The Key Concepts and Skills for each content strand are presented by month. For more information, refer to the Key Concepts and Skills table in the Unit Organizer of the *Teacher's Lesson Guide*.

Grade 4 *Everyday Mathematics*® Content by Strand

	August/September Lessons 1•1–2•4	October Lessons 2•5–3•8	November Lessons 3•9–4•9	December Lessons 4•10–5•12	January Lessons 6•1–7•2	February Lessons 7•3–8•4	March Lessons 8•5–9•8	April Lessons 9•9–11•3	May/June Lessons 11•4–12•7
Number and Numeration	Use symbols >, <, and = to compare numbers and numerical expressions. [Goal 6; Lesson 1•1] Use numbers written in number-word notation. [Goal 1; Lesson 2•1] Give equivalent mathematical expressions for whole numbers. [Goal 4; Lesson 2•2] Read and write numbers up to 1,000,000,000; identify the values of digits. [Goal 1; Lesson 2•3] Write numbers in expanded notation. [Goal 4; Lesson 2•3] Read and write large numbers. [Goal 1; Lesson 2•4] Identify places in whole numbers and the values of the digits in those places. [Goal 1; Lesson 2•4]	Identify places in whole numbers and the values of the digits in those places. [Goal 1; Lessons 2•7, 2•9] Find factors and multiples of numbers. [Goal 3; Lesson 3•2] Identify square numbers. [Goal 4; Lesson 3•2] Identifying prime and composite numbers. [Goal 3; Lesson 3•2] Rename a fraction as an equivalent fraction and as a percent. [Goal 5; Lessons 5•2, 5•4] Read and write large numbers. [Goal 1; Lesson 3•6]	Compare whole numbers. [Goal 6; Lesson 3•9] Identify the values of digits in decimals. [Goal 1; Lesson 4•1] Read and write decimals through thousandths. [Goal 1; Lesson 4•1] Order decimals through thousandths on a number line. [Goal 6; Lesson 4•1] Read and write decimals through hundredths. [Goal 1; Lessons 4•2, 4•3, 4•8] Model decimals through hundredths with base-10 blocks. [Goal 1; Lessons 4•2, 4•3, 4•5] Name the fractional part of the ONE represented by a base-10 block. [Goal 2; Lesson 4•2] Rename fractions with 10 and 100 in the denominator as decimals. [Goal 5; Lesson 4•2] Rename fractions with 100 in the denominator as decimals. [Goal 5; Lesson 4•3] Compare and order decimals through hundredths. [Goal 6; Lesson 4•3] Read and interpret decimals through tenths. [Goal 1; Lesson 4•4] Compare whole numbers and decimals. [Goal 6; Lesson 4•4] Express the values of digits in decimals. [Goal 1; Lesson 4•5] Read and write decimals through hundredths in the context of money. [Goal 1; Lesson 4•6] Read, write, and model (with base-10 blocks) decimals through thousandths. [Goal 1; Lesson 4•7] Name the fractional part of the ONE represented by each base-10 block. [Goal 2; Lesson 4•7] Rename fractions with 10, 100, and 1,000 in the denominator as decimals. [Goal 5; Lesson 4•7] Compare and order decimals through thousandths. [Goal 6; Lesson 4•7]	Write numbers in expanded notation. [Goal 4; Lessons 5•2, 5•5, 5•6] Read and write whole numbers to hundred billions. [Goal 1; Lesson 5•8] Identify digits and their values in whole numbers to hundred billions. [Goal 1; Lesson 5•8] Read and write large numbers; identify the digits and their values. [Goal 1; Lesson 5•9] Use exponential notation to represent powers of 10. [Goal 4; Lesson 5•9] Use expanded notation to represent powers of 10. [Goal 4; Lesson 5•9] Read and write whole numbers; identify digits and their values. [Goal 1; Lesson 5•10] Read and write large numbers. [Goal 1; Lesson 5•11] Develop the meaning of percent as per 100. [Goal 5; Lesson 5•11] Compare large numbers. [Goal 6; Lesson 5•11]	Identify and use multiples of 10. [Goal 3; Lessons 6•2, 6•3, 6•10] Use multiples to solve division problems. [Goal 3; Lesson 6•6] Use multiples of 30. [Goal 3; Lesson 6•6] Identify fractions as equal parts of a whole or the ONE and solve problems involving fractional parts of regions. [Goal 2; Lesson 7•1] Identify equivalent fractions and mixed numbers. [Goal 5; Lesson 7•1] Solve problems involving fractional parts of collections. [Goal 2; Lesson 7•2] Identify the whole or the ONE when given the "fraction-of." [Goal 2; Lesson 7•2] Identify equivalent fractions. [Goal 5; Lesson 7•2]	Identify the whole or the ONE. [Goal 2; Lessons 7•4, 7•5] Find fractional parts of polygonal regions. [Goal 2; Lesson 7•4] Identify equivalent fractions. [Goal 5; Lessons 7•4, 7•5] Represent fractions and mixed numbers with pattern blocks. [Goal 2; Lesson 7•5] Identify fractional parts of regions. [Goal 2; Lessons 7•6, 7•7] Name equivalent fractions. [Goal 5; Lessons 7•6, 7•7] Use a rule for generating equivalent fractions. [Goal 5; Lesson 7•7] Read and write decimals through hundredths. [Goal 1; Lesson 7•8] Represent a shaded region as a fraction and a decimal. [Goal 2; Lesson 7•8] Rename fractions with 10 and 100 in the denominator as decimals. [Goal 5; Lesson 7•8] Compare fractions. [Goal 