.13	Number Sense and Operations Data Analysis Statistics, and Probability Data Analysis Statistics, and Probability Number Sense and Operations Number Sense and Operations	Fractions Data Analysis, Statistics, and Probability Data Analysis, Statistics, and Probability Fractions Computation and Operations	<ul style="list-style-type: none"> Recognize, name, and generate equivalent forms of fractions and explain why they are equivalent. Represent the possible outcomes for a simple probability solution written as a fraction. Construct, draw conclusions, and make predictions from tables. Explain different interpretations of fractions as a ratio of whole numbers, as parts of unit wholes, and as parts of a collection. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 17, 18 Using Knowledge of Fractions and Computation Skills to Convert Fractions	How do you write mixed numbers and improper fractions?	4.NSO-F.12. 5.NSO-F.11. 3.NSO-C.16	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Fractions Fractions Computation and Operations	<ul style="list-style-type: none"> Select, use, and explain models to relate common fractions and mixed numbers (e.g., $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{8}$, $\frac{1}{10}$, $\frac{1}{12}$, and $1\frac{1}{2}$); find equivalent fractions, mixed numbers, and decimals. Write improper fractions as mixed numbers, and know that a mixed number represents the number of “wholes” and the part of a whole remaining (e.g., $\frac{5}{4} = 1 + \frac{1}{4} = 1\frac{1}{4}$). Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
Lessons 19, 20 Representing, Reading and Writing Decimals to the Hundredths	How do you represent tenths to hundredths using place value models?	4.NSO-N.5 4.NSO-F.13 4.NSO-F.11	Number Sense and Operations Number Sense and Operations Number Sense and	Number Sense Number Sense Fractions	<ul style="list-style-type: none"> Read and interpret whole numbers and decimals up to two decimal places. Represent positive decimals to the hundredths.

Place		2.NSO-C.13	Operations Number Sense and Operations	Computation and Operations	<ul style="list-style-type: none"> Select, use, and explain models to relate common fractions and mixed numbers, find equivalent fractions, mixed numbers, and decimals. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 21, 22 Applying Ideas When Writing a Percentage	How can a fraction and decimal be written as a percent?	5.NSO-F.9. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations	Fractions Computation and Operations	<ul style="list-style-type: none"> Interpret percents as parts out of 100, use % notation, and express a part of a whole as a percentage. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 23, 24 Using Number Line to Compare and Order Decimals	How can you use a number line to compare and order decimals?	4.NSO-N.5 5.NSO-N.4 4.NSO-F.9. 3.NSO-C.16	Number Sense and Operations Number Sense and Operations Number Sense and Operations Number Sense and Operations	Number Sense Number Sense Fractions Computation and Operations	<ul style="list-style-type: none"> Read and interpret whole numbers and decimals up to two decimal places. Compare and order decimals using a number line. Demonstrate an understanding of fractions as parts of unit wholes, as parts of a collection, and as locations on a number line. Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
Lessons 25, 26 Compare and Order Fractions and Decimals	How can you compare and order fractions and decimals?	5.NSO-N.4. 3.NSO-C.16	Number Sense and Operations Number Sense and Operations	Number Sense Computation and Operations	<ul style="list-style-type: none"> Compare and order integers (including negative integers) and positive fractions, mixed numbers, decimals, and percents. Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
Lessons 27, 28 Using Rounding to Estimate Sums and Differences of	How can you use rounding to help you estimate sums and	4.NSO-E.28. 4.NSO-E.29	Number Sense and Operations Number Sense and	Estimation Estimation	<ul style="list-style-type: none"> Estimate and compute the sum or difference of whole numbers and positive decimal places to two places.

