**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
Angle that is less than 90°.

### Right Angle
Angle that is 90°.

### Obtuse Angle
Angle that is more than 90°.

<table>
<thead>
<tr>
<th>Triangles: 3 sides and 3 vertices</th>
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</thead>
<tbody>
<tr>
<td><strong>Right Triangle</strong>&lt;br&gt;Has one right angle.</td>
</tr>
<tr>
<td><strong>Acute Triangle</strong>&lt;br&gt;Has all acute angles.</td>
</tr>
<tr>
<td><strong>Obtuse Triangle</strong>&lt;br&gt;Has one obtuse angle.</td>
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### 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
- Faces: 6
- Vertices: 8
- Edges: 12

### Rectangular Prism
- Faces: 6
- Vertices: 8
- Edges: 12

### Cube
- Faces: 6
- Vertices: 8
- Edges: 12

### 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

\[ 5 \text{ft} \times 8 = 40 \text{ square feet} \]

**Perimeter:** to figure perimeter, all add the sides

\[ 5 + 5 + 8 + 8 = 26 \text{ feet} \]
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.