6; Lesson 7•9] Order fractions. [Goal 6; Lesson 7•9] Explain strategies used to compare and order fractions. [Goal 6; Lesson 7•9] Given the fractional part of a region, name the ONE. [Goal 2; Lesson 7•10] Given a fractional part of a collection, name the ONE. [Goal 2; Lesson 7•10] Name fractional parts of regions. [Goal 2; Lesson 7•11] Use equivalent fractions to design spinners. [Goal 5; Lesson 7•11] Rename fractions as percents. [Goal 5; Lesson 7•12] Use a number line to represent a fraction. [Goal 2; Lesson 7•12a] Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$. [Goal 3; Lesson 7•12a] Determine between which two whole numbers a fraction lies. [Goal 6; Lesson 7•12a]	Rename fractions as decimals. [Goal 5; Lesson 8•5] Name the "whole" or the ONE. [Goal 2; Lesson 9•1] Solve "percent-of" problems. [Goal 2; Lessons 9•1, 9•2] Rename fractions with denominators of 100 as decimals. [Goal 5; Lessons 9•1, 9•2] Find equivalent names for percents. [Goal 5; Lessons 9•1, 9•2] Find the fraction and percent of a collection and a region. [Goal 2; Lesson 9•2] Explore terminating and repeating decimals. [Goal 5; Lesson 9•3] Use a calculator to rename fractions as decimals. [Goal 5; Lesson 9•3] Use a calculator to rename fractions as percents. [Goal 5; Lesson 9•4] Solve number stories involving discounts. [Goal 2; Lesson 9•4] Name the whole, or the ONE. [Goal 2; Lesson 9•4] Rename any decimal as a percent. [Goal 5; Lesson 9•4] Read and use large numbers. [Goal 1; Lesson 9•5] Explore repeating and terminating decimals. [Goal 5; Lesson 9•5] Use a calculator to rename fractions as percents; rename decimals as percents by multiplying by 100. [Goal 5; Lesson 9•5] Use a calculator to convert fractions to percents. [Goal 5; Lesson 9•6] Compare fractions with unlike denominators. [Goal 6; Lesson 9•6] Interpret "percent-of" data. [Goal 2; Lesson 9•7] Order data reported as percents. [Goal 6; Lesson 9•7] Identify place value in decimals through hundredths. [Goal 1; Lessons 9•8, 9•9]	Review place value in decimals through hundredths. [Goal 1; Lesson 9•9] Compare and order integers. [Goal 6; Lesson 10•6]	Compare integers. [Goal 6; Lesson 11•6] Find multiples. [Goal 5; Lessons 12•2, 12•3, 12•4] Compare decimals. [Goal 6; Lesson 12•5]
Operations and Computation	Solve simple +, –, ×, and / problems. [Goals 1 and 3; Lesson 1•1] Compare uses of estimates and exact counts. [Goal 6; Lesson 2•1] Find the sum of numbers written in expanded notation. [Goal 2; Lesson 2•3] Add and subtract multidigit whole numbers. [Goal 2; Lesson 2•4]	Apply extended addition facts. [Goal 1; Lesson 2•7] Use the partial-sums and column-addition algorithms to solve multidigit addition problems; choose an appropriate paper-and-pencil algorithm to solve multidigit addition problems. [Goal 2; Lesson 2•7] Make ballpark estimates for multidigit addition problems. [Goal 6; Lesson 2•7] Apply extended subtraction facts. [Goal 1; Lesson 2•9] Use the trade-first and partial-differences algorithms to solve multidigit subtraction problems; choose an appropriate paper-and-pencil algorithm to solve multidigit subtraction problems. [Goal 2; Lesson 2•9] Make ballpark estimates for multidigit subtraction problems. [Goal 6; Lesson 2•9] Solve addition and subtraction problems. [Goals 1 and 2; Lesson 3•1] Solve multiplication and division problems. [Goals 3 and 4; Lesson 3•1] Solve multiplication facts. [Goal 3; Lessons 3•2, 3•3, 3•4, 3•5] Use multiplication facts to generate related division facts. [Goal 3; Lesson 3•5] Apply multiplication and division facts and extended facts to solve problems. [Goal 3; Lesson 3•5] Calculate relative time across time zones. [Goal 2; Lesson 3•6] Judge the reasonableness of counts; describe the difference between a count and an estimate. [Goal 6; Lesson 3•6] Solve multiplication problems. [Goal 4; Lesson 3•7] Use a map scale. [Goal 7; Lesson 3•7] Solve addition and subtraction number stories. [Goal 2; Lesson 3•8] Explain strategies for solving addition and subtraction number stories. [Goal 2; Lesson 3•8]	Add, subtract, multiply, and divide to solve expressions. [Goals 1–4; Lessons 3•9, 3•10] Add, subtract, multiply, and divide to solve open sentences. [Goals 1–4; Lesson 3•11] Use a "guess-and-check" strategy to make reasonable estimates for open sentences. [Goal 6; Lesson 3•11] Use extended division facts to expand the place-value chart to decimals. [Goal 3; Lesson 4•1] Estimate sums and differences of decimals; explain the strategies used. [Goal 6; Lesson 4•4] Add and subtract decimals to the hundredths place. [Goal 2; Lesson 4•5] Judge the reasonableness of solutions to decimal addition and subtraction problems. [Goal 6; Lesson 4•5] Add and subtract decimals through hundredths in the context of money. [Goal 2; Lesson 4•6] Estimate reasonable solutions