Geometry

M4G1 Students will define and identify the characteristics of geometric figures through examination and construction.

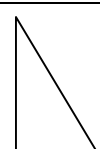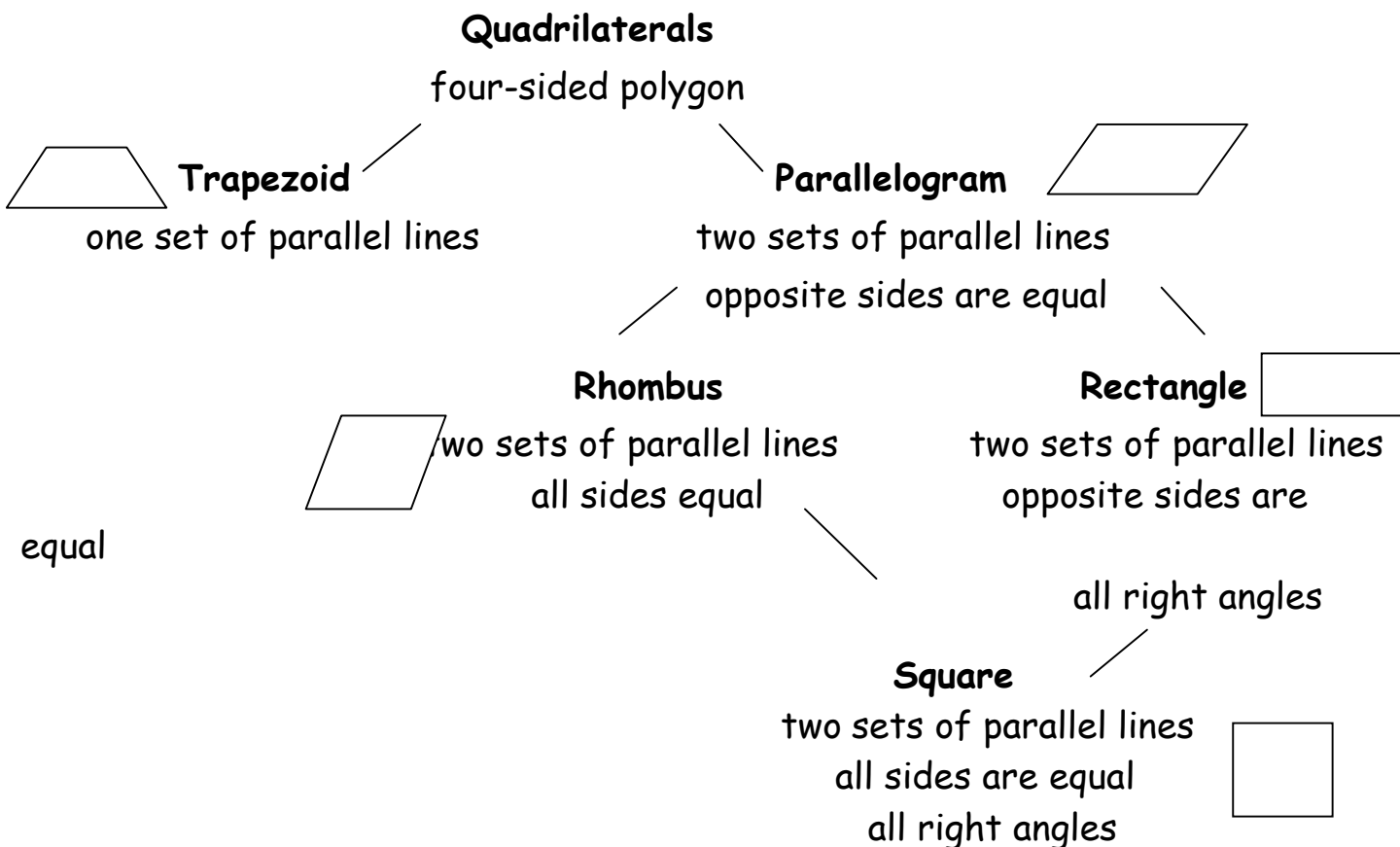a. Examine and compare angles in order to classify and identify triangles by their angles.

b. Describe parallel and perpendicular lines in plane geometric figures.

c. Examine and classify quadrilaterals (including parallelograms, squares, rectangles, trapezoids, and rhombi) by their properties.

d. Compare and contrast the relationships among quadrilaterals.

