

Daily HW Check 3-2

Box 1: Interior angles #13

Box 2: Exterior angles #10

## **5-1 and 5-2**

### **Points, Lines, Planes, and Angles Parallel and Perpendicular Lines**

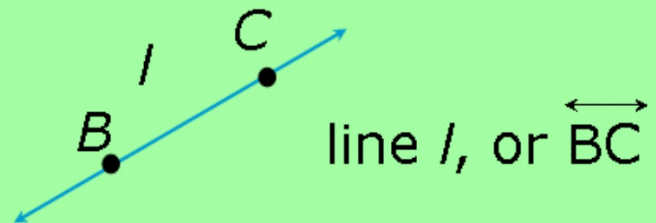
Today I will learn to classify and name figures, and identify parallel, perpendicular, and transversal lines along with their created angles.

A **point** names a location.

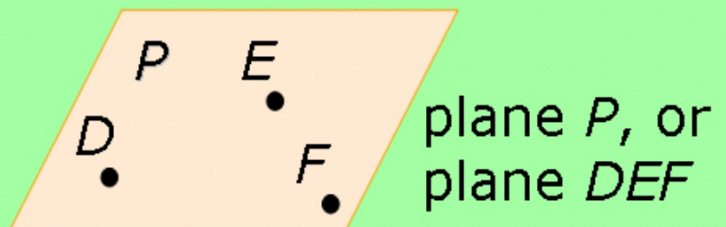


Point A

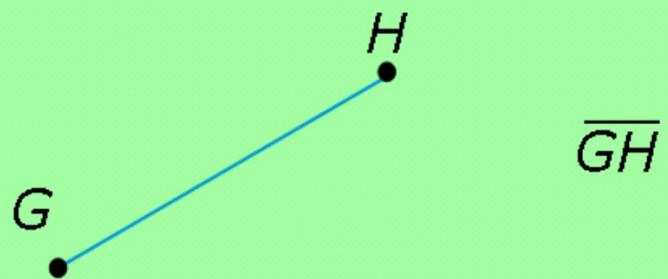
A **line** is perfectly straight and extends forever in both directions.



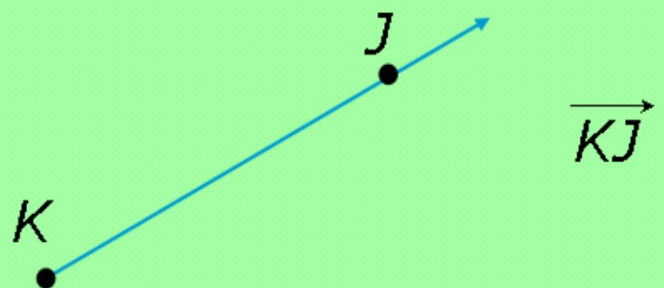
A **plane** is a perfectly flat surface that extends forever in all directions.



A **segment**, or line segment, is the part of a line between two points.



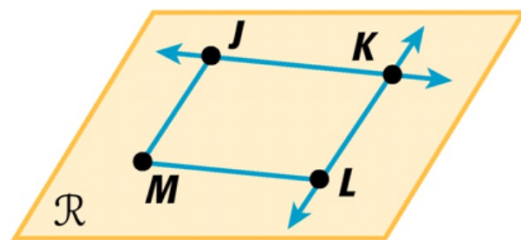
A **ray** is a part of a line that starts at one point and extends forever in one direction.



**Name 4 points in the figure.**

**Name a line in the figure.**

**Name a plane in the figure.**

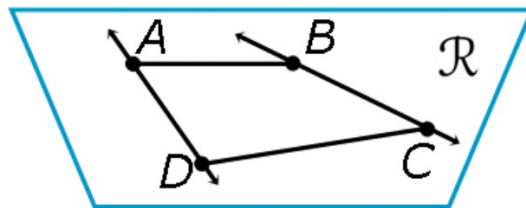


**Name four segments in the figure.**

**Name four rays in the figure.**

**Name 4 points in the figure.**

**Name a line in the figure.**



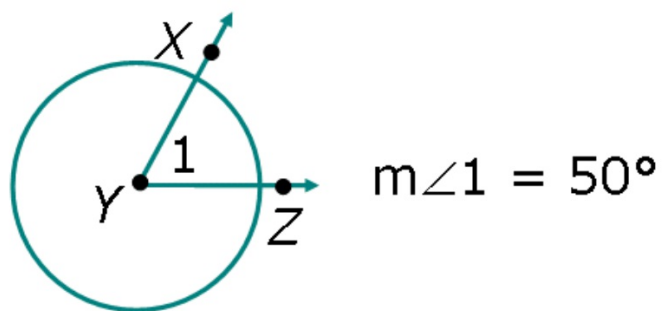
**Name a plane in the figure.**

**Name four segments in the figure**

**Name four rays in the figure**

An **angle** ( $\angle$ ) is formed by two rays with a common endpoint called the *vertex* (plural, *vertices*). Angles can be measured in degrees.

One degree, or  $1^\circ$ , is  $\frac{1}{360}$  of a circle.  $m\angle 1$  means the measure of  $\angle 1$ . The angle can be named  $\angle XYZ$ ,  $\angle ZYX$ ,  $\angle 1$ , or  $\angle Y$ . The vertex must be the middle letter.



A **right angle** measures  $90^\circ$ .

An **acute angle** measures less than  $90^\circ$ .

