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accurate Precise.

algorithm A step-by-step set of instructions for solving a certain kind of problem.

angle A figure that is formed by two rays with a common endpoint. Angles can be represented by rotating one ray while the other is kept stationary.

-angle Suffix meaning vertex.

apex The point at which the faces (none of which is a base) of a pyramid meet.

area The number of non-overlapping units, usually squares, that can be fit into a bounded surface.

array A rectangular arrangement of objects in rows and columns.

arrow rule The operation that determines how to find the number that goes in the next frame when moving from one frame to another in a Frames and Arrows diagram.

attribute A common feature (size, shape, color, parts, and so on) of a set of figures.

average A middle, or typical, value of a set of numbers. It is determined by finding the sum of the numbers and then dividing by the number of them; also know as the mean.

ballpark estimate A check on the reasonableness of an answer.

bar graph A drawing which shows the relationship between certain data by use of bars to represent the numbers.

base The flat face whose shape is the basis for classifying polyhedrons.

capacity (of a scale) The greatest weight a particular scale can hold.

cartographer A map maker.

census An official count of population, and recording of data such as age, sex, income, education, and so on.

center of a circle The point from which all points on the circle are exactly the same distance.

centimeter In the metric system, a unit of length equivalent to 10 millimeters, $\frac{1}{10}$ of a decimeter, or $\frac{1}{100}$ of a meter.

change diagram Used to represent an addition or a subtraction problem in which a given quantity is increased or decreased. The diagram includes the starting quantity, ending quantity, and amount of change.

circumference The distance around a circle.

clockwise A rotation in the same direction as that of the hands of a clock; a turn to the right.

clutch (of eggs) A nest of eggs.

compare diagram Used to represent problems in which two quantities are given and then compared to find how much more or how much less one quantity is than the other.

cone A 3-dimensional shape having a circular base, a curved surface, and one vertex.

coordinate grid A device for locating numbers not on the number line. It is formed by drawing two number lines at right angles to each other and intersecting at their zero points.

coordinates Pairs of numbers written in a specific order within parentheses and used to locate points on the coordinate grid.

counterclockwise A rotation in the opposite direction as that of the rotation of the hands of a clock; a turn to the left.

cube A polyhedron with six square faces.

cubic units The units in which volume measurements are expressed.

cylinder A 3-dimensional shape having a curved surface and parallel circular bases that are the same size. A can is a common object shaped like a cylinder.

data A collection of information that is gathered by observation or measurement.

deca- Prefix meaning ten.

decimeter In the metric system, a unit of length equivalent to 10 centimeters or $\frac{1}{10}$ of a meter.

degree A unit for measuring the sizes of angles based on a circle divided into 360 equal parts.

degrees Celsius Units for measuring temperature. On the Celsius scale zero degrees is the freezing point of water.

degrees Fahrenheit Units for measuring temperature. On the Fahrenheit scale 32 degrees is the freezing point of water.

denominator The number of equal parts into which the unit (the ONE) is divided. It is the number written below the line in a fraction.

diameter A line segment that passes through the center of a circle and has its endpoints on the circle.

digit The symbols from 0 through 9 that are used, sometimes with other symbols to record any number in our numbering system.

embedded figure A figure entirely enclosed within another figure.

endpoint The point at each end of a line segment. The names of the points are used for naming a line segment. "Segment *LT*" or segment *TL*" is the line segment drawn between points *L* and *T*.

equal groups Sets with the same number of elements such as tables with 4 legs, rows with 6 chairs, boxes of 100 clips, and so on.

equilateral triangle A triangle with all three sides the same length.

equivalent fractions Fractions with different numerators and denominators which name the same amount.

estimate A calculation of a close, rather than exact, answer; a number close to another number.

even number An even number is a whole number that can be evenly divided by two.

event A happening or occurrence. The tossing of a coin is an event.

exploration An independent or small-group activity. The activities include concept development with manipulatives, links to more abstract levels, data collection, classification and ordering, problem solving, games, and skill reviews.

face A flat surface that is the side of a 3-dimensional shape.

fact extensions Calculations with larger numbers by using knowledge of basic facts. Knowing 5 + 8 = 13 makes it easy to solve problems such as 50 + 80 = ?, 35 + 8 = ?, and 65 + ? = 73. Extensions can also be applied to subtraction, multiplication, and division facts.

fact family A collection of related addition and subtraction facts, or multiplication and division facts, made from the same numbers. For the numbers 2, 5, and 7, the family consists of 2 + 5 = 7, 5 + 2 = 7, 7 - 5 = 2, and 7 - 2 = 5. For the numbers 3, 5, and 15, the family consists of 3 x 5 = 15, 5 x 3 = 15, 15 ÷ 3 = 5, and 15 ÷ 5 = 3.

factor The numbers being multiplied in a multiplication number model. In the number model 4 x 3 = 12, 4 and 3 are factors.

