|  |  |
| --- | --- |
|  | A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a 4 sided polygon. |
|  | A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has two parallel pairs of opposite sides. |
|  | A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has two pairs of opposite sides parallel, and four right angles. It is also a parallelogram, since it has two pairs of parallel sides. |
|  | A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has two pairs of parallel sides, four right angles, and all four sides are equal. It is also a rectangle and a parallelogram. |
|  | A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is defined as a parallelogram with four equal sides. Is a rhombus always a rectangle? No, because a rhombus does not have 4 right angles. |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ only have one pair of parallel sides. It’s a type of quadrilateral that is not a parallelogram. |

Rhombus Quadrilateral Square Trapezoid

Rectangle Parallelogram



Complete the sentences by writing ***always***, ***sometimes***, or ***never***.

A rhombus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a square.

A parallelogram is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a rectangle.

A rhombus is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_a parallelogram.

A trapezoid is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a parallelogram.

A square is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a rhombus.

**True or False???**

A **parallelogram** is never a square.

Why or why not?

A **square** is always a rectangle.

Why or why not?

A **rhombus** is never a square.

Why or why not?

A **trapezoid** is parallelogram.

Why or why not?

A **parallelogram** has one set of opposite sides.

Why or why not?

A **rectangle** has four right angles.

Why or why not?

A **rhombus** always has four equal sides.

Why or why not?

The **sum of the interior angles** of a **quadrilateral** is 180°.

Why or why not?

**Classification of Triangles**

**Equilateral, Isosceles and Scalene**

There are three special names given to triangles that tell how many sides (or angles) are equal.

|  |  |
| --- | --- |
| Equilateral Triangle | Equilateral Triangle**Three** equal sides **Three** equal angles, always 60° |
| Isosceles Triangle | Isosceles Triangle**Two** equal sides **Two** equal angles |
| Scalene Triangle | Scalene Triangle**No** equal sides **No** equal angles |

## What Type of Angle?

Triangles can also have names that tell you what **type of angle** is inside*:*

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |

|  |  |
| --- | --- |
| Acute Triangle | Acute TriangleAll angles are less than 90° |
| Right Triangle | Right TriangleHas a right angle (90°) |
| Obtuse Triangle | Obtuse TriangleHas an angle more than 90° |

Draw the type of triangle described by the lengths of its sides and by the measures of its angles.

Use a ruler.

|  |
| --- |
| Triangle by Length of Sides |
| Triangle by Angle Measure |  | Scalene | Isosceles  |
| Acute |  |  |
| Obtuse |  |  |

**Polygons**

What is a polygon?

What is a regular polygon?

Types of polygons:

|  |  |
| --- | --- |
| **Name** | **Number of Sides** |
| Triangle |  |
| Quadrilateral |  |
| Pentagon |  |
| Hexagon |  |
| Heptagon |  |
| Octagon |  |
| Nonagon |  |
| Decagon |  |

**Other Geometry Words to Know**

Draw an example of the following words:

|  |  |  |
| --- | --- | --- |
| **Name** | **Symbol** | **Definition or Example** |
| Parallel |  |  |
| Perpendicular |  |  |
| Intersecting |  |  |
| Congruent |  |  |
| Angle |  |  |