Glossary

The **absolute value** of a number is the distance from 0 on the number line regardless of direction.

An **addend** is any set of numbers to be added.

The **additive identity property** states that the sum of any real number and zero is equal to the given real number (ex., 5 + 0 = 5).

The **additive inverse property** states that the sum of a number and its additive inverse always equals zero

[ex., 5 + (–5) = 0].

An **algebraic equation** is a mathematical statement that says that two expressions are equal (ex, 2*x* + 1 = 5).

An **algebraic expression** is a variable expression that contains at least one variable (ex., 2*x* – 5).

**Area** is the measure in square units of the interior region of a 2 dimensional figure.

The **area of a circle** is computed by squaring the radius and multiplying that product by π. The formula is

 *A* = π$r^{2}$ , where π ≈ 3.14.

The **area of a rectangle** is computed by multiplying the lengths of two adjacent sides.

In the numeric pattern of an **arithmetic sequence**, students must determine the difference, called the ***common difference***, between each succeeding number in order to determine what is added to each previous number to obtain the next number.

The **associative property of addition** states that regrouping the addends does not change the sum

[ex., 5 + (4 + 3) = (5 + 4) + 3].

The **associative property of multiplication** states that regrouping the factors does not change the product

 [ex., 5 · (4 · 3) = (5 · 4) · 3].

**Bases** are two opposite, parallel and congruent face(s) of a rectangular prism or cylinder.

 A **benchmark** is a standard of achievement to which similar items are compared.

**Circumference** is the distance around the outside edge of a circle. The following formula is used to find the distance: C = 2πr where π = 3.14 and r = radius.

The **commutative property for addition** states that changing the order of the addends does not change the sum (e.g., 5 + 4 = 4 + 5).

The **commutative property for multiplication** states that changing the order of the factors does not change the product (e.g., 5 · 4 = 4 · 5).

**Comparisons** are ascertaining differences between characteristics.

A **compound event** combines two or more simple events. For example, a bag contains 4 red, 3 green and 2 blue marbles. What is the probability of selecting a green and then a blue marble?

**Compute** means to solve.

**Congruent** means the same shape and the same size.

**Consecutive numbers** are numbers that occur right after each other on the number line. For example, the numbers 4 and 5.

**Convert** means to change to another form. For example, changing from a fraction to a decimal.

The **coordinate plane** is a two-dimensional system in which a location is described by its distances from two perpendicular number lines (axes).

**Corresponding** means matching or in the same position in different plane figures.

**Counter-clockwise** is the opposite direction to which the hands on a clock move.

A **cylinder** can be represented on a flat surface as a net that contains two circles (bases for the cylinder) and one rectangular region whose length is the circumference of the circular base and whose width is the height of the cylinder.

 A **decimal** is parts of the whole using place value. Example, 0.75

The **denominator** is the number below the line in a fraction; the number of equal pieces the whole is broken into. Example, in the fraction $\frac{1}{4}$ , the number 4 is the denominator.

The **diameter** is a chord that goes through the center point of a circle.

A **dilation** of a geometric figure is a transformation that *changes the size* of a figure by scale factor to create a similar figure.

A **discount** is the amount taken off the original price.

The **distributive property** states that the product of a number and the sum (or difference) of two other numbers equals the sum (or difference) of the products of the number and each other number

[ex., 5(3 + 7) = (5 · 3) + (5 · 7), or 5(3 – 7) = (5 · 3) – (5 · 7)].

The **dividend** is the number being divided into equal parts.

The **divisor** is the number of equal groups or the number of items in each equal group.

An **equation** is a mathematical sentence that states that two expressions are equal.

**Equivalent** means “equal to” or to have the same amount or value.

The **expanded form** is a way to write a number from exponential form. For example, $8^{3}$ would be written as 8x8x8.

The **experimental probability** of an event is determined by carrying out a simulation or an experiment.

The experimental probability = number of times desired outcomes occur .

 number of trials in the experiment

An **exponent** tells how many times the base is multiplied by itself. For example, in the expression $ a^{x}$, *x* is the exponent. The letter *a* is the **base.**

The **exponential form** is a number represented by how many times you multiply the base times itself. For example, 8x8x8 would be written as $8^{3}$ .

