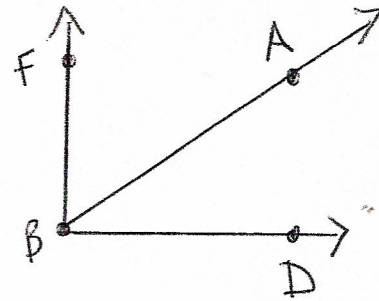