for decimal addition and subtraction problems. [Goal 6; Lesson 4•6] Use extended multiplication facts to convert between metric measurements. [Goal 3; Lesson 4•8]	Use extended multiplication facts to convert between metric measurements. [Goal 3; Lesson 4•10] Use a scale to determine actual size. [Goal 7; Lesson 4•11] Solve basic multiplication facts. [Goal 3; Lessons 5•1, 5•7] Use basic multiplication facts to compute fact extensions. [Goal 3; Lesson 5•1] Use repeated addition and arrays to model multiplication. [Goal 7; Lesson 5•1] Add multidigit numbers. [Goal 2; Lessons 5•2, 5•5] Use basic facts to compute extended facts. [Goal 3; Lessons 5•2, 5•5] Solve multidigit multiplication problems. [Goal 4; Lesson 5•2] Estimate sums. [Goal 6; Lesson 5•3] Compare appropriate situations for the use of exact answers and estimates. [Goal 6; Lesson 5•3] Solve problems involving products where factors are multiples of 10, 100, 1,000, and so on. [Goal 3; Lesson 5•4] Estimate whether a product is in the tens, hundreds, thousands, or more. [Goal 6; Lessons 5•4, 5•5, 5•6] Use the partial-products algorithm to solve multiplication problems with 1-digit multipliers. [Goal 4; Lesson 5•5] Use the partial-products algorithm to solve multiplication problems with 2-digit multipliers. [Goal 4; Lesson 5•6] Add single-digit numbers. [Goal 2; Lesson 5•7] Use the lattice method to solve multiplication problems with 1- and 2-digit multipliers. [Goal 4; Lesson 5•7] Use multiplication to solve a multistep problem. [Goals 3 and 4; Lesson 5•8] Make reasonable estimates. [Goal 6; Lesson 5•8] Describe differences between estimates and exact counts. [Goal 6; Lesson 5•10] Round numbers to a given place. [Goal 6; Lesson 5•10]	Describe the inverse relationship between multiplication and division. [Goal 3; Lesson 6•1] Solve multiplication and division number stories. [Goals 3 and 4; Lesson 6•1] Use repeated addition, skip counting, and arrays to model multiplication. [Goal 7; Lesson 6•1] Add multiples of 10. [Goal 1; Lessons 6•2, 6•3, 6•10] Apply extended multiplication facts to long-division situations. [Goal 3; Lessons 6•2, 6•3, 6•10] Solve equal-grouping division number stories. [Goal 4; Lessons 6•2, 6•3] Subtract multidigit numbers. [Goal 2; Lessons 6•3, 6•10] Solve division number stories and interpret remainders. [Goal 4; Lesson 6•4] Use arrays to model division. [Goal 7; Lesson 6•4] Add and subtract to find unknown angle measures. [Goal 2; Lesson 6•7] Use a map scale. [Goal 7; Lesson 6•8] Multiply multidigit numbers to determine miles from the equator. [Goal 4; Lesson 6•9] Solve equal-grouping division number stories and problems. [Goal 4; Lesson 6•10] Use an equal-sharing division strategy. [Goal 4; Lesson 7•2]	Add fractions with like denominators. [Goal 5; Lesson 7•3] Add and subtract fraction addition with pattern blocks. [Goal 5; Lesson 7•4] Model fraction and mixed-number addition and subtraction with pattern blocks. [Goal 5; Lesson 7•5] Use equal sharing to solve division problems. [Goal 4; Lesson 7•6] Solve number stories involving multiplication of a fraction by a whole number. [Goal 7; Lesson 7•12a] Make a rough floor plan of the classroom. [Goal 7; Lesson 8•2] Make a scale drawing of the classroom. [Goal 7; Lesson 8•2] Use a scale drawing to estimate the area of the classroom. [Goal 7; Lesson 8•3] Use the terms ***estimate*** and ***guess***. [Goal 6; Lesson 8•4] Use an estimate to judge the reasonableness of a solution. [Goal 6; Lesson 8•4]	Use division to compare two quantities with like units. [Goal 4; Lesson 8•6] Use "times as many" language to compare area measurements. [Goal 4; Lesson 8•8] Compare two quantities with like units using division. [Goal 4; Lesson 9•5] Round to the nearest whole-number percent. [Goal 6; Lesson 9•5] Multiply decimals by whole numbers. [Goal 4; Lesson 9•6] Round decimals and estimate products. [Goal 6; Lesson 9•6] Use repeated addition to model multiplication. [Goal 7; Lesson 9•8]	Divide decimals by whole numbers. [Goal 4; Lesson 9•8] Round decimals and estimate quotients. [Goal 6; Lesson 9•8] Add signed numbers. [Goal 2; Lesson 10•6]	Use multiplication to solve volume problems. [Goal 3; Lesson 11•4] Add and subtract signed numbers. [Goal 2; Lesson 11•6] Use division to solve conversion problems. [Goal 4; Lesson 11•7] Describe examples of rates. [Goal 7; Lesson 12•1] Solve multiplication and division facts. [Goal 3; Lesson 12•2] Multiply and divide decimals by whole numbers. [Goal 4; Lessons 12•2, 12•6] Use repeated addition and scaling to model multiplication problems. [Goal 7; Lessons 12•2, 12•6] Divide whole numbers. [Goal 4; Lesson 12•3] Round decimals and whole numbers. [Goal 6; Lesson 12•3] Convert between rates. [Goal 7; Lesson 12•3] Divide decimals by whole numbers. [Goal 4; Lesson 12•5] Round decimals. [Goal 6; Lesson 12•5] Use repeated addition and scaling to solve rate problems. [Goal 7; Lesson 12•5] Solve problems involving division of multidigit whole numbers; interpret the remainder. [Goal 4; Lesson 12•6]