An **expression** is a name for a number; the relationship between two consecutive terms in a sequence. For example, n + 2, 5n, n-3, or $\frac{n}{4}$.

A **face** is one of the flat surfaces of a solid.

A **fraction** is a ratio written in division form. Example, $\frac{3}{4}$

A **frequency distribution** shows how often an item, a number, or range of numbers occurs.

A **function** is a relation in which there is one and only one second member for each first member.

The **Fundamental (Basic) Counting Principle** is a computational procedure to determine the number of possible outcomes of several events. It is the product of the number of outcomes for each event that can be chosen individually (e.g., the possible outcomes or outfits of four shirts, two pants, and three shoes is 4 · 2 · 3 or 24).

In **geometric sequences**, students must determine what each number is multiplied by in order to obtain the next number in the geometric sequence. This multiplier is called the ***common ratio***.

**Gratuity** is another word for tip or the amount added to the bill for the server.

A **histogram** is a form of bar graph in which the categories are consecutive and equal intervals.

The **image** of a polygon is the resulting polygon after the transformation.

**Inference** is “what could happen if…” .

The set of **integers** is the set of whole numbers and their opposites

(ex … –3, –2, –1, 0, 1, 2, 3 …).

An **interval** is the set of all real numbers between two given numbers.

**Inverse** is the reciprocal (multiplication: 4 · $\frac{1}{4}$ = 1) or the opposite (addition: 6 + -6 = 0).

A **line plot** is a graph that shows data on a number line with an “x” or other mark to show frequency.

The **multiplicative identity property** states that the product of any real number and one is equal to the given real number (e.g., 8 · 1 = 8).

The **multiplicative inverse property** states that the product of a number and its multiplicative inverse (or reciprocal) always equals one (e.g., 4 · $\frac{1}{4}$ = 1).

The **multiplicative property of zero** states that the product of any real number and zero is zero.

 A **negative number** is any number less than 0. For example, -6.

The **net** is a flat 2 dimensional figure that can be folded up into a 3 dimensional solid.

The **numerator** is the number above the line in a fraction; the number represents how many pieces of the whole there are. Example, in the fraction $\frac{1}{4}$ , the number 1 is the numerator.

An expression that contains only numbers is a **numerical expression**.

 A **one-step equation** is an equation that requires the use of one operation to solve (ex., *x* + 3 = –4).

A **one-step inequality** is an inequality that requires the use of one operation to solve (ex., *x* – 4 > 9).

The **order of operations (PEMDAS)**  is **Ordered pairs** are a pair of numbers used to locate a point in a coordinate plane; the pair is written in the form (x-coordinate, y-coordinate); the x-coordinate tells the distance left or right from the origin; the y-coordinate tells the distance up or down from the origin.

The **origin** is the point at the intersection of the x- and y-axes; the point is written as (0, 0).

**Parallel** are lines in the same plane that do not intersect.

A **parallelogram** is a quadrilateral whose opposite sides are parallel and opposite angles are congruent.

A **percent** is a special ratio in which the denominator is 100; part of 100. Example, 75%

A **pie graph/circle graph** is a graph using a divided circle where each section represents part of the total.

A **polygon** is a simple, closed, plane figure with three or more sides that are line segments.

A **positive number** is any number more than 0. For example, 2.

**Predictions** are trends that suggest what new data might be like.

The **product** is the result when two or more numbers are multiplied.

A **proportion** is a statement of equality between two ratios. A proportion can be written as $\frac{a}{b} $=$\frac{ c}{d}$, *a*:*b* = *c*:*d*, or *a* is to *b* as *c* is to *d*.

A **quadrant** is one of four portions into which the coordinate plane is divided by the horizontal and vertical axes.

A **quadrilateral** is a closed plane (two-dimensional) figure with four sides that are line segments.

The **quotient** is the result when a number is divided by another number.

The symbol used to indicate square roots (√­¯ ) is called the **radical.**

The **radius** is the distance from the center point of a circle to any point on the edge of that circle. It is half of the diameter.

