

Guided Notes
Geometry Section 1.4

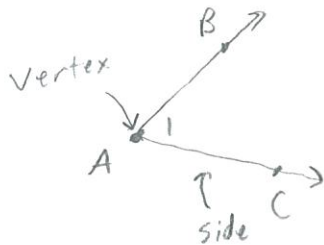
Name: _____

Section 1.4 - Measuring Angles

Angle -

is formed by 2 rays with the same endpoint

Diagram:



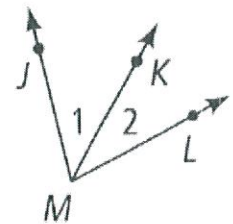
Angle Name:

$\angle A$, $\angle BAC$, $\angle CAB$, or $\angle 1$

Example 1:

- What are two other names for $\angle 1$?
 $\angle JMK$, $\angle KMJ$
- What are two other names for $\angle KML$?
 $\angle LMK$, $\angle 2$
- Would it be correct to name any of the angles $\angle M$? Explain.

vertex is always middle letter.



No. More than one angle exists at M, so we have to be more specific

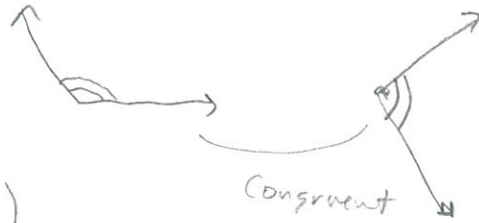
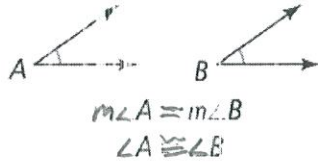
Types of Angles

<p>Type: Acute $0^\circ < x < 90^\circ$</p>	<p>Type: Right $x = 90^\circ$</p>	<p>Type: Obtuse $90^\circ < x < 180^\circ$</p>	<p>Type: Straight $x = 180^\circ$</p>
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Congruent Angles

Congruent Angles -	Angles w/ the same measure
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Diagram:



Angles are congruent (\cong)
Measures of the angles are equal ($=$)

Angle Addition Postulate

If B is in the interior of $\angle AOC$, then $m\angle AOB + m\angle BOC = m\angle AOC$	
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Example 2: If $m\angle RQT = 155^\circ$, what are $m\angle RQS$ and $m\angle TQS$?

$$m\angle RQS + m\angle TQS = m\angle RQT$$

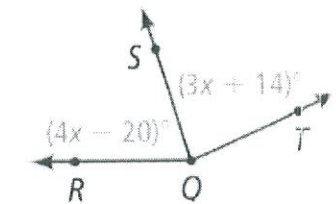
$$4x - 20 + 3x + 14 = 155$$

$$7x - 6 = 155$$

$$7x = 161$$

$$x = 23$$

$$\begin{aligned}
 m\angle RQS &= 4(23) - 20 \\
 &= 92 - 20 \\
 &= 72
 \end{aligned}$$



$$\begin{aligned}
 m\angle TQS &= 3(23) + 14 \\
 &= 69 + 14 \\
 &= 83^\circ
 \end{aligned}$$

Example 3: If $\angle DEF$ is a straight angle, what are $m\angle DEC$ and $m\angle CEF$?

Try on
own

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

$$11x - 12 + 2x + 10 = 180$$

$$13x - 2 = 180$$

$$13x = 182$$

$$x = 14$$

$$\begin{aligned}
 m\angle DEC &= 11(14) - 12 \\
 &= 154 - 12 \\
 &= 142
 \end{aligned}$$

$$m\angle CEF = 180 - 142$$

$$= 38^\circ$$

or plus in x