Data and Chance	Create a tally chart. [Goal 1; Lesson 2•5] Find the maximum, minimum, range, mode, median, and mean for a set of data. [Goal 2; Lessons 2•5, 2•6] Use data landmarks to make a prediction. [Goal 2; Lesson 2•5] Create a line plot. [Goal 1; Lesson 2•6] Use data landmarks and representations to answer questions and draw conclusions. [Goal 2; Lesson 2•6] Create a bar graph and line plot. [Goal 1; Lesson 2•8] Determine the maximum, minimum, range, mode, and median of a data set. [Goal 2; Lesson 2•8] Ask and answer questions and draw conclusions based on data landmarks, a bar graph, and line plot. [Goal 2; Lesson 2•8] Use data to create a line graph. [Goal 1; Lesson 3•4] Find the median and mean of a data set. [Goal 2; Lesson 3•4] Use a table of climate data and a time zones map. [Goal 2; Lesson 3•6] Use a table of air distance data. [Goal 2; Lesson 3•8]	Use a table of data to answer questions. [Goal 2; Lesson 4•4] Complete a table of deposits and withdrawals. [Goal 1; Lesson 4•5]	Use a travel map to find driving distance and driving time. [Goal 2; Lesson 5•3] Explore meanings of ***average***. [Goal 2; Lesson 5•4] Use data presented in a table. [Goal 2; Lesson 5•10] Use a table of information. [Goal 2; Lesson 5•11]	Use basic probability terms to describe and compare the likelihood of an event; explain the choice of term. [Goal 3; Lesson 7•3] Predict the outcomes of an experiment. [Goal 4; Lesson 7•3] Express the probability of an event as a fraction. [Goal 4; Lesson 7•3] Conduct experiments and calculate expected probability. [Goal 4; Lesson 7•11] Use basic probability terms to describe the likelihood of events. [Goal 3; Lesson 7•12] Conduct a cube-drop experiment. [Goal 4; Lesson 7•12] Use fractions and percents to predict the outcomes of an experiment. [Goal 4; Lesson 7•12] Compare predicted outcomes and actual results. [Goal 4; Lesson 7•12] Create a tally chart. [Goal 1; Lesson 8•1] Find the minimum, maximum, mode, and median of a data set; use landmarks to draw conclusions. [Goal 2; Lesson 8•1] Find the median of a data set. [Goal 2; Lesson 8•2]	Use a data table. [Goal 2; Lesson 9•3] Create a table and tally chart. [Goal 1; Lesson 9•6] Analyze survey results and make predictions based on collected data. [Goal 2; Lesson 9•6] Create a table, chart, and map to display data. [Goal 1; Lesson 9•7] Interpret data displayed on a map. [Goal 2; Lesson 9•7]		Collect and organize data to create a table. [Goal 1; Lesson 12•1] Find the median and mean of a data set. [Goal 2; Lesson 12•1] Use data to draw conclusions and make predictions. [Goal 2; Lesson 12•1] Analyze and interpret data. [Goal 2; Lessons 12•3, 12•4]
Measurement and Reference Frames	Describe relationships among U.S. customary units of length. [Goal 3; Lesson 1•1] Use a compass to measure distance. [Goal 1; Lesson 1•6] Measure line segments to the nearest centimeter. [Goal 1; Lesson 1•7] Use a compass as a tool to measure distance. [Goal 1; Lesson 1•8] Locate points on a letter-number coordinate map. [Goal 4; Lesson 2•1]	Use and describe a strategy for estimating volume; describe the difference between an estimate and a guess. [Goal 2; Lesson 2•5] Measure to the nearest half-centimeter. [Goal 1; Lesson 2•6] Measure to the nearest $\frac{1}{2}$ inch. [Goal 1; Lesson 3•7]	Measure objects or distances to the nearest centimeter. [Goal 1; Lesson 4•8] Describe relationships among metric units of length. [Goal 3; Lesson 4•8] Identify personal references for metric units of length. [Goal 1; Lesson 4•8] Estimate, without tools, the length of objects or distances in centimeters, decimeters, and meters. [Goal 1; Lesson 4•9] Measure the length of objects or distances in centimeters, decimeters, and meters. [Goal 1; Lesson 4•9]	Measure lengths to the nearest millimeter. [Goal 1; Lesson 4•10] Describe the relationship among metric units of length. [Goal 3; Lesson 4•10]	Form angles of a given measure. [Goal 1; Lesson 6•5] Draw and measure angles with a full-circle protractor. [Goal 1; Lesson 6•6] Use reference points to estimate the measures of angles; use a half-circle protractor to measure and draw angles. [Goal 1; Lesson 6•7] Estimate distances on a map. [Goal 1; Lesson 6•8] Use ordered number pairs to locate points on a map. [Goal 4; Lesson 6•8] Use letter-number pairs to locate points and regions on a map. [Goal 4; Lesson 6•8] Locate positions on the global coordinate grid system. [Goal 4; Lesson 6•9]	Measure distances in feet and inches. [Goal 1; Lesson 8•1] Calculate the perimeter of a triangle. [Goal 2; Lesson 8•1] Add mixed units; convert between