Glossary

Algebra

An aspect of mathematics that uses letters and other symbols to represent numbers and quantities; algebra can include real numbers, complex numbers, matrices, vectors, etc.

Analyze

To examine or study in great detail for the purpose of explaining and interpreting; to examine methodically and study the relationships of how various aspects relate to each other.

Attribute

A characteristic of a set of data or shape.

Cardinality

The number of elements in a given mathematical set; for example, the set A = {2, 4, 6} contains 3 elements; A has a cardinality of 3.

Computational Fluency

Speed and accuracy of math facts in order to apply higher order mathematical skills.

Cuisenaire Rods

Math manipulatives that include different colored rods representing different lengths in centimeters (1-10 centimeters) to help children compute and understand abstract concepts in mathematics relating to addition, subtraction, multiplication, division, and measurement skills.

Data

Data are facts collected together for analysis.

Data Analysis

The analysis of data with the goal of drawing conclusions and making decisions.

Geoboard

A math manipulative comprised of grids of pegs that hold rubber bands, which can come in a variety of sizes and colors. Geoboards help children understand abstract math concepts relating to area, perimeter, fractions, patterns, and even theorems.

Graph

A visual depiction of data, which shows the relationship among variables and is usually along the x and y axes; some common graphs are bar graphs, histograms, line graphs, pie graphs, and pictographs.

Inference

The act or process of drawing conclusions using deductive reasoning skills based on facts.

Manipulatives

Any concrete, tangible object that allows children to explore a mathematical concept or idea in an active, hands-on way.

Measure

The quantity, dimensions, length, or capacity of an object.

Number Line

A picture (diagram) showing numbers as points on a line.

One-to-One Correspondence

The ability to match numbers to objects or objects to objects; each elements of one corresponds with each element of another; to match each member of one set to the member of an equal set.

Operations

An action or procedure that produces a new value (output) from one or more input values; there are four basic operations in mathematics to solve problems: addition (+), subtraction (-), multiplication (x), and division (/).

Patterns

A repeating design or sequence of shapes or numbers.

Pi

The name for the ratio of the circumference of a circle to its diameter; pi is represented by this symbol: π and equals 3.1415…

Predict

To tell what will happen in the future based on past data trends.

Probability

Relates to the measurement of how likely it is for an event to occur; the number is always between zero and 100%.

Problem Solving

Problem solving generally involves: 1) exploring a given problem 2) planning a strategy for solving the problem 3) carrying out the plan for the solution and 4) examining the answer carefully.

Qualitative

Characteristics that may be descriptive and are not represented by numerical values.

Quantitative

Characteristics that are represented by numerical values; it involves the collecting, organizing and interpreting data that deal with quantities or amounts of things; numerical data.

Set

A collection of data with something in common.
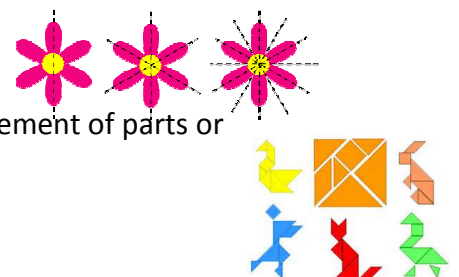
Sort

To group by characteristic.

Spatial Reasoning

The ability to visually and mentally manipulate two-dimensional and three-dimensional objects or patterns; relates to visual and perceptual abilities.

Symmetry

Refers to balanced proportions; within a figure it is a balanced arrangement of parts or opposite sides of a plane, line, or points.
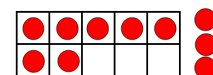
Tangram

Ancient Chinese puzzle game that consists of seven flat shapes that can be moved around and arranged to create new shapes (using all seven shapes that are not overlapping).

Ten Frame

An array of squares used to teach counting, number relationships and computation.

Venn Diagram

A drawing with circles (that overlap) used to show relationships between sets of data.