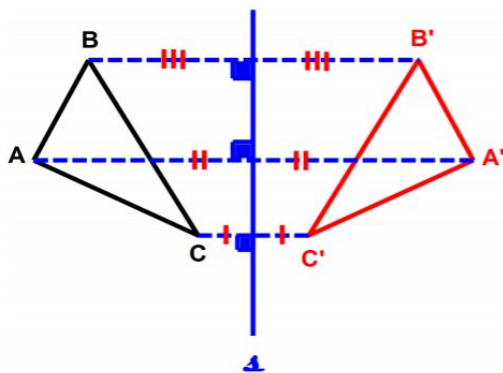Name:_____
Group:_____

# **Reflections and Symmetric Figures**

-A _____ is a _____ _____ that flips
a point, a line or a figure across a _____, this is called the _____ ___
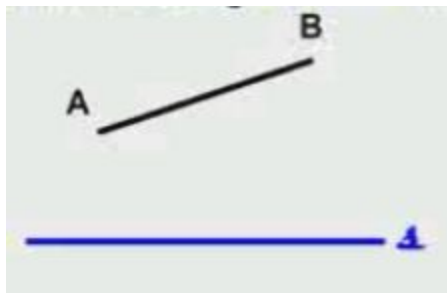_____.

_____ is the original figure.
Line _____ is the _____ of reflections
_____ is the reflected figure.

**IMPORTANT:**
-Line _____ is the _____
bisector of line segments _____, _____, and
_____.
-This means that the _____ from point **A** to
line _____is the same as the _____
from _____ to line _____...same for
the other vertices of the triangle.

**HOW TO DRAW THE IMAGE OF A LINE SEGMENT:**

1. Draw perpendicular lines to line _____ that passs
through point A and point B. Use a _____ _____
and extend the perpendicular lines past line _____.
2. Along the perpendicular lines, measure the
distance from A to the axis of reflection, then place A'
along your perpendicular lines but on the oppsite side of
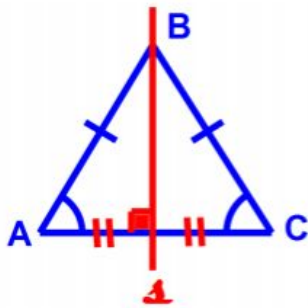the reflection line. Label it A'
3. Repeat for point B. Label it B'
4. Draw line A'B'

What does line A'B'
represent:_____

## SYMMETRIC FIGURES

-A figure is _____ if an axis of reflection can be drawn _____ it.
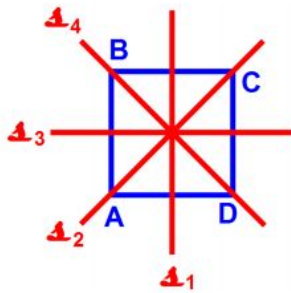
-For example, this isosceles triangle:

Notice that vertex A is an image of _____ and vise versa.

...This means that all _____ are _____ _____.

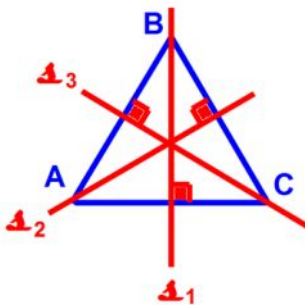$$\angle A = \angle C \quad m\overline{AB} = m\overline{BC}$$

-Some symmetric figures have more that one _____ __ _____.
    Like a square:

→ How many axes of symmetry do you see?_____
→ So all _____ are _____ figures.

-Equilateral triangle:

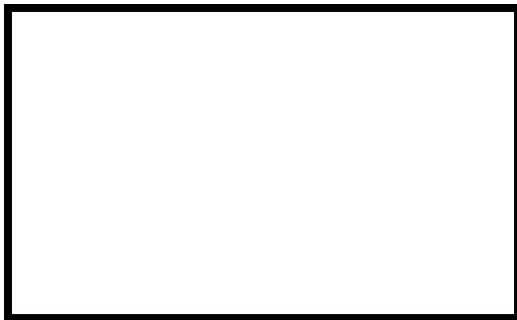→ How many axes of symmetry do you see?
→ So....all _____ are symmetrical.

-Try a **scalene** triangle:

uilateral triangles are symmetrical.  → no angles or sides are _____.
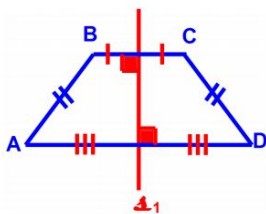
**ene Triangle**

B

-A **rectangle:**

→ How many axes of symmetry can we make?

**Isosceles Trapezoid:**

→ How many congruent angles?_____
→ How many congruent sides?_____
→ How many axes of symmetry?_____

**Right Trapezoid:**

→ How many congruent side?_____
→ How many congruent angles?_____
→ Does this figure have symmetry?_____