feet and inches. [Goal 3; Lesson 8•1] Make a rough floor plan of the classroom. [Goal 1; Lesson 8•2] Make a scale drawing of the classroom. [Goal 1; Lesson 8•2] Measure to the nearest foot. [Goal 1; Lesson 8•2] Use a scale drawing to estimate the area of the classroom. [Goal 2; Lesson 8•3] Find the areas of polygons by counting squares and partial squares. [Goal 2; Lesson 8•3] Count squares and partial squares or use a formula to estimate area. [Goal 2; Lesson 8•6] Convert between square inches and square feet. [Goal 3; Lesson 8•4]	Count unit squares or use a formula to find the area of a rectangle. [Goal 2; Lesson 8•5] Find the area of a rectangle. [Goal 2; Lesson 8•6] Develop a formula for calculating the area of a parallelogram. [Goal 2; Lesson 8•6] Calculate perimeter. [Goal 2; Lesson 8•6] Find the areas of rectangles and parallelograms. [Goal 2; Lesson 8•7] Develop a formula for calculating the area of a triangle. [Goal 2; Lesson 8•7] Estimate and compare area measurements. [Goal 2; Lesson 8•8] Use a formula to calculate the area of a rectangle. [Goal 2; Lesson 9•8]	Measure length. [Goal 1; Lesson 10•3] Estimate weight with and without tools. [Goal 1; Lesson 11•1] Describe relationships among metric units of mass and weight. [Goal 3; Lesson 11•1] Convert between metric and customary units of mass and weight. [Goal 3; Lesson 11•1]	Find the area of the base of a rectangular prism. [Goal 2; Lesson 11•6] Count unit cubes to find the volume of a rectangular prism. [Goal 2; Lesson 11•6] Calculate the surface area of a rectangular prism. [Goal 2; Lesson 11•6] Find the area of the base and the surface area of a rectangular prism. [Goal 2; Lesson 11•5] Count unit cubes and use a formula to find the volume of a rectangular prism. [Goal 2; Lesson 11•5] Describe relationships among customary units of capacity. [Goal 3; Lesson 11•7]
Geometry	Identify and draw line segments, lines, and rays. [Goal 1; Lesson 1•2] Describe characteristics of line segments, lines, and rays. [Goal 1; Lesson 1•2] Use letter and symbol notation to name line segments, lines, and rays. [Goal 1; Lesson 1•2] Use letter notation to name angles. [Goal 1; Lesson 1•3] Construct angles, triangles, and quadrangles. [Goals 1 and 2; Lesson 1•3] Describe properties of and compare quadrangles. [Goal 2; Lesson 1•3] Identify types of quadrangles. [Goal 2; Lesson 1•3] Develop definitions for ***parallel*** and ***intersecting line segments, lines,*** and ***rays.*** [Goal 1; Lesson 1•4] Develop definitions for ***perpendicular line segments.*** [Goal 2; Lesson 1•4] Describe characteristics of parallelograms. [Goal 2; Lesson 1•4] Classify quadrangles based on side and angle properties. [Goal 2; Lesson 1•4] Construct convex and nonconvex (concave) polygons. [Goal 2; Lesson 1•5] Develop definitions for ***convex*** and ***nonconvex (concave)*** polygons. [Goal 2; Lesson 1•5] Describe properties of polygons and regular polygons. [Goal 2; Lesson 1•5] Identify types of polygons according to the number of sides. [Goal 2; Lesson 1•5] Use a compass to draw circles. [Goal 2; Lessons 1•6, 1•7] Construct an inscribed square. [Goal 2; Lesson 1•6] Verify that the sides of a square are the same length. [Goal 2; Lesson 1•6] Demonstrate and explain the meaning of ***intersect***. [Goal 1; Lesson 1•7] Demonstrate and explain the meanings of ***concentric, radius,*** and ***congruent***. [Goal 2; Lesson 1•7] Copy a line segment with a compass and straightedge. [Goal 1; Lesson 1•8] Use a compass to draw circles; construct a regular hexagon inscribed in a circle. [Goal 2; Lesson 1•8] Verify that the sides of regular polygons are the same length. [Goal 2; Lesson 1•8]			Describe right angles. [Goal 1; Lesson 6•5] Rotate objects a given number of degrees. [Goal 3; Lessons 6•5, 6•6] Investigate the relationship between rotations and degrees. [Goal 3; Lesson 6•5] Use ray and line segment vocabulary. [Goal 1; Lesson 6•6] Describe a circle as having 360°. [Goal 2; Lesson 6•6] Classify angles according to their measure. [Goal 1; Lesson 6•7] Describe parallel and intersecting lines in terms of latitude and longitude. [Goal 1; Lesson 6•9] Identify Earth as a sphere divided into hemispheres. [Goal 2; Lesson 6•9] Identify a triangle, hexagon, trapezoid, and rhombus. [Goal 2; Lesson 7•1]	Identify a triangle, hexagon, trapezoid, and rhombus. [Goal 2; Lessons 7•4, 7•5] Identify a hexagon, trapezoid, and rhombus. [Goal 2; Lesson 7•10] Identify polygons. [Goal 2; Lesson 9•3]	Identify perpendicular line segments and right angles. [Goal 1; Lessons 8•6, 8•7] Describe properties of parallelograms. [Goal 2; Lesson 8•6] Describe properties of and types of triangles. [Goal 2; Lesson 8•7]	Describe properties of congruent figures. [Goal 2; Lesson 10•1] Identify, describe, and sketch reflections of two-dimensional