**Geometry Academic Vocabulary Words:**

**Definition of a Polygon:**

**1. It is a closed shape.**

**2. It has no curves.**

**3. It has no intersecting lines (they meet at a vertex)**

**4. It has at least 3 sides**

**5. It is a two-dimensional, flat shape.**

**Regular Polygon:**

**It has all of the characteristics of a polygon (5 above) AND it has all sides congruent and all angles congruent. An example is a square and an equilateral triangle.**

**1. Triangle is a 3-sided shape**

* Equilateral Triangle-All 3 sides are congruent
* Isosceles Triangle-At least 2 sides are congruent
* Scalene Triangle-All 3 sides are not congruent-3 sides all different lengths.
* Right Triangle-It has a 90 degree angle
* Acute Triangle-All angles are greater than 0 but less than 90 degress
* Obtuse Triangle-1 angle is greater than 90 but less than 180 degrees

**2. Quadrilateral- ANY 4 sided shape**

* Square
* Rectangle
* Rhombus
* Trapezoid
* Parallelogram
* Kite

**3. Pentagon-5-sided shape**

**4. Hexagon-6-sided shape**

**5. Heptagon/Septagon-7-sided shape**

**6. Octagon-8-sided shape**

**7. Nonagon-9-sided shape**

**8. Decagon-10-sided shape**

**9. 11-gon/Hendecagon-11-sided shape**

**10. Dodecagon-12-sided shape**

**1.**    **Right Angle-An angle that is exactly 90 degrees.**

**2.**    **Acute Angle-An angle that is greater than zero and less than 90 degrees.**

**3.**    **Obtuse Angle-An angle that is greater than 90 and less than 180 degrees.**

**4.**    **Straight Angle-An angle that is 180 degrees.**

**5.**    **Parallel Lines-At least 2 lines that are equidistant apart and never intersect.**

**6.**    **Congruent-Same shape and size**

**7.**    **Length/Base-Distance-How far from end to end or from one point to another**

**8.**    **Width-The distance from side to side.**

**9.**    **Area-The amount of space a flat, 2 dimensional shape occupies or takes up.**

**10.**  **Area Squared-Total area after multiplying length times width or base x height.**

**11.**  **Quadrilateral-Any 4 sided shape.**

**12.**  **Square-A quadrilateral with 4 congruent sides and 4 congruent angles (90 degrees). Both pair of opposite sides are parallel and congruent.**

**13.**  **Rectangle-A quadrilateral with 2 pair of opposite sides congruent and parallel. It also has 4 congruent angles (90 degrees each)**

**14.**  **Rhombus-A quadrilateral with 4 congruent sides and both pair of opposite sides are parallel and congruent. Two pair of opposite angles are congruent (1 pair is obtuse/1 pair is acute).**

**15.** **Parallelogram-A quadrilateral with both pair of opposite sides parallel and congruent. The 2 pairs of opposite angles are also congruent.**

**16. Kite-A quadrilateral with two distinct pairs of adjacent congruent sides and no opposite sides congruent**

**17.** **Trapezoid-A quadrilateral with exactly one pair of parallel sides called bases.  The nonparallel sides are called legs.  The two angles that share a base of this quadrilateral are called base angles.  It also has two pairs of base angles.**

**18.** **Compose/Composing-To put something together or create**

**19.** **Decompose/Decomposing-To take something apart or break up into other or smaller parts.**

**20.** **Complex Figure-A weird shape or polygon that we need to decompose (not your basic polygon shapes like a square, triangle, rectangle, etc.)**

**21.**  **Volume-The capacity of a 3 dimensional shape.**

**22.**  **Length-The measurement up and down.**

**23.**  **Width-The measurement side to side.**

**24.**  **Height-The measurement up and down.**

**25.**  **Surface Area-The sum of the area of each lateral face of a 3 dimensional (3D) shape.**

**26.**  **Rectangular Prism-A 3 dimensional shape with 6 sides made up of rectangles or squares only, and every 2 sides are congruent (top/bottom, front/back, side/side)**

**27.**  **Nets-A 2 dimensional representation of a 3 dimensional shape.**

**1. Equilateral Triangle-A triangle with 3 congruent sides.**

**2. Isosceles Triangle-A triangle with at least 2 congruent sides.**

**3. Scalene Triangle-A triangle with all 3 sides of different lengths (no sides congruent).**

**4. Acute Triangle-A triangle with 3 angles greater than 0 and less than 90 degrees.**

**5. Obtuse Triangle-A triangle with 1 angle that is greater that 90 but less than 180 degrees.**

**6. Right Triangle-A triangle with 1 angle that is exactly 90 degrees.**

**7. Scalene Acute Triangle-All 3 sides of a triangle not equal and all 3 angles are greater than 0 and less than 90 degrees.**

**8. Scalene Obtuse Triangle-All 3 sides of a triangle not equal and 1 angle is greater than 90 and less than 180 degrees.**

**9. Scalene Right Triangle-All 3 sides of a triangle not equal and 1 angle is exactly 90 degrees (right angle).**

**10. Isosceles Obtuse Triangle-At least 2 sides of a triangle are congruent and 1 angle is greater than 90 and less than 180 degrees.**

**11. Isosceles Acute Triangle-At least 2 sides of a triangle are congruent and all 3 angles are greater than 0 and less than 90 degrees.**

**12. Isosceles Right Triangle-At least 2 sides of a triangle are congruent and 1 angle is exactly 90 degrees.**

**13. Right Trapezoid-It has two bases and exactly 2 right (90) degree angles.**

**14. Isosceles Trapezoid-A trapezoid that has 2 bases and 2 congruent legs (sides).**

**1. Quadrilateral-Any four sided shape**

**2. Kite-A quadrilateral with two distinct pairs of adjacent congruent sides and no opposite sides congruent**

**3. Rhombus-A quadrilateral with 4 congruent sides, opposite sides parallel and congruent. Opposite angles are congruent (2 acute and 2 obtuse angles)**

**4. Rectangle-A quadrilateral with both pair of opposite sides parallel and congruent with 4 right angles. All four sides are not congruent.**

**5. Parallelogram-A quadrilateral with both pair of opposite sides parallel and congruent.**

**6. Square-A quadrilateral with opposite sides parallel and congruent and 4 right angles.**

**7. Trapezoid-A quadrilateral with exactly one pair of parallel sides called bases.  The nonparallel sides are called legs.  The two angles that share a base of this quadrilateral are called base angles.  It also has two pairs of base angles**

**8. Regular Quadrilateral-A 4 sided shape where all the sides and angles are congruent.**

**9. Convex Quadrilateral-A quadrilateral where all the diagonals fall inside the quadrilateral.**

**10. Concave Quadrilateral-A quadrilateral where at least one diagonal falls outside of the quadrilateral.**