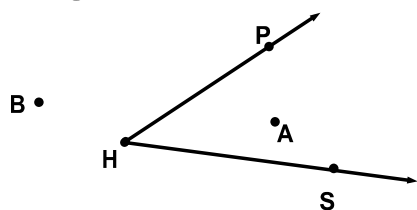
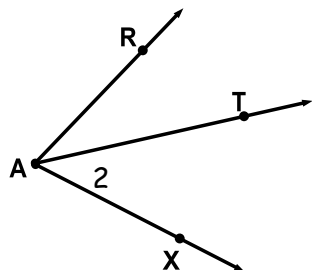


Week 4 Monday Notes

Angles and their Measures



H is the Vertex of $\angle PHS$.
 \overrightarrow{HP} & \overrightarrow{HS} are the sides of the angle. A is a point in the interior of the angle. B is a point in the exterior of the angle.



Name 3 different angles:

$\angle RAX$ Could also have:
 $\angle RAT$ $\angle 2$ $\angle TAR$
 $\angle TAX$ $\angle XAT$ $\angle XAR$

Angle Addition Postulate:

$$m\angle RAT + m\angle TAX = m\angle RAX$$

Measures are Equal

$$m\angle BAC = m\angle DEF$$

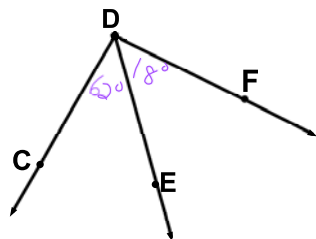
"is equal to"

Angles are Congruent

$$\angle BAC \cong \angle DEF$$

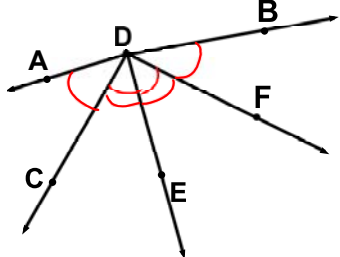
"is congruent to"

Example 1:



$m\angle CDE = 62^\circ$
 $m\angle EDF = 18^\circ$
 Find $m\angle CDF$
 $62 + 18 = 80^\circ$

Example 2:



- a. $\angle CDE \cong \angle FDE$
- b. $\angle ADC \cong \angle BDF$
- c. If $m\angle CDE = 48^\circ$, then $m\angle EDF = 48^\circ$
- d. If $m\angle ADC = 40^\circ$, then $m\angle BDF = 40^\circ$

Week 4 Monday Notes

Types of angles: Make a sketch for each type of angle listed.

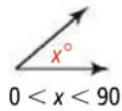
acute

right

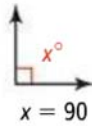
obtuse

straight

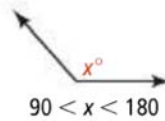
acute angle



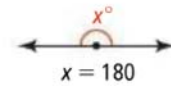
right angle



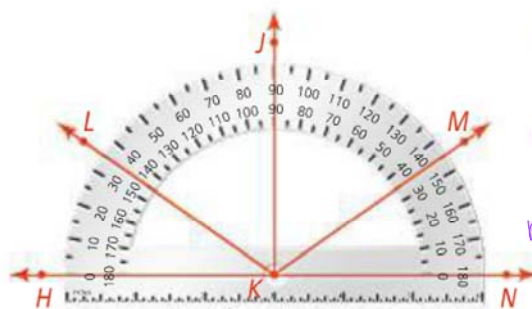
obtuse angle



straight angle



What are the measures of $\angle LKN$, $\angle JKL$, and $\angle JKN$? Classify each angle as *acute*, *right*, *obtuse*, or *straight*.



$$m\angle LKN = 145^\circ$$

obtuse

$$m\angle JKL = 55^\circ$$

acute

$$m\angle JKN = 90^\circ$$

Right

Example:

$\angle DEF$ is a straight angle. What are $m\angle DEC$ and $m\angle CEF$? $\approx 180^\circ$

$$m\angle DEC + m\angle CEF = m\angle DEF$$

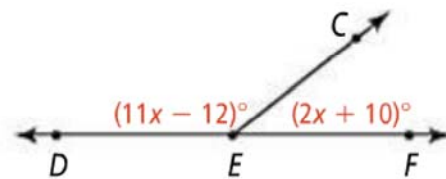
$$11x - 12 + 2x + 10 = 180^\circ$$

$$13x - 2 = 180$$

$$+2 \quad +2$$

$$\frac{13x}{13} = \frac{182}{13}$$

$$x = 14$$



$$m\angle DEC = 11(14) - 12 = 154 - 12 = 142^\circ$$

$$m\angle CEF = 2(14) + 10 = 28 + 10 = 38^\circ$$