

Number Sense

3	4	5	6	7	8	9
Numbers to 10,000	Interpret, represent fractions with common denominator	Mixed numbers, improper fractions and decimals	Integers, positive and negative	Integers, positive and negative, fractions and decimals and explain multiple equivalents	Rational numbers, exponents and square roots	Scientific notation
<, >, = Odd and even numbers	Use a #line to represent fractions Compare decimals and fractions	Use factors and multiples to rename equivalent fractions, find least common multiple and greatest common factor	Compare and identify equivalence between non-negative integers, fractions, percents and decimals	Use the inverse property of addition, multiplication and division of integers	Use the distributive property of addition, multiplication and division on rational numbers	Maintain skills
Compose and decompose numbers Use estimation strategies of multiples of 10 and 100, rounding, clustering	Decompose fractions into smaller fractions	Demonstrate equivalent relationships between decimals and fractions	Compare different representations of rational numbers by implementing strategies (like denominators, changing to same form...)	Understand ratio, percent or proportion	Apply the concepts of ratio, percent or proportion	Understand and apply the concept of inverse proportion
Solve +, -, x, ÷ with 3 digit problems Write and solve multi step problems that involve + and -	Recall multi-And division Facts through 12s Describe Identity property Use remainders with division	Add and subtract fractions with like denominators and non negative decimals	Find the sums or differences of non-negative fractions or decimals	Add and subtract integers	Add, subtract, multiply and divide powers and square roots on rational numbers	Compute with scientific notation
Represent money with decimals	Represent decimals (money) in multiple ways Add and subtract decimals	Read and write decimals to the thousandth place				

Algebraic Sense

3	4	5	6	7	8	9
Complete a pattern by supplying missing elements	Extend patterns using words, tables, numbers and pictures	Determine the operation that changes the elements of one set of #'s into another	Extend patterns and sequences using operations that alternate between terms	Extend, represent or create linear patterns in tables and graphs	Extend, represent or create linear or non-linear patterns in tables and graphs	Extend, create patterns to represent linear or exponential functions
Extend patterns of numbers using + and - skip counting with multiplication	Model growing patterns with +, -, and x	Analyze a pattern to determine a rule with two operations between terms (+, -, x, ÷)	Identify patterns involving combinations of operations including exponents	Identify a rule for linear patterns	Identify a rule for linear and non-linear patterns	Identify an equation or rule for linear and non-linear patterns
Write an equation for a given situation Compare expressions to determine equality	Compare x or ÷ expressions using < and > Explain inequalities	Express and model relationships between quantities using ≠, ≤, and ≥	Express relationships between quantities of decimals, percents and integers using =, <, >, ≠, ≤, and ≥	Express relationships between quantities using =, <, >, ≠, ≤, and ≥ involving integers	Express relationships between quantities using =, <, >, ≠, ≤, and ≥ involving whole number exponents or square roots	Maintain skills
Write and explain mathematical statements	Select operational and relational symbols to make a x or ÷ true	Translate a situation involving two alternating operations into algebraic form using equations, tables and graphs	Translate a situation involving multiple operations into algebraic form	Use order of operations	Simplify single variable expressions	Simplify variable expressions involving whole number exponents
	Substitute a numeric value for a symbol in expressions or equations Solve missing factor equations	Solve for a missing value in an equation involving division	Solve one step variable equations	Solve one and two step equations with variables	Solve multi-step equations and one step inequalities with one variable	Solve multi=step equations and systems of equations