Decimals	differences of decimals?	4.NSO-E.30 3.NSO-C.16	Operations Number Sense and Operations Number Sense and Operations	Estimation Computation and Operations	<ul style="list-style-type: none"> Estimate the answers to calculations involving addition, and subtraction; know when approximate or a rounded solution is appropriate and use it to check the reasonableness of answers. Select and use a variety of strategies to estimate quantities. Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
Lessons 29, 30 How to Use Place Value Models to Add and Subtract Decimals	How can you use place value models to add and subtract decimals?	5.NSO-C.14 4.NSO-F.11 4.NSO-N.5. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations Number Sense and Operations	Computation and Operations Fractions Number Sense Computation and Operations	<ul style="list-style-type: none"> Add and subtract positive decimals. Recognize, name, and generate equivalent forms of common decimals and fractions and explain why they are equivalent. Read and interpret whole numbers and decimals up to two decimal places. Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.

Lessons 31, 32 Knowledge of Basic Facts and Place Value	How can an equivalent decimal make finding sums and differences of decimals easier?	5.NSO-C.14. 4.NSO-F.11. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Computation and Operations Fractions Computation and Operations	<ul style="list-style-type: none"> • Add and subtract positive decimals. • Recognize, name, and generate equivalent forms of common decimals (0.5, 0.25, 0.2, 0.1) and fractions (halves, quarters, fifths, and tenths) and explain why they are equivalent. • Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 33, 34 Solving Word Problems	How can you use your knowledge of decimals to help you solve problems?	4.NSO-C.25 5.NSO-C.14. 2.NSO-C.13	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Computation and Operations Computation and Operations Computation and Operations	<ul style="list-style-type: none"> • Select and use appropriate operations to solve problems; including those involving money. • Add and subtract positive decimals. • Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
Lessons 35, 36 Knowledge of Making Change Using Mental Math	How can you use your knowledge of decimals to help you make change?	3.NSO-C.13 5.NSO-C.14 3.NSO-C.16	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Computation and Operations Computation and Operations Computation and Operations	<ul style="list-style-type: none"> • Solve problems involving addition and subtraction of money amounts in decimal notation. • Add and subtract positive decimals. • Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems
Lessons 37, 38 Rounding Whole Numbers	How can you use rounding to help you estimate and solve money problems?	4.NSO-C.25. 4.NSO-E.28 4.NSO-E.29	Number Sense and Operations Number Sense and Operations Number Sense and Operations	Computation and Operations Estimation Estimation	<ul style="list-style-type: none"> • Select and use appropriate operations to solve problems; including those involving money. • Estimate and compute the sum or difference of whole numbers and positive decimal places to two places. • Estimate the answers to calculations involving addition, and subtraction;

		4.NSO-E.30	Number Sense and Operations	Estimation	<p>know when approximate or a rounded solution is appropriate and use it to check the reasonableness of answers.</p> <ul style="list-style-type: none"> • Select and use a variety of strategies (front-end and rounding) to estimate quantities. • Add and subtract whole numbers accurately and efficiently. • Know addition and subtraction facts (addends to 12), commit to memory, and use them to solve problems.
		3.NSO-C.11	Number Sense and Operations	Computation and Operations	
		2.NSO-C.13	Number Sense and Operations	Computation and Operations	
Lessons 39, 40 Relating to the Fractional Parts of the Hour	How can you use what you know about fractions to help you tell time?	3.M.2	Measurement	Measurement	<ul style="list-style-type: none"> • Carry out simple unit conversions within a system of measurement such as hours to minutes.
		4.M.1	Measurement	Measurement	<ul style="list-style-type: none"> • Identify and use appropriate units and tools (clock) to estimate, measure, and solve problems involving time.
		4.M.3	Measurement	Measurement	<ul style="list-style-type: none"> • Identify time to the minute on analog clocks. Compute elapsed time using a clock.
		4.NSO-C.21	Number Sense and Operations	Computation and Operations	<ul style="list-style-type: none"> • Multiply fractions by whole numbers, (find fraction of a whole number) using time and clock models.
		5.PRA.6.	Patterns, Relationships, and Algebra	Relationships	<ul style="list-style-type: none"> • Solve problems involving proportional relationships using concrete models.
		3.NSO-C.11	Number Sense and Operations	Computation and Operations	
		3.NSO-C.16	Number Sense and Operations	Computation and Operations	<ul style="list-style-type: none"> • Add and subtract whole numbers accurately and efficiently. • Know multiplication facts through 10 x 10 and related division facts. Use these facts to solve related problems