

#### Understands numbers, number systems and number relationships

- Draw arrays to model multiplication
- List the factors of a number
- Identify even and odd numbers
- Convert between fractions and mixed or whole numbers
- Convert among fractions, decimals and percents
- Find and identify factors of numbers
- Find the prime factorizations of numbers
- Use a divisibility test to determine if a number is divisible by another number
- Identify prime and composite numbers
- Understand how square numbers and their square roots are related
- Order and compare positive and negative numbers
- Order and compare fractions

#### Understands computation and estimation

- Know basic multiplication facts
- Find the sum and difference of multi-digit whole numbers and decimals
- Find common denominators
- Find the product of multi-digit whole numbers and decimals
- Convert between fractions and mixed numbers
- Find equivalent fractions
- Convert among fractions, decimals, and percents
- Understand and apply exponential notation
- Identify number sentences; tell whether a number sentence is true or false
- Understand and apply the use of parentheses in number sentences
- Use an algorithm to add mixed numbers

#### Understands measurement

- Use a formula to find the area of triangles and parallelograms
- Use a formula to find the area of rectangles
- Use formulas to find the volume of prisms and cylinders

#### Demonstrates mathematical reasoning and connections

- Know place value to hundredths
- Identify place value in numbers to billions
- Make magnitude estimates
- Know place value to billions

#### Understand data analysis and statistics

- Identify the maximum, minimum, mode and mean for a data set
- Find and use data landmarks
- Interpret mystery line plots and graphs

#### Understands algebra and functions

- Plot ordered pairs on a one-quadrant coordinate grid
- Solve one-step pan-balance problems

#### Understands geometry

- Know properties of polygons
- Define and create tessellations
- Understand the concept of area of a figure
- Use formulas to find the areas of polygons and circles
- Know the properties of geometric solids
- Estimate the measure of an angle
- Measure an angle to within  $2^\circ$
- Identify types of triangles
- Identify the base and height of triangles and parallelograms

#### Demonstrates an understanding of trigonometry

- Identify types of angles

#### Understands concepts of calculus

- Solve ratio and rate number stories