A **rate** is a ratio that compares two quantities measured in different units.

A **ratio** is a comparison of two numbers.

A **rectangle** is a parallelogram with four right angles. The diagonals of a rectangle are the same length and bisect each other.

A **rectangular prism** can be represented on a flat surface as a net that contains six rectangles — two that have measures of the length and width of the base, two others that have measures of the length and height, and two others that have measures of the width and height.

A **reflection** is a transformation that *reflects* a figure across a line in the plane.

A **relation** is any set of ordered pairs. For each first member, there may be many second members.

A **rhombus** is a parallelogram with four congruent sides whose diagonals bisect each other and intersect at right angles.

A **rotation** of a geometric figure is a *turn* of the figure around a fixed point. The point may or may not be on the figure. The fixed point is called the *center of* *rotation*.

The **sale price** is the new price of an object after the discount has been taken off the original price.

**Scale factor** is the ratio of any two corresponding lengths in two similar geometric figures.

**Scientific notation** is used to represent very large or very small numbers using the powers of 10.

Two polygons are **similar** if corresponding (matching) angles are congruent and the lengths of corresponding sides are proportional. **Congruent polygons** have the same size and shape.

**Simplify** means to solve or to find the value of a given mathematical problem or to make simple.

A **solid** is a 3-dimensional shape.

A **square** is a rectangle with four congruent sides whose diagonals are perpendicular. A square is a rhombus with four right angles.

A **square root** of a number is a number which, when multiplied by itself, produces the given number

(ex., 121 is 11 since 11 x 11 = 121).

**Standard form** is a general representation of a number.

**A stem and leaf plot** is a data display that shows groups of data arranged by place value.

**Surface area** is the sum of the areas of all faces of a 3-dimensional solid in square units.

(Key word – cover)

**The** **surface area of the cylinder** is the area of the two circles and the rectangle. The formula is

*SA* = 2π$r^{2}$ + 2π*rh*.

The **surface area of a rectangular prism** is the sum of the areas of all six faces. The formula is

*SA* = 2*lw*+ 2*lh* + 2*wh*.

**Tax** is the amount added to the original price**.**

**Term** is a number or variable; parts of an expression separated by + or – signs.

**Theoretical probability** of an event is the expected probability and can be found with a formula.

Theoretical probability of an event = number of possible favorable outcomes .

 total number of possible outcomes

A **transformation** is an operation that alters the location or form of a figure.

A **translation** of a geometric figure is a *slide* of the figure in which all the points on the figure move the same distance in the same direction.

A **trapezoid** is a quadrilateral with exactly one pair of parallel sides. A trapezoid with congruent, nonparallel sides is called an *isosceles trapezoid*.

**Tree diagrams** are used to illustrate possible outcomes of events. They can be used to support the Fundamental (Basic) Counting Principle.

**A trend** is the pattern and relationship with data sets.

**Two-dimensional** is flat; in one plane; having length and width but no depth.

A **two-step equation** is defined as an equation that requires the use of two operations to solve

(ex., 2*x* + 1 = -5).

A **unit rate** is a rate with a denominator of 1.

A **variable** is a symbolic representation used to denote an unknown quantity or expression.

An expression that contains a variable is a **variable expression**.

A **verbal expression** is a word phrase (“the sum of two consecutive integers”).

A **verbal sentence** is a complete word statement (“The sum of two consecutive integers is five.”)

**Volume** is the measure in cubic units of the amount a solid holds. (Key word – fill)

The **volume of a rectangular prism** is computed by multiplying the area of the base, *B*, (length times width) by the height of the prism. The formula is *V* = *lwh = Bh*.

The **volume of a cylinder** is computed by multiplying the area of the base, *B*, (π$r^{2}$) by the height of the cylinder. The formula is *V* = π$r^{2}$*h*  = Bh.

**Whole numbers** are the non-negative integers in the real number system. (ex., the numbers 0, 1, 2, 3, ...)

The **x-axis** is the horizontal number line.

The **y-axis** is the vertical number line.