

Honors Geometry Chapter 2 Review 2

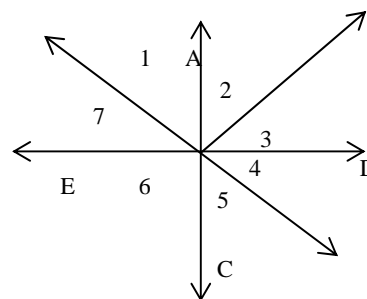
1. Draw the diagram, list the givens and what you need to prove for the following conditional:

If 2 lines intersect, then the vertical angles formed are congruent.

2. The measure of the complement of an angle is 4 less than 3 times the measure of the angle. Find the angle and the supplement of the angle.

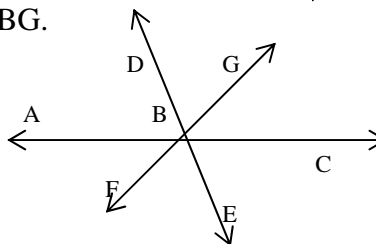
3. Use the diagram to solve for x . $\overline{AC} \perp \overline{ED}$

- a) If $m\angle 2 = 5x$, $m\angle 3 = x + 30$
 b) If $m\angle 1 = 3x + 2$, $m\angle 5 = 6x - 7$
 c) If $m\angle 4 = 5x + 10$, $m\angle 1 = 7x + 4$

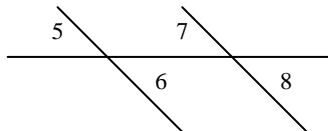


4. State the reason for each statement. \overline{BD} bisects $\angle ABG$.

- a) $AB + BC = AC$
 b) $m\angle ABD = \frac{1}{2} m\angle ABG$
 c) $\angle ABD \cong \angle EBC$
 d) $m\angle ABG + m\angle GBC = 180$
 e) $\overline{FB} \cong \overline{FB}$

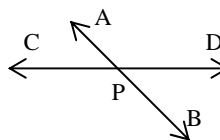


5. Given: $m\angle 6 = m\angle 7$
 Prove: $\angle 5 \cong \angle 8$



Answers:

1. Given: \overline{AB} and \overline{CD} intersect at point P
 Prove: $\angle APC \cong \angle DPB$ and $\angle APD \cong \angle CPB$



2. 23.5 and supple = 156.5
 3. a) 10 b) 3 c) 6.33
 4. a) segment addition b) angle bisector theorem c) vertical angles d) linear pair e) reflexive
 5.

Statements	Reasons
1. \overline{AB} and \overline{CD} intersect at point P	1. Given
2. $m\angle 5 = m\angle 6$, $m\angle 7 = m\angle 8$	2. Vertical angles
3. $m\angle 5 = m\angle 7$	3. Substitution
4. $m\angle 5 = m\angle 8$	4. Transitive
5. $\angle 5 \cong \angle 8$	5. defn of congruent