

Cornell Notes	Topic/Objective:	Name:
	1.4 Name, Measure, and Classify Angles	Class/Period: Geometry 1-2
		Date:

Essential Question: What is an angle? What types of angles?

Questions:

What is an angle?

Notes: An angle consist of two different rays with the same endpoint

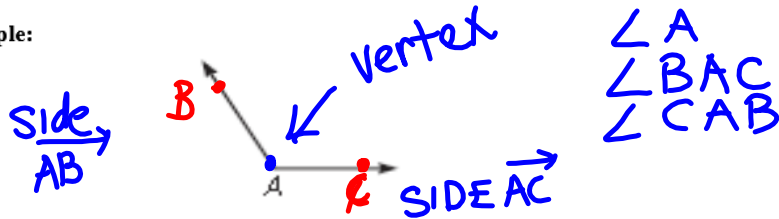
What are the sides of an angle?

The sides of an angle are the rays that form the angle.

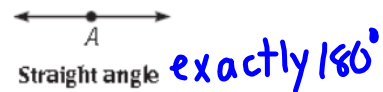
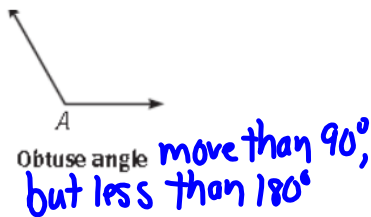
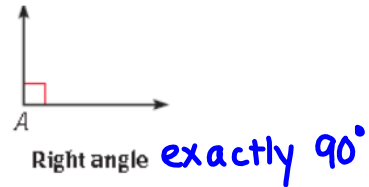
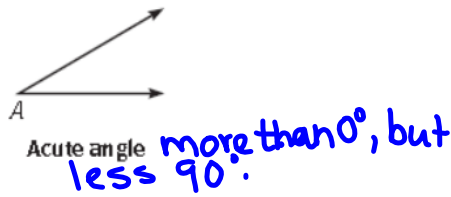
What is the vertex of an angle?

The vertex of an angle is the endpoint where the sides of the angle intersect

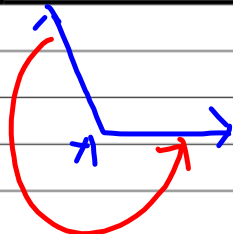
Example:



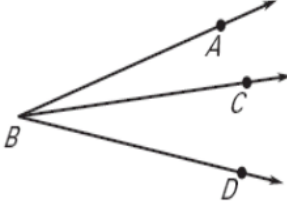
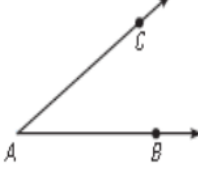
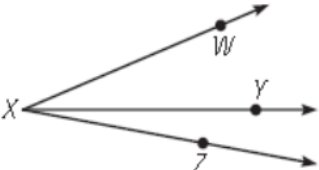
What are the different types of angles?



Summary:



Reflex angle more  $180$ , but less than  $360^\circ$ .

Examples:	Notes:
<p><b>Example 1:</b></p>	<p><b>Name the angles in the diagrams.</b></p> <p><b>a.</b></p>  <p><math>\angle ABC</math> or <math>\angle CBA</math>  <math>\angle CBD</math> or <math>\angle DBC</math>  <math>\angle ABD</math> or <math>\angle DBA</math></p> <p><b>b.</b></p>  <p><math>\angle A</math> or <math>\angle CAB</math>  <u><math>\angle BAC</math></u></p> <p><b>POSTULATE 4: ANGLE ADDITION POSTULATE</b></p>  <p>If <b>Y</b> is in the interior of <math>\angle \underline{WXZ}</math>, then the measure of <math>\angle \underline{WXZ}</math> is equal to the <b>sum</b> of the measures of <math>\angle \underline{WXY}</math> and <math>\angle \underline{YXZ}</math>.</p> <p><math>\angle WXZ = \angle WXY + \angle YXZ</math></p>

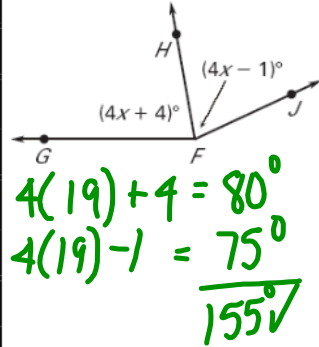
Examples:

