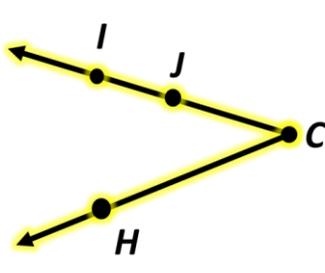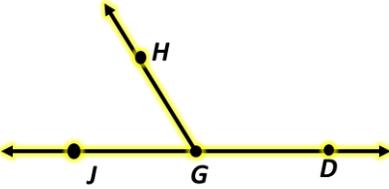1-3 – Measuring and Constructing Angles
"I WILL …
…use the properties of quadratics to solve segments."

I. Definitions
    A. _____ is a figure formed by two rays, or sides, with a common midpoint
    B. _____ is the central part of the angle
    C. _____ of an angle is located inside of the angle
    D. _____ of an angle is set of the points outside of the angle

Ex 1: Name all of the angles in the picture in all possible ways.	Ex 2: Name all of the angles in the picture in all possible ways.	Your Turn: Name all of the angles in the picture in all possible ways.
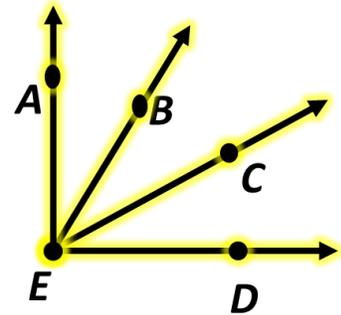
II. How to use a Protractor

Step 1: Place the center mark of the protractor on the vertex.

Step 2: Line up the 0-mark with one side of the angle.

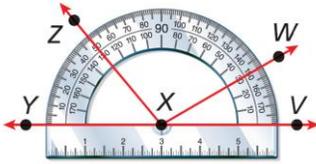**Step 3:** Read the measure on the protractor scale.
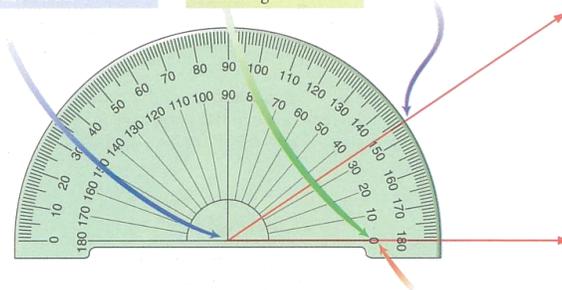
Step 4: Be sure you read the scale that has the 0-mark you are using! The angle in the diagram measures 34° and not 146°.

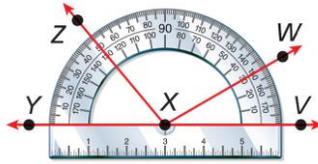| Ex 3: Use a protractor to draw an angle having a measure of 135°.	Your Turn: Use a protractor to draw an angle having a measure of 75°.

III. Types of Angles

    A. _____ is an angle which measures greater than 0° but less than 90°

    B. _____ is an angle which measures 90°

    C. _____ is an angle which measures greater than 90° but less than 180°

   D. _____ is an angle formed by two opposite rays and measures 180°

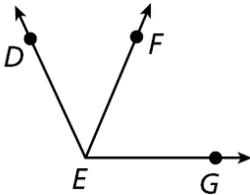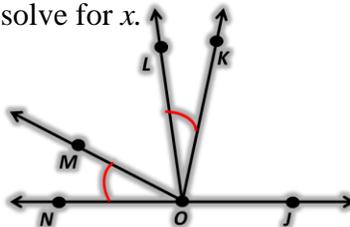| Ex 4: Given below, estimate the measurement of $\angle WXV$ and classify the angle as acute, right, obtuse, or straight.	Ex 5: Given below, estimate the measurement of $\angle ZXW$ and classify the angle as acute, right, obtuse, or straight.	Your Turn: Given below, estimate the measurement of $\angle DOB$ and classify the angle as acute, right, obtuse, or straight.
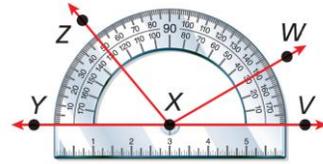
IV. Definitions

    A. _____are angles that have the same measure

        1. Arc marks are used to show that the two angles are congruent

        2. Arc marks are associated with angles whereas ticks are associated with rays or segments

    B. _____is where two inscribed angles whose lengths are added together to get the length of the entire angle

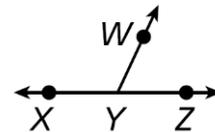   C. _____is a ray that divides an angle into two congruent angles

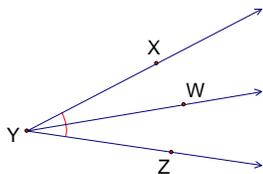| Ex 6: $m\angle DEG = 121°$ and $m\angle DEF = 48°$. Find $m\angle FEG$ and justify answer.	Ex 7: Given that $m\angle JOK = 38°$, $m\angle KOL = (5x + 10)°$, and $m\angle LOM = (3x - 8)$, solve for x.	Your Turn: Given that $m\angle WYZ = (2x - 5)°$, $m\angle XYW = (3x + 10)°$, and $m\angle XYZ$ is a straight angle, solve for $m\angle WYZ$ and justify.

V. Angle Bisector

A. An _____ is a ray that divides an angle into two congruent angles.

Ex 8: In the diagram, $\overrightarrow{YW}$ bisects $\angle XYZ$. $m\angle XYW = (4x + 6)°$ and $m\angle WYZ = (7x - 12)°$. Find $m\angle XYZ$ and justify.	Ex 9: In the diagram, $\overrightarrow{QS}$ bisects $\angle PQR$. $m\angle PQS = (5x - 1)°$ and $m\angle PQR = (8x - 12)°$. Find $m\angle PQS$ and justify.	Your Turn: In the diagram, $\overrightarrow{JK}$ bisects $\angle LJM$. $m\angle LJK = (-10x + 3)°$ and $m\angle KJM = (-x + 21)°$. Find $m\angle LJM$ and justify.
X W Y Z		

Page 24: Justify 17, 29, & 31; 18-22 all, 32, 41-44 all