figures. [Goal 3; Lesson 10•1] Solve problems involving spatial visualization. [Goal 3; Lessons 10•1, 10•2, 10•3, 10•4] Describe properties of congruent figures, right angles, and perpendicular lines. [Goal 2; Lesson 10•2] Explore lines of reflection and reflected images. [Goal 3; Lesson 10•2] Draw and describe congruent figures. [Goal 2; Lesson 10•3] Explore basic properties of reflections. [Goal 3; Lesson 10•3] Identify polygons and describe properties of regular polygons. [Goal 2; Lesson 10•4] Identify and draw lines of symmetry. [Goal 3; Lesson 10•4] Explore the connection between reflections and line symmetry. [Goal 3; Lesson 10•4] Identify and draw congruent figures. [Goal 2; Lesson 10•5] Identify, describe, and sketch reflections, rotations, and translations. [Goal 3; Lesson 10•5] Identify a line of reflection. [Goal 3; Lesson 10•6] Identify parallel and intersecting line segments and parallel planes. [Goal 1; Lesson 11•2] Describe, compare, and classify plane and solid figures. [Goal 2; Lessons 11•2, 11•3] Identify congruent faces. [Goal 2; Lessons 11•2, 11•3] Construct a rectangular prism. [Goal 2; Lesson 11•2] Identify parallel and intersecting line segments and parallel faces. [Goal 1; Lesson 11•3] Construct polyhedrons; sketch two-dimensional representations of polyhedrons. [Goal 2; Lesson 11•3]	Solve problems involving spatial visualization. [Goal 3; Lesson 11•5]
Patterns, Functions, and Algebra	Extend numerical patterns. [Goal 1; Lesson 2•1] Use conventional notation to write expressions using the four basic arithmetic operations. [Goal 2; Lesson 2•2] Insert grouping symbols to make number sentences true. [Goal 3; Lesson 2•2] Use and describe patterns to find sums. [Goal 1; Lesson 2•3] Solve open sentences. [Goal 2; Lesson 2•4]	Use rules to complete "What's *My Rule?*" tables. [Goal 1; Lesson 3•1] Use words and symbols to describe and write rules for functions. [Goal 1; Lesson 3•1] Identify and use patterns in the Multiplication/Division Facts Table. [Goal 1; Lessons 3•2, 3•3] Write multiplication and division number sentences. [Goal 2; Lesson 3•5] Write number models to represent addition and subtraction number stories. [Goal 2; Lesson 3•8]	Use conventional notation to write number sentences. [Goal 2; Lesson 3•9] Determine whether a number sentence is true or false. [Goal 2; Lesson 3•9] Determine whether number sentences are true or false. [Goal 2; Lessons 3•10, 3•11] Evaluate expressions containing parentheses. [Goal 3; Lesson 3•10] Insert parentheses to make true number sentences. [Goal 3; Lesson 3•10] Identify the solution of an open sentence. [Goal 2; Lesson 3•11] Describe numeric patterns in number lines. [Goal 1; Lesson 4•1]	Describe rules to solve problems involving products of ones and tens and products of tens and tens. [Goal 1; Lesson 5•1] Evaluate numeric expressions containing parentheses. [Goal 3; Lesson 5•2] Use the Distributive Property of Multiplication over Addition. [Goal 4; Lesson 5•2] Apply the Distributive Property of Multiplication over Addition. [Goal 4; Lessons 5•5, 5•6] Identify and describe patterns in a place-value table. [Goal 1; Lesson 5•8]	Write number models to represent multiplication and division number stories. [Goal 2; Lessons 6•1, 6•2] Write number models containing grouping symbols. [Goal 3; Lessons 6•1, 6•4] Write number models to represent division number stories. [Goal 2; Lesson 6•4] Find fractions and mixed numbers on number lines. [Goal 1; Lesson 7•1]	Use patterns in a table to find equivalent fractions. [Goal 1; Lesson 7•6] Develop a rule for generating equivalent fractions. [Goal 1; Lesson 7•7] Use patterns to compare and order fractions. [Goal 1; Lesson 7•9] Write equations to model number stories. [Goal 2; Lesson 7•12a]	Use patterns in a table to develop a formula for the area of a rectangle. [Goal 1; Lesson 8•5] Apply the Distributive Property of Multiplication over Addition. [Goal 4; Lesson 8•5] Evaluate numeric expressions containing parentheses. [Goal 3; Lesson 9•7] Describe patterns in terminating and repeating decimals. [Goal 1; Lesson 9•3] Use conventional notation to write number sentences. [Goal 2; Lesson 9•8]	Use conventional notation to write number sentences. [Goal 2; Lesson 9•9] Describe rules for patterns and use them to solve problems. [Goal 1; Lesson 10•4] Extend, describe, and create geometric patterns. [Goal 1; Lesson 10•5] Extend numeric patterns. [Goal 1; Lesson 11•1]	Write number models with parentheses. [Goal 3; Lessons 11•4, 11•5] Describe a rule for a pattern and use the rule to solve problems. [Goal 1; Lesson 11•5] Describe rules for patterns and use them to solve problems. [Goal 1; Lesson 11•6] Write a number sentence with parentheses. [Goal 3; Lesson 12•1] Use patterns and rules to solve rate problems. [Goal 1; Lessons 12•2, 12•4]

