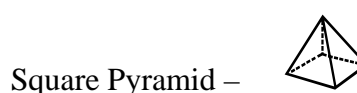
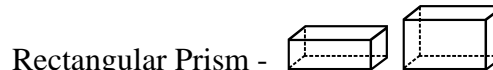
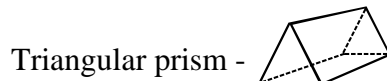
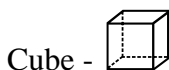
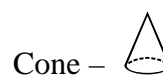
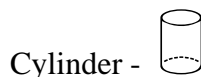


Geometry Notes

Space Figures - 3 Dimensional (3-D)



Faces = flat sides

Vertex/Vertices = points

Edges = where sides meet

Polygons - 2 Dimensional

Triangle - 3 sides

Quadrilateral - 4 sides (square, rectangle, parallelogram, rhombus)

Pentagon - 5 sides

Hexagon - 6 sides

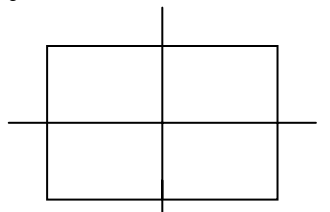
Heptagon - 7 sides

Octagon - 8 sides

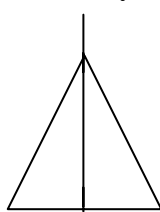
Nonagon - 9 sides

Decagon - 10 sides

Symmetry - Objects that can be divided evenly by a line are symmetrical.



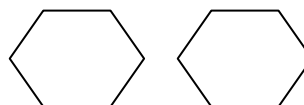
2 lines of symmetry



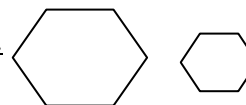
1 line of symmetry

Congruence and Similarity

Figures that have the same size and shape are called congruent.

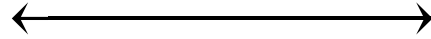


Figures that have the same shape but have different sizes are called similar.



Lines, Line Segments, and Rays

A line is a straight path that goes forever in both directions.



A line segment is a part of a line. It has two endpoints.



A ray is a part of a line. It has one endpoint and one arrow



Parallel and Perpendicular Lines

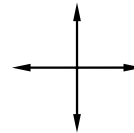
Parallel lines – two lines that are next to each other, but never touch.



Intersecting Lines – lines that cross each other.

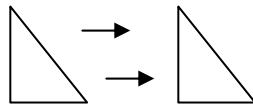


Perpendicular lines – two lines that meet at a right angle.

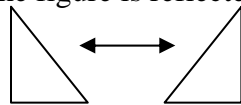


Transformations

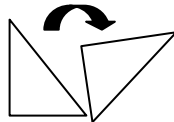
translation - (slide) – the figure remains in the same position, but is just moved over.



reflection - (flip) – the figure is reflected as a mirror image.



Rotation - (turn) – the figure is rotated on a pivot point.

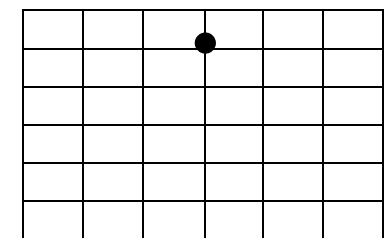


Coordinates

The number in an ordered pair.

Example (3 , 5)

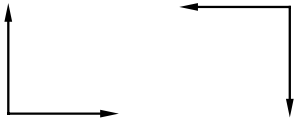
The first number is across, the second number is up.



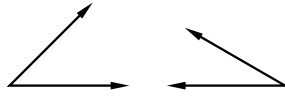
0 1 2 3 4 5 6

Angles

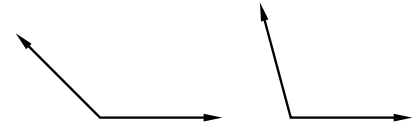
Right angle – has an angle that measures 90°



Acute Angle – has an angle that measures $<90^\circ$

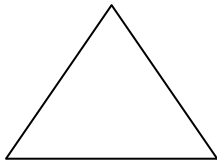


Obtuse angle – has an angle that measures $>90^\circ$

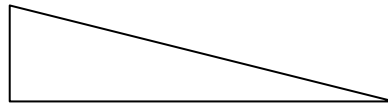


Triangles – 3 sided polygons

Equilateral Triangle – all sides are the same length



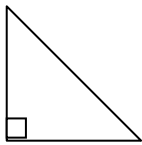
Scalene Triangle – all 3 sides are different lengths



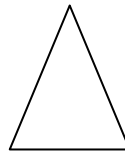
Isosceles Triangle – has 2 sides that are the same length



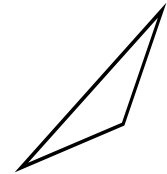
Right Triangle - has one right angle



Acute Triangle – has all acute angles

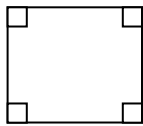


Obtuse Triangle – has one obtuse angle



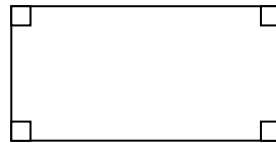
Quadrilaterals – 4 sided polygons

Square -



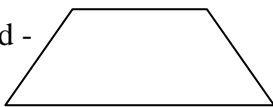
All sides are the same length
All angles are right angles

Rectangle –



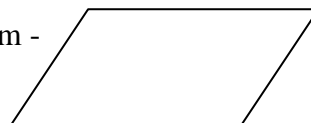
2 pair of sides that are the same length
All angles are right angles

Trapezoid -



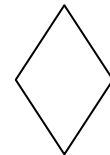
Has exactly one pair of parallel sides that are different lengths

Parallelogram -



Has 2 pairs of the same-length sides
Has 2 pairs of parallel sides

Rhombus -



2 pairs of parallel sides
All sides are the same length