

Grade 5

Number Sense and Operations in Fractions

A Understand the relationship between fractions and decimals (denominators that are factors of 100). 5.NF.A

- 1 Understand that parts of a whole can be expressed as fractions and/or decimals. 5.NF.A.1
- 2 Convert decimals to fractions and fractions to decimals. 5.NF.A.2
- 3 Compare and order fractions and/or decimals to the thousandths place using the symbols $>$, $=$ or $<$, and justify the solution. 5.NF.A.3

B Perform operations and solve problems with fractions and decimals. 5.NF.B

- 4 Estimate results of sums, differences and products with fractions and decimals to the thousandths. 5.NF.B.4
 - 5a Estimate the size of the product based on the size of the two factors. 5.NF.B.5A
 - 5b Explain why multiplying a given number by a fraction greater than 1 results in a product larger than the given number. 5.NF.B.5B
 - 5c Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. 5.NF.B.5C
 - 5d Explain why multiplying the numerator and denominator by the same number is equivalent to multiplying the fraction by 1. 5.NF.B.5D
 - 6 Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution. 5.NF.B.6
 - 7a Recognize the relationship between multiplying fractions and finding the areas of rectangles with fractional side lengths. 5.NF.B.7A
 - 7b Calculate and interpret the product of a fraction by a whole number and a whole number by a fraction. 5.NF.B.7B
 - 7c Calculate and interpret the product of two fractions less than one. 5.NF.B.7C
 - 8a Calculate and interpret the quotient of a unit fraction by a non-zero whole number. 5.NF.B.8A
 - 8b Calculate and interpret the quotient of a whole number by a unit fraction. 5.NF.B.8B
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Relationships and Algebraic Thinking

A Represent and analyze patterns and relationships. 5.RA.A

- 1a Generate two numeric patterns given two rules. 5.RA.A.1A
- 1b Translate two numeric patterns into two sets of ordered pairs. 5.RA.A.1B
- 1c Graph numeric patterns on the Cartesian coordinate plane. 5.RA.A.1C
- 1d Identify the relationship between two numeric patterns. 5.RA.A.1D
- 2 Write a rule to describe or explain a given numeric pattern. 5.RA.A.2

C Use the four operations to represent and solve problems. 5.RA.C

- 5 Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals. 5.RA.C.5

Geometry and Measurement

A Classify two- and three- dimensional geometric shapes. 5.GM.A

- 2 Classify figures in a hierarchy based on properties. 5.GM.A.2

B Understand and compute volume. 5.GM.B

- 4a Describe a cube with edge length 1 unit as a “unit cube” and is said to have “one cubic unit” of volume and can be used to measure volume. 5.GM.B.4A
- 4b Understand that the volume of a right rectangular prism can be found by stacking multiple layers of the base. 5.GM.B.4B

C Graph points on the Cartesian coordinate plane within the first quadrant to solve problems. 5.GM.C

- 6a Represent the axes as scaled perpendicular number lines that both intersect at 0, the origin. 5.GM.C.6A
- 6b Identify any point on the Cartesian coordinate plane by its ordered pair coordinates. 5.GM.C.6B
- 6c Define the first number in an ordered pair as the horizontal distance from the origin. 5.GM.C.6C
- 6d Define the second number in an ordered pair as the vertical distance from the origin. 5.GM.C.6D

D Solve problems involving measurement and conversions within a measurement system. 5.GM.D

- 9 Solve multi-step problems that require measurement conversions. 5.GM.D.9

Data and Statistics

A Represent and analyze data. 5.DS.A

- 2 Create a line plot to represent a given or generated data set, and analyze the data to answer questions and solve problems, recognizing the outliers and generating the median. 5.DS.A.2