Assessment 1 | Assessment 2 | Assessment 3 | Assessment 4 & 5 | Assessment 6 | Assessment 7 | Assessment 8 | Assessment 9 & 10 | Assessment 11 & 12

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ISBN: 978-0-07-657710-1
MHID: 0-07-657710-4
1 2 3 4 5 6 7 8 9 QST 17 16 15 14 13 12 11

McGraw-Hill Education

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ISBN 9780076577101-1
MHID 007657710-4

The University of Chicago School Mathematics Project

Everyday Mathematics® goals are organized here by content strand. Program Goals are shown in bold face. Numbered goals are specific to this grade level.

Grade 4 *Everyday Mathematics*® Grade-Level Goals

Number and Numeration

Understand the meanings, uses, and representations of numbers.

Goal 1: Read and write whole numbers up to 1,000,000,000 and decimals through thousandths; identify places in such numbers and the values of the digits in those places; translate between whole numbers and decimals represented in words and in base-10 notation.

Goal 2: Read, write, and model fractions; solve problems involving fractional parts of a region or a collection; describe and explain strategies used; given a fractional part of a region or a collection, identify the unit whole.

Goal 3: Find multiples of whole numbers less than 10; identify prime and composite numbers; find whole-number factors of numbers.

Understand equivalent names for numbers.