Example 2:

Notes:

**Find angle measures**

Given that  $m\angle GFJ = 155^\circ$ , find  $m\angle GFH$  and  $m\angle HFJ$ .



$$m\angle GFH = 4(19) + 4 = 80^\circ$$

$$m\angle HFJ = 4(19) - 1 = 75^\circ$$

$$\underline{155^\circ \checkmark}$$

$$\angle GFJ = \angle GFH + \angle HFJ$$

$$155^\circ = 4x + 4^\circ + 4x - 1^\circ$$

$$155^\circ = 8x + 3^\circ$$

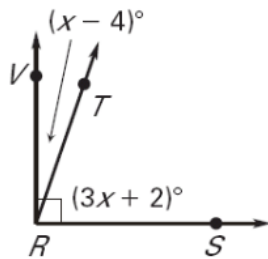
$$\begin{array}{r} - 3 \\ \hline 152^\circ = 8x \end{array}$$

$$\frac{152^\circ}{8} = \frac{8x}{8}$$

$$19^\circ = x$$

**Checkpoint Complete the following exercise.**

Given that  $\angle VRS$  is a right angle, find  $m\angle VRT$  and  $\angle TRS$ .



$$m\angle VRT = 23^\circ - 4^\circ = 19^\circ$$

$$m\angle TRS = 3(23^\circ) + 2^\circ = 71^\circ$$

$$\underline{90^\circ \checkmark}$$

$$\angle VRS = \angle VRT + \angle TRS$$

$$90^\circ = x - 4 + 3x + 2$$

$$90^\circ = 4x - 2$$

$$\begin{array}{r} + 2 \\ \hline 92^\circ = 4x \end{array}$$

$$\frac{92^\circ}{4} = \frac{4x}{4}$$

$$23^\circ = x$$

Summary:

Examples:

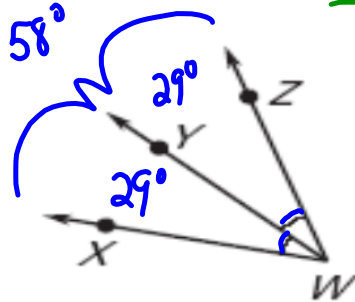
Example 3:

\* bisects  
is to break  
into 2 equal  
parts.

Notes:

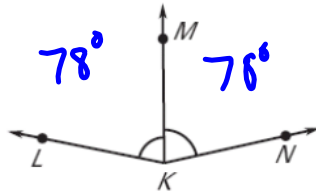
Double an angle measure

In the diagram at the below,  $\overrightarrow{WY}$  bisects  $\angle XWZ$ , and  $m\angle XWY = 29^\circ$ . Find  $m\angle XWZ$ .



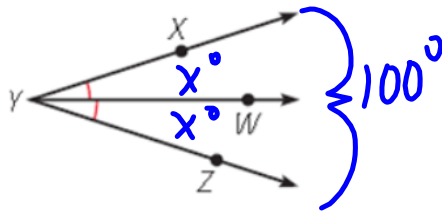
$$\begin{aligned} m\angle XWZ &= m\angle XWY + m\angle YWZ \\ &= 29^\circ + 29^\circ \\ &= 58^\circ \end{aligned}$$

In the diagram below,  $\overrightarrow{KM}$  bisects  $\angle LKN$  and  $m\angle LKM = 78^\circ$ . Find  $m\angle LKN$ .



$$\begin{aligned} m\angle LKN &= m\angle LKM + m\angle MKN \\ &= 78^\circ + 78^\circ \\ &= 156^\circ \end{aligned}$$

In the diagram below  $\angle XWZ$  is bisected by  $\overrightarrow{WY}$ , find the measures of  $\angle XWZ$ , and  $m\angle XWY$  if  $\angle XYZ = 100^\circ$ .



$$\begin{aligned} 2x &= 100^\circ \\ x &= \frac{100^\circ}{2} = 50^\circ \end{aligned}$$

Summary: Lesson 1.4- Measuring and classifying angles Worksheet.

