## Applications: Geometry (Angles)

<b>[</b>		1	1
Acute angle:	Right angle:	Obtuse angle:	Straight angle:
An angel whose	An angle whose measure is	An angle whose measure	An angle whose measure
measure is greater than	90°	is greater than $90^\circ$ and	is 180°
$0^{\circ}$ and less than $90^{\circ}$		less than 180°	
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Complementary angles:	Supplementary angles:	Vertical angles:	Triangle:
Two angles that form a	Two angles that form a	A pair of opposite angles	An enclosed figure
right angle; the sum of	straight line; the sum of	formed by two	composed of three sides.
their measures add to	their measures add to $180^\circ$	intersecting lines.	1
90°	1	D A B C	
70*		Vertical angles are equal.	The <b>sum</b> of the three angles within the triangle
4 20"		In the picture above, the $C$ and the	13 1 00 .
If one angle is 70 <sup>0</sup> then		$m \angle A = m \angle C$ and the	
the complement of that	If one angle is 60° then the	$m \angle D = m \angle B$ .	
angle is 20°	supplement of that angle is		
angle is 20°.	120 <sup>°</sup> .		



Using these definitions of angles, if one knows the measurement of one angle formed by intersection lines, then the measurements of the other three can easily be determined.

If  $m \angle A = 110^{\circ}$ , then  $m \angle C = 110^{\circ}$  because they are vertical angles. The  $m \angle B = 70^{\circ}$  because  $\angle A$  and  $\angle B$  are supplementary angles. Since  $\angle D$  and  $\angle B$  are vertical angles, then  $m \angle D = 70^{\circ}$ . TRY:

If  $m \angle A = 50^\circ$ , find the complement and the supplement of  $\angle A$ .

Find the measure of the missing angles in:

10x-14 7x+13

Find the measure of the missing angles in:

3x+14 x-2

Four times the complement of an angle is 45  $^\circ$  less than its supplement. Find the measure of the angle, its complement, and its supplement.