Goal 4: Use numerical expressions involving one or more of the basic four arithmetic operations and grouping symbols to give equivalent names for whole numbers.

Goal 5: Use numerical expressions to find and represent equivalent names for fractions and decimals; use and explain a multiplication rule to find equivalent fractions; rename fourths, fifths, tenths, and hundredths as decimals and percents.

Understand common numerical relations.

Goal 6: Compare and order whole numbers up to 1,000,000,000 and decimals through thousandths; compare and order integers between −100 and 0; use area models, benchmark fractions, and analyses of numerators and denominators to compare and order fractions.

Operations and Computation

Compute accurately.

Goal 1: Demonstrate automaticity with addition and subtraction fact extensions.

Goal 2: Use manipulatives, mental arithmetic, paper-and-pencil algorithms and models, and calculators to solve problems involving the addition and subtraction of whole numbers and decimals through hundredths; describe the strategies used and explain how they work.

Goal 3: Demonstrate automaticity with multiplication facts through 10 ∗ 10 and proficiency with related division facts; use basic facts to compute fact extensions such as 30 ∗ 60.

Goal 4: Use manipulatives mental arithmetic, paper-and-pencil algorithms and models, and calculators to solve problems involving the multiplication of multidigit whole numbers by 2-digit whole numbers and the division of multidigit whole numbers by 1-digit whole numbers; describe the strategies used and explain how they work.

Goal 5: Use manipulatives, mental arithmetic, and calculators to solve problems involving the addition and subtraction of fractions and mixed numbers; describe the strategies used.

Make reasonable estimates.

Goal 6: Make reasonable estimates for whole number and decimal addition and subtraction problems and whole number multiplication and division problems; explain how the estimates were obtained.

Understand meanings of operations.

Goal 7: Use repeated addition, skip counting, arrays, area, and scaling to model multiplication and division.

Data and Chance

Select and create appropriate graphical representations of collected or given data.

Goal 1: Collect and organize data or use given data to create charts, tables, graphs, and line plots.

Analyze and interpret data.

Goal 2: Use the maximum, minimum, range, median, mode, and graphs to ask and answer questions, draw conclusions, and make predictions.

Understand and apply basic concepts of probability.

Goal 3: Describe events using *certain*, *very likely*, *likely*, *unlikely*, *very unlikely*, *impossible* and other basic probability terms; use *more likely*, *equally likely*, *same chance*, *50-50*, *less likely*, and other basic probability terms to compare events; explain the choice of language.

Goal 4: Predict the outcomes of experiments and test the predictions using manipulatives; summarize the results and use them to predict future events; express the probability of an event as a fraction.

Measurement and Reference Frames

Understand the systems and processes of measurement; use appropriate techniques, tools, units, and formulas in making measurements.

Goal 1: Estimate length with and without tools; measure length to the nearest $\frac{1}{4}$ inch and $\frac{1}{2}$ centimeter; use tools to measure and draw angles; estimate the size of angles without tools.

Goal 2: Describe and use strategies to measure the perimeter and area of polygons, to estimate the area of irregular shapes, and to find the volume of rectangular prisms.

Goal 3: Describe relationships among U.S. customary units of measure and among metric units of measure.

Use and understand reference frames.

Goal 4: Use ordered pairs of numbers to name, locate, and plot points in the first quadrant of a coordinate grid.

Geometry

Investigate characteristics and properties of two- and three-dimensional geometric shapes.

Goal 1: Identify, draw, and describe points, intersecting and parallel line segments and lines, rays, and right, acute, and obtuse angles.

Goal 2: Describe, compare, and classify plane and solid figures, including polygons, circles, spheres, cylinders, rectangular prisms, cones, cubes, and pyramids, using appropriate geometric terms including *vertex, base, face, edge,* and *congruent*.

Apply transformations and symmetry in geometric situations.

Goal 3: Identify, describe, and sketch examples of reflections; identify and describe examples of translations and rotations.

Patterns, Functions, and Algebra

Understand patterns and functions.

Goal 1: Extend, describe, and create numeric patterns; describe rules for patterns and use them to solve problems; use words and symbols to describe and write rules for functions that involve the four basic arithmetic operations and use those rules to solve problems.

Use algebraic notation to represent and analyze situations and structures.

Goal 2: Use conventional notation to write expressions and number sentences using the four basic arithmetic operations; determine whether number sentences are true or false; solve open sentences and explain the solutions; write expressions and number sentences to model number stories.

Goal 3: Evaluate numeric expressions containing grouping symbols; insert grouping symbols to make number sentences true.

Goal 4: Describe and apply the Distributive Property of Multiplication over Addition.

Mc Graw Hill Education

ISBN: 978-0-07-657710-1
MHID: 0-07-657710-4
1 2 3 4 5 6 7 8 9 QST 17 16 15 14 13 12 11

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The McGraw-Hill Companies
ISBN 978007657710-1
MHID 007657710-4
9 0000
9 780076 577101