Acute Angle	Right Angle	Obtuse Angle
Angle that is less than 90°.	Angle that is 90°.	Angle that is more than 90°.
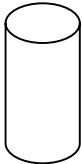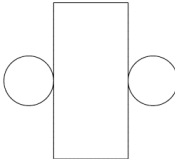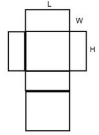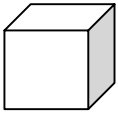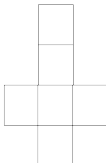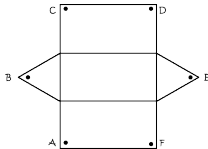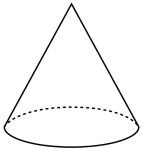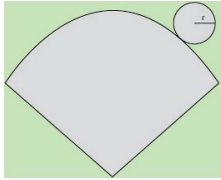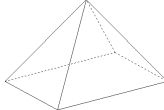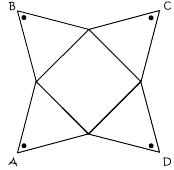
Triangles: 3 sides and 3 vertices		
Right Triangle Has one right angle.	**Acute Triangle** Has all acute angles.	**Obtuse Triangle** Has one obtuse angle.

Quadrilaterals
four-sided polygon

Trapezoid
one set of parallel lines

Parallelogram
two sets of parallel lines
opposite sides are equal

Rhombus
two sets of parallel lines
all sides equal

Rectangle
two sets of parallel lines
opposite sides are equal

all right angles

Square
two sets of parallel lines
all sides are equal
all right angles
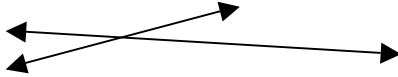
Geometric Solids

M4G2 Students will understand fundamental solid figures.

a. Compare and contrast a cube and a rectangular prism in terms of the number and shape of their faces, edges, and vertices.

b. Describe parallel and perpendicular lines and planes in connection with rectangular prisms.

c. Build/collect models for solid geometric figures (cubes, prisms, cylinders, pyramids, spheres, and cones) using nets and other representations.

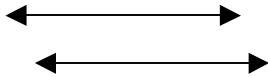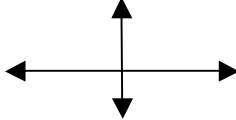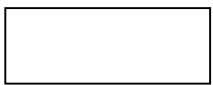|	
Cylinder net	**Rectangular Prism** faces: 6 vertices: 8 edges: 12 net
Cube faces: 6 vertices: 8 edges: 12 net	**Triangular Prism** net
Cone net	**Pyramid** net

Geometry Terms

intersecting lines: two lines that cross	
parallel lines: lines that never intersect	
perpendicular lines: lines that intersect and form right angles	

area: to figure area, multiply the length by the width
 	
     5ft   area
                        5 x 8 = 40 square feet
        8ft	

perimeter: to figure perimeter, all add the sides
 	
     5ft   perimeter
                        5+5+8+8=26 feet
        8ft	

Coordinate Plane

M4G3 Students will use the coordinate system.

a. Understand and apply ordered pairs in the first quadrant of the coordinate system.

b. Locate a point in the first quadrant in the coordinate plane and name the ordered pair.

c. Graph ordered pairs in the first quadrant.

A = (4, 3)

B = (3, 0)

C = (1, 5)
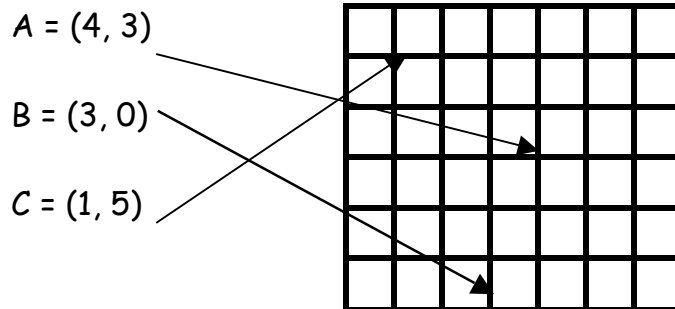
The points on the coordinate plane are described by ordered pairs. An ordered pair is made up of two numbers inside parentheses and separated by a comma. The first number tells you to go across the x-axis. The second number tells you to go up the y-axis.