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factor of a number A whole number that can be multiplied by another whole number to get the given number; numbers the given number can be divided by without having remainders.

foot (ft) In the U.S. customary system, a unit of length equivalent to 12 inches or $\frac{1}{3}$ of a yard.

Frames and Arrows Diagrams to represent number sequences--sets of numbers that are ordered according to a rule. The diagrams consist of *frames* in which numbers are written and *arrows* that give rules for moving from one frame to another. Frames and Arrows diagrams are also called chains.

function machine A diagram of an imaginary machine programmed to process numbers according to a certain rule. A number (input) is put into the machine and is transformed into a second number (output) through the application of the rule.

girth The measure around.

-gon Suffix meaning angle.

hepta- Prefix meaning seven.

hexa- Prefix meaning six.

hundreds The place-value position that is equal to one hundred times the unit value.

hundredths The place-value position that is equal to $\frac{1}{100}$ of the unit value; the second digit to the right of the decimal point.

inch (in) In the U.S. customary system, a unit of length equivalent to $\frac{1}{12}$ of a foot.

intersecting Meeting at a point.

kite A quadrilateral with two pairs of adjacent equal sides.

labyrinth A maze.

lattice multiplication An algorithm for multiplying with multidigit numbers.

line The extension of a line segment forever in both directions.

line graph A drawing which shows the relationship among data by using a set of points connected by line segments; often used to show trends.

line segment Two points and the straight path between them. It can be any length, has definite endpoints, and marks the shortest distance between two points.

map scale A ratio that compares the distance on a map to the actual distance between two locations. The ratio is often represented by a labeled line segment.

Math Boxes A format to provide review problems and to practice skills.

mathematics A study of relationships among numbers, shapes, and patterns. We use mathematics to count and measure things, to discover similarities and differences between them, to solve problems and to learn about and organize our world.

maximum The greatest amount.

mean The average of a set of data. It is calculated by finding the sum of the numbers and dividing by the number of them.

median The number in the middle when a set of data is organized in sequential order; also the middle value.

meter In the metric system, a unit of length equivalent to 10 decimeters; 100 centimeters, or 1000 millimeters.

metric system The measurement system used in most countries in the world; a system of measurement based on the decimal numeration system. Some measures include: *linear* (length, distance)--millimeter, centimeter, decimeter, meter, kilometer; *mass*

(weight)--gram, kilogram; and *capacity* (an amount of liquid or other pourable substance)--milliliter, liter.

millimeter In the metric system, a unit of length equivalent to $\frac{1}{10}$ of a centimeter or $\frac{1}{1000}$ of a meter.

mode The number that occurs most often within a set of data.

multiples Repeated groups of the same amount. Multiples of numbers are the product of that number and whole numbers.

multiplication The operation used to find the total of things in several equal groups, or to find the number that is times as many as another number.

name-collection box A box-like diagram tagged with a given number and used for collecting equivalent names for that number.

net weight The weight of the contents of a container without including the weight of the container.

nona- Prefix meaning nine.

number family A collection of any triplet of numbers consisting of two addends and their sum or two factors and their product.

number-grid puzzle A piece of a number grid in which some, but not all, of the numbers are missing. It is used for practice of place-value concepts.

number model The numerical representation (number sentence) that shows how the parts of a number story are related. Some examples are $5 + 8 = 13$; $27 - 11 = 16$; $3 \times 30 = 90$; $56 \div 8 = 7$.

numerator Names the number of equal parts the unit (the ONE) being considered. It is the number written above the line in a fraction.

odd number An odd number is a whole number that cannot be evenly divided by two.

odometer An instrument for measuring distance traveled by a vehicle.

ones The place-value position that is equal to the unit value.

ordered pair A pair of numbers used to locate points on a coordinate grid.

outcome The result of an event. Heads and tails are two possible outcomes of the event of tossing a coin.

parallel Equidistant at all points, no matter how far extended; never meeting.

parallelogram A quadrilateral that has two pairs of parallel sides and equal opposite sides.

parts-and-total diagram Used to represent problems in which two or more quantities are combined to form a total quantity. It is often used when the parts are known and the total is the unknown. It can also be used when the total and one or more parts are known, but one part is the unknown.

penta- Prefix meaning five.

percent, % Per hundred; times $\frac{1}{100}$; times 0.01; 1 one-hundredth. 15% means $\frac{15}{100}$ or 0.15 of a number.

perimeter The distance around a surface with a boundary. *Peri-* comes from the Greek word for around and *meter* comes from the Greek word *metron* that means measure; perimeter means around measure.

pie graph A drawing which represents data by using a circle divided into parts to show the relationship of the parts to the whole. Also called a circle graph.

plane A flat surface that extends forever.

plane figures 2-dimensional figures.

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point An exact location in space and has no size. Points are usually labeled with capital letters.

poly- Prefix meaning many.

polygon A 2-dimensional figure, all of whose sides are line segments connected end to end, so that each segment intersects exactly two others at its endpoints. The word comes from the Greek language: *poly* means many and *gon* means angle.

polyhedron A 3-dimensional shape, all of whose surfaces (faces) are flat, as opposed to curved. Each face is a polygon.

population The total number of people living within a certain geographical area.

power of a number The product of factors all of which are the same.

precipitation Rain or snow.

precision (of a scale) Accuracy. The smaller the unit, or fraction of a unit used, the more precise the scale.

prime number A whole number, greater than 1, that has exactly two factors, 1 and itself.

prism A polyhedron (3-dimensional shape) with two parallel flat faces (called bases) with the same size and shape. Prisms are classified according to the shape of the two parallel bases; the sides (also called faces) are parallelograms.

product The result of doing multiplication. In number model 4 x 3 = 12, 12 is the product.

pyramid A polyhedron (3-dimensional shape) in which one face (called the base) is a polygon and the other faces are triangles with a common vertex. A pyramid is classified according to the shape of its base.

random sampling Taking a sampling from the population in a manner that allows all members the same chance of being included.

range The difference between the greatest and least numbers in a set of data.

rate diagram Used to represent problems in which the total number of objects in several equal groups are being considered. The diagram has three parts: number of groups, number in each group, and the total number.

ray An extension of a line segment. It starts at one endpoint of a segment and goes on forever, beyond the other end of the segment.

rectangle A parallelogram whose corners are all right angles.

rectangular prism A prism whose faces are all rectangles.

remainder The amount left over when things are divided into equal groups or shared equally. In the division number model "16 ÷ 3 = 5 R1," 1 is the remainder.

rhombus A parallelogram with four equal sides and with corners that need not be square.

right angle A square corner; a 90° angle.

rotation Turn around a center point or axis.

sample A small part intended to represent the nature of the whole.

scale factor A number that names "how many times as many?" or "what fraction of?" one quantity is of another quantity.

side Any one of the line segments which makes up a polygon.

similar figures Figures that have the same shape but are not necessarily the same size.

sphere A 3-dimensional shape whose curved surface is, at all points, a given distance from its center point. A ball is shaped like a sphere.

square A rectangle whose sides are all the same length.

square number A number which is the product of a number multiplied by itself; numbers that can be represented by a square array.

standard square unit A unit used to measure area--a square that measures 1 inch, or 1 centimeter, or 1 yard, or other standard measure of length, on each side.

straightedge A tool, such as a ruler, used to draw a straight line.

telephone prefix The first three digits following the area code in a telephone number.

ten thousands The place-value position that is equal to ten thousand times the unit value.

tens The place-value position that is equal to ten times the unit value.

tenths The place-value position that is equal to $\frac{1}{10}$ of the unit value; the first digit to the right of the decimal point.

thousands The place-value position that is equal to one thousand times the unit value.

thousandths The place-value position that is equal to $\frac{1}{1000}$ of the unit value; the third digit to the right of the decimal point.

three-dimensional (3-D) Objects that are not completely within a single flat surface; objects with thickness as well as length and width.

tiling Covering so there are no spaces or overlaps except for possible spaces around the edges.

trapezoid A quadrilateral that has one pair of parallel sides.

triangle A 3-sided polygon.

turns Rotations.

two-dimensional (2-D) Objects completely within a flat surface; objects with length and width.

U.S. customary system The measuring system used most frequently in the United States. Some measures include *linear* (length, distance)--inch, foot, yard, mile; *weight*--ounce, pound; *capacity* (amount of liquid or other pourable substance)--cup, pint, quart, gallon.

vertex The point where the sides of a polygon meet; the point where the edges of a polyhedron meet.

vertical Upright.

volume The amount of space a 3-dimensional object takes up.

What's My Rule? A routine which consists of a set of number pairs in which the numbers in each pair are related to one another according to the same rule. The problems are usually displayed in table form in which two of the three parts are known. The goal is to find the unknown part.

yard (yd) In the U.S. customary system, a unit of length equivalent to 3 feet or 36 inches.

zone A group of locations within a range of distances. A division of locations for which a uniform rate is charged by a delivery or transportation system.