

Module 1: Integers

Absolute Value- the distance of a number from zero on a number line; shown by $| \quad |$.

Inequality- A mathematical sentence that shows the relationship between quantities that are not equal.

Integers- A member of the set of whole numbers and their opposites.

Opposites- Two numbers that are an equal distance from zero on a number line.

Positive Number- A number greater than zero.

Negative Number- A number less than zero.

Module 2: Factors and Multiples

Area- The number of square units needed to cover a given surface.

Factor - A number that is multiplied by another number to get a product.

Multiple- The product of a number and any nonzero whole number.

Product- The result when two or more numbers are multiplied.

Greatest Common Factor (GCF)- The largest common factor of two or more given numbers.

Least Common Multiple (LCM)- The smallest number, other than zero, that is a multiple of two or more given numbers.

Module 3: Rational Numbers

Dividend- The number to be divided in a division problem.

Divisor- The number you are dividing by in a division problem.

Fraction- A number in the form $\frac{a}{b}$ where $b \neq 0$

Rational Number- A number that can be written in the form $\frac{a}{b}$ where a and b are integers and $b \neq 0$

Venn Diagram- A diagram that is used to show relationships between sets.

Module 4: Operations with Fractions

Denominator- The bottom number of a fraction that tells how many equal parts are in the whole.

Numerator -The top number of a fraction that tells how many parts of a whole are being considered.

Mixed Number- A number made up of a whole number that is not zero and a fraction.

Order of Operations - A rule for evaluating expressions: first perform the operations in parentheses, then compute powers and roots, then perform all multiplication and division from left to right, and then perform all addition and subtraction from left to right.

Module 5: Operations with Decimals

Quotient - The result when one number is divided by another.

Module 6: Representing Ratios and Rates

Equivalent Ratios- Ratios that name the same comparison.

Quantity- A numerical value

Rate- A ratio that compares two quantities measured in different units.

Ratio- A comparison of two quantities by division.

Term- The parts of an expression that are added or subtracted.

Unit Rate- A rate in which the second quantity in the comparison is one unit.

Module 7: Applying Ratios and Rates

Conversion Factor- a ratio comparing two equivalent measurements.

Point- An exact location that has no size.

Proportion- An equation that states that two ratios are equivalent.

Scale-The ratio between two sets of measurements.

Scale Drawing-A drawing that uses a scale to make an object proportionally smaller than or larger than the real object.

Unit Conversion- The process of changing one unit of measure to another.

Module 8: Percents

Equivalent Fractions- Fractions that name the same amount or part.

Simplest Form- A fraction is in simplest form when the numerator and denominator have no common factors other than 1.

Equivalent Decimals- Decimal that name the same amount.

Model- Something that represents another thing

Percent- A ratio comparing a number to 100.

Proportional Reasoning- Use proportional reasoning to solve problems in which you know a part and a percent and need to find the whole.

Module 9: Generating Equivalent Numerical Expressions

Factor Tree – A diagram showing how a whole number breaks down into its prime factors.

Numerical Expression- An expression that contains only numbers and operations.

Prime Factorization – A number written as the product of its prime factors.

Simplified Expression- To write a fraction or expression in simplest form.

Base-When a number is raised to a power, the number that is used as a factor is the base.

Exponent- The number that indicates how many times the base is used as a factor.

Power- A number produced by raising a base to an exponent.

Module 10: Generating Equivalent Algebraic Expressions

Algebraic Expression- An expression that contains at least one variable.

Coefficient - The number that is multiplied by the variable in an algebraic expression.

Constant – A value that does not change

Equivalent Expression – Equivalent expressions have the same value for all values of the variables.

Evaluate- To find the value of a numerical or algebraic expression.

Like Terms- Terms with the same variables raised to the same exponents.

Term- The parts of an expression that are added or subtracted.

Variable- A symbol used to represent a quantity that can change.

Module 11: Equations and Relationships

Equation- A mathematical sentence that shows that two expressions are equivalent.

Solution - A value that makes the statement true.