Geometric Sense

3	4	5	6	7	8	9
Identify, name, and describe the attributes and properties of polygons	Identify, describe and compare attributes of congruent figures in multiple orientations	Identify, name, compare, and sort parallel and perpendicular lines in two dimensional figures	Find the missing measure of an angle using the properties of parallel, perpendicular, vertical and corresponding angles	Understand the concept of similarity and its relationship to congruence Produce scale drawings	Understand properties of cylinders, cones and pyramids	Understand the properties and relationship between 1-D, 2-D, and 3-D figures nets
Identify and compare congruent shapes	Identify symmetrical, parallel and perpendicular lines in two dimensional figures	Identify, sort, explain the properties of angles, polygons or circles based on attributes Differentiate regular and irregular polygons	Name and sort circles or rectangular prisms according to their attributes Describe the relationship between diameter and radius	Name, sort, classify prisms, polygons, angles and circles Describe the relationship between diameter and radius	Use the properties of similarity and use the Pythagorean Theorem to determine a right triangle	Apply the properties and relationship between 1-D, 2-D, and 3-D to sort and classify figures including prisms, cones, cylinders and prisms
Identify the interval on a given number line or the scale on a graph	Describe the location in the first quadrant on a coordinate grid Plot a set of ordered pairs	Use a number line to order fractions and decimals	Show the order of a given set of integers on a number line Describe location of positive and negative points	Describe the location of points on any quadrant of a coordinate grid	Locate a missing vertex, determine length of sides or distance between points on a coordinate grid	Use geometric properties to determine and plot points on a coordinate grid
	Simulate, identify and record a single translation and/or reflection	Identify transformations, Draw a transformation on a grid Draw congruent figures and shapes in multiple orientations	Apply and describe rotations of 90° , 180° , 270° , 360°	Apply a combination of translations and/or reflections to a 2-D figure	Apply a combination of translations, rotations and/or reflections to a 2-D figure	Apply multiple transformations, translations, reflections and/or rotations to a 2-D figure Apply single dilations

Measurement

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<p>Length, height, width, time, money and temperature State differences of standard and non standard unit, metric and US systems</p>	<p>Determine area and perimeter using different units Focus on US system of measurement</p>	<p>Measure, classify, identify angles Use formulas Focus on the metric system</p>	<p>Capacity volume Surface area of prisms Compare square and cubic units</p>	<p>Understand how changes in one linear dimension affects others with the area of rectangles, triangles and circles Measure and describe angles</p>	<p>Understand how a change in one linear dimension affects surface area and volume of prisms and cylinders Change two linear dimensions with area and perimeter Understand and use rate, slope and other derived units</p>	<p>Understand the relationship between change in one or two linear dimensions and corresponding change in perimeter, area, surface area and volume</p>
<p>Explain and show how clocks show the passage of time</p>	<p>Identify if, when or how an estimate or exact measure is necessary</p>	<p>Use estimation to justify reasonableness of a measurement</p>	<p>Estimate volume or capacity</p>	<p>Use formulas to determine measurements of circles, triangles and rectangles Use estimation strategies with the these concepts and include surface area</p>	<p>Use formulas including the Pythagorean Theorem Use estimation strategies with the these concepts including surface area, volume of right cylinders, prisms and length of sides of a right triangle</p>	<p>Use formulas with prisms, cylinders, cones or pyramids Use and apply estimation strategies with an appropriate level of precision</p>

Probability and Statistics

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Design a survey, collect and record data Organize category data into bar and picture graphs with unit scales, read line plots	Identify appropriate questions and populations to obtain desired kind of information Design survey questions Describe trends, use technology to create graphs	Ask the same question using different data collection methods Interpret and construct line and bar graphs, histograms, stem and leaf plots, circle graphs	Compare different data and collection methods Justify a choice of graph type Use technology to create scatter plots	Understand how a question, collection method or population may affect data Read and interpret data from diagrams, stem and leaf scatter plots, box and whisker	Describe how different samples of a population may affect data Read and interpret data in diagrams, tables, ordered pairs, scatter plots, make prediction	Determine possible sources of bias and measures of central tendency Use bivariate data in tables and displays Make predictions
Explain and identify mode	Determine median and range	Determine the mean Compare mean, median and mode	Apply the concepts of mean, median and mode to real world situations	Determine and use range and the measure of central tendency	Identify clusters and outliers and effects on measures of central tendency	Maintain skills
N/A	Identify the likelihood of events	Predict and test the likelihood of an event Represent the probability of a single event on a scale of 0 to 1 Determine fairness Calculate the number of different combinations of different objects	Express probabilities as fractions or decimals between 0 and 1 and percents between 0 and 100 Represent and describe all possible outcomes	Understand the concepts of complementary and mutually exclusive events	Understand the concept of compound events	Understand the concepts of dependent and independent events