Angle Measure classwork

• **Degree**: $\frac{1}{360}$ of a turn around a circle



- Ray: part of a line
 - It has one endpoint and extends indefinitely in one direction.
 - Rays are named stating the endpoint first then any other point on the ray.



• **Opposite rays**: two rays extending from a common point on a line

- Angle: a figure consisting of two noncollinear ______ with a common______
 - Vertex the common_____ of the rays of an angle
 - Sides the _____ forming an angle

Angles:

An angle separates a plane into three distinct parts

- Interior
- Exterior
- The angle itself

Naming angles

- Use a single _____ or _____
- Triplet of _____ (center letter is the vertex) if there is any possible ambiguity regarding angle to which you refer.





Ex #2: Use the figure to answer the following.

- a) Name all the angles that have W as a vertex.
- b) Name the sides of $\angle 1$.
- c) Write another name for $\angle WYZ$.
- d) Name a pair of opposite rays.



- **Congruent angles**: angles that have the same measure.
 - Arcs on the figure indicate which angles are congruent.
 - If $m \angle ABC = m \angle DEF$, then it is said that $\angle ABC \cong \angle DEF$.
- Angle bisector: a ray that divides an angle into ______ is called an angle bisector.

<u>Ex #3</u>: In the figure, \overrightarrow{YX} and \overrightarrow{YZ} are opposite rays. \overrightarrow{YU} bisects $\angle ZYW$ \overrightarrow{YT} bisects $\angle XYW$.



a) If $m \angle 1 = 5x + 10$ and $m \angle 2 = 8x - 23$, find $m \angle 2$.

b) If $m \angle WYZ = 82$ and $m \angle ZYU = 4r + 25$, find r.

c) If $\angle ZYW$ is a right angle and $m \angle ZYU = 13a - 7$, find *a*.