

Recall that...

A ray is a part of a line. It has one endpoint and extends forever in one direction.

**What is an angle, and how do we name it?**

An angle is formed by two rays with a common endpoint called the *vertex*. We can name an angle by using a number; using the vertex and a point on each side, in which case the vertex has to be in the middle, and the points on the side can be in any order; or, by just using the vertex, as long as there is not another angle sharing the same vertex (i.e., the angle is not attached to another angle).

Examples:

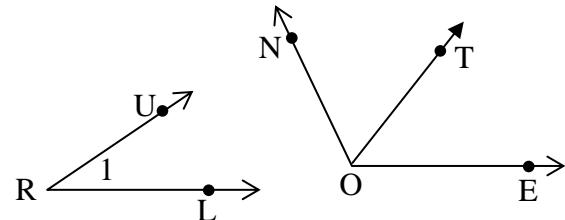
Name the vertex of the angle on the left: _____

Name the sides of the angle on the left: _____

Write all possible names for the angle on the left: _____

Write a name for each of the three angles in the diagram on the right: _____

Which name cannot be used for the adjacent (side by side) angles on the right? _____

**Practice:**

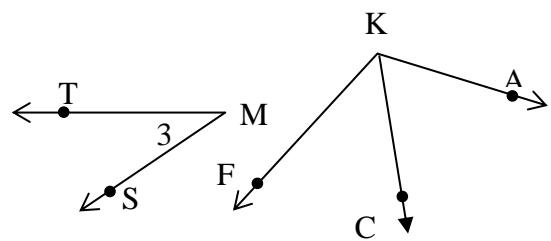
1) Name the vertex of the angle on the left: _____

2) Name the sides of the angle on the left: _____

3) Write all possible names for the angle on the left: _____

4) Write a name for each of the three angles in the diagram on the right: _____

5) Which name cannot be used for the adjacent (side by side) angles on the right? _____

**How do we classify angles?**

We classify angles based on their size.

An *acute angle* has a measure of _____

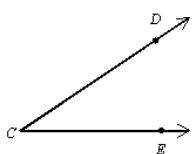
A *right angle* has a measure of _____

An *obtuse angle* has a measure of _____

A *straight angle* has a measure of _____

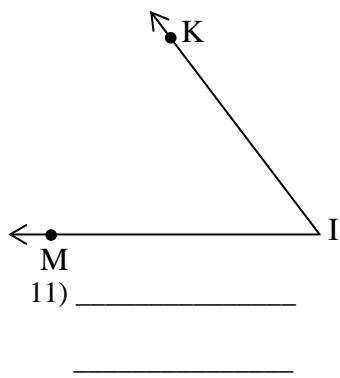
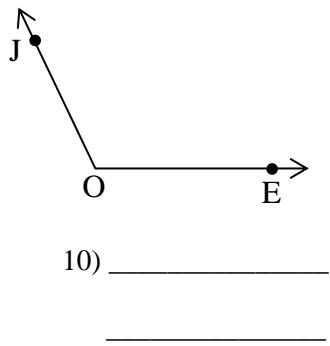
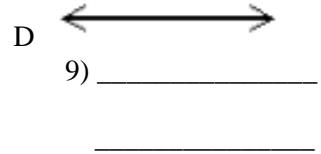
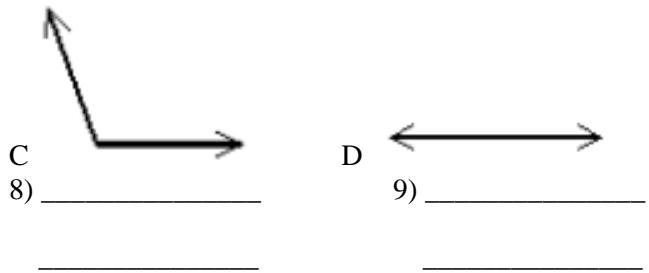
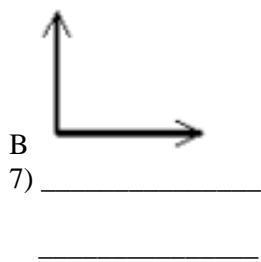
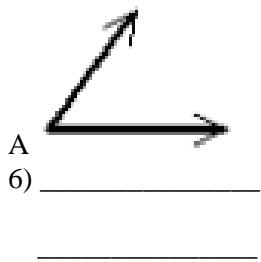
The measure notation for angles is _____.

Example: Find the measure of the angle, and classify it based on its measure.



Measure notation: _____ Type of angle: _____

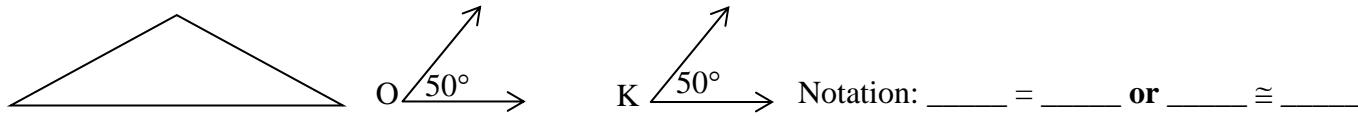
Practice: Find the measure of each angle, and classify it based on its measure. Write the measure using angle measure notation.



What are congruent angles, and how do show their congruency?

Any two angles that have the same measure are called **congruent angles**. To indicate that two or more angles are congruent, we:

- 1) Use **arcs** to indicate that the angles are congruent. If two angles have the same number of arcs, then those angles are congruent.
- 2) Indicate that their measures are the same (e.g., $m\angle 3 = m\angle 5$).
- 3) Use the congruency symbol \cong between the names of the angles (e.g., $\angle 3 \cong \angle 5$)



Practice: Write both notations for each group of angles below. If the congruency arcs are not marked, add them.