Module 12: Relationships in Two Variables

Axes- The two perpendicular lines of a coordinate plane that intersect at the origin.
singular: axis

Coordinate Plane- A plane formed by the intersection of a horizontal number line called the x-axis and a vertical number line called the y-axis.

Coordinates- The numbers of an ordered pair that locate a point on a coordinate graph.

Dependent Variable- The output of a function; a variable whose value depends on the value of the input, or independent variable.

Independent Variable- The input of a function; a variable whose value determines the value of the output, or dependent variable.

Ordered Pair- A pair of numbers that can be used to locate a point on a coordinate plane.

Origin- The point where the x-axis and y-axis intersect on the coordinate plane; (0, 0).

Quadrants- The two axes divide the coordinate plane into four quadrants

x-axis- The horizontal axis on a coordinate plane.

x-coordinate- The first number in an ordered pair; it tells the distance to move right or left from the origin, (0, 0).

y-axis- The vertical axis on a coordinate plane.

y-coordinate- The vertical axis on a coordinate plane.

Module 13: Area and Polygons

Hexagon- A six sided polygon

Parallelogram- A quadrilateral with two pairs of parallel sides.

Polygon- A closed plane figure formed by three or more line segments that intersect only at their endpoints.

Quadrilateral- A four sided polygon

Rectangular Prism- A polyhedron whose bases are rectangles and whose other faces are rectangles.

Regular Polygon- A polygon with congruent sides and angles.

Rhombus- A parallelogram with all sides congruent.

Right Triangle- A triangle containing a right angle.

Trapezoid- A quadrilateral with exactly one pair of parallel sides.

Triangle- A three sided polygon

Module 14: Distance and Area in the Coordinate Plane

Perimeter - The distance around a polygon.

Reflection- A transformation of a figure that flips the figure across a line.

Vertex/Vertices- On an angle or polygon, the point where two sides intersect.

Module 15: Surface Area and Volume of Solids

Base – A side of a polygon; a face of a three- dimensional figure by which the figure is measured or classified.

Height- n a triangle or quadrilateral, the perpendicular distance from the base to the opposite vertex or side. In a prism or cylinder, the perpendicular distance between the bases.

Net- An arrangement of two- dimensional figures that can be folded to form a polyhedron.

Pyramid- A polyhedron with a polygon base and triangular sides that all meet at a common vertex.

Surface Area- The sum of the areas of the faces, or surfaces, of a three- dimensional figure.

Volume- The number of cubic units needed to fill a given space.

Module 16: Displaying Analyzing and Summarizing Data

Average - The sum of the items in a set of data divided by the number of items in the set; also called mean

Box Plot- A graph that shows how data are distributed by using the median, quartiles, least value, and greatest value; also called a box-and- whisker plot.

Categorical Data- Data that consists of nonnumeric information.

Dot Plot- A visual display in which each piece of data is represented by a dot above a number line.

Histogram- A bar graph that shows the frequency of data within equal intervals.

Interquartile Range- (IQR) The difference of the third (upper) and first (lower) quartiles in a data set, representing the middle half of the data.

Lower Quartile- the median of the lower half of the data

Mean- The sum of the items in a set of data divided by the number of items in the set; also called average.

Mean Absolute Deviation (MAD)- The mean distance between each data value and the mean of the data set.

Median- The middle number or the mean (average) of the two middle numbers in an ordered set of data.

Measure of Center- a single number used to describe a set of numeric data. A measure of center describes a typical value from the data set.

Measure of Spread- a single number used to describe the spread of a data set.

Mode- The number or numbers that occur most frequently in a set of data; when all numbers occur with the same frequency, we say there is no mode.

Quartile- Three values, one of which is the median, that divide a data set into fourths.

Range- the difference between the greatest and least values in a data set.

Statistical Question- The mean absolute deviation can be used to answer statistical questions. A statistical question is a question that has many different, or variable, answers. The question "How much does a typical cat weigh?" is an example of a statistical question.

Upper Quartile- the median of the upper half of the data