An **obtuse angle** measures greater than  $90^\circ$  and less than  $180^\circ$ .

**Complementary angles** have measures that add to  $90^\circ$ .



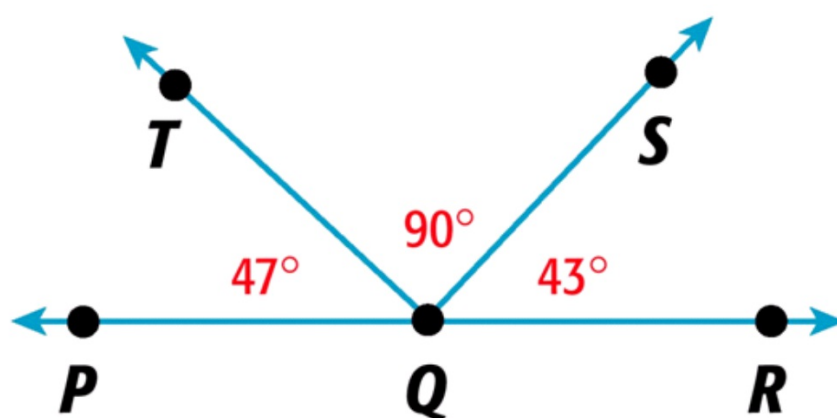
**Supplementary angles** have measures that add to  $180^\circ$ .





**Name a right angle in the figure.**

**Name two acute angles in the figure.**

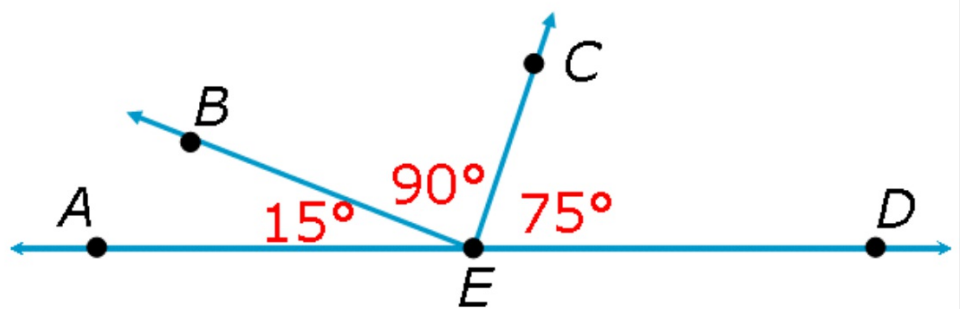


**Name two obtuse angles in the figure.**

**Name two pairs of supplementary angles.**

**Name two acute angles in the figure.**

**Name two obtuse angles in the figure.**



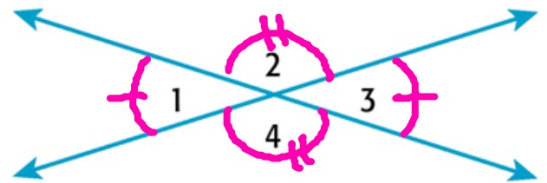
**Congruent** figures have the same size and shape.

- Segments that have the same length are congruent.
- Angles that have the same measure are congruent.
- The symbol for congruence is  $\cong$ , which is read "is congruent to."

Intersecting lines form two pairs of **vertical angles**. Vertical angles are always congruent, as shown in the next example.

**In the figure,  $\angle 1$  and  $\angle 3$  are vertical angles, and  $\angle 2$  and  $\angle 4$  are vertical angles.**

**A. If  $m\angle 1 = 37^\circ$ , find  $m\angle 3$ .**



The measures of  $\angle 1$  and  $\angle 2$  add to  $180^\circ$  because they are supplementary, so  $m\angle 2 = 180^\circ - 37^\circ = 143^\circ$ .

### Lesson Quiz

In the figure,  $\angle 1$  and  $\angle 3$  are vertical angles, and  $\angle 2$  and  $\angle 4$  are vertical angles.

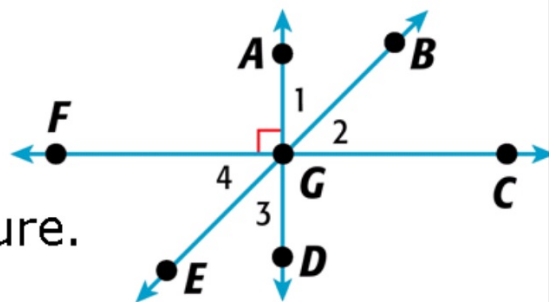
1. Name three points in the figure.

2. Name two lines in the figure.

3. Name a right angle in the figure.

4. Name a pair of complementary angles.

5. If  $m\angle 1 = 47^\circ$ , then find  $m\angle 3$ .



## Lesson Quiz

In the figure,  $\angle 1$  and  $\angle 3$  are vertical angles, and  $\angle 2$  and  $\angle 4$  are vertical angles.

1. Name three points in the figure.

Possible answer:  $A$ ,  $B$ , and  $C$

2. Name two lines in the figure.

Possible answer:  $\overleftrightarrow{AD}$  and  $\overleftrightarrow{BE}$

3. Name a right angle in the figure.

Possible answer:  $\angle AGF$

4. Name a pair of complementary angles.

Possible answer:  $\angle 1$  and  $\angle 2$

5. If  $m\angle 1 = 47^\circ$ , then find  $m\angle 3$ .

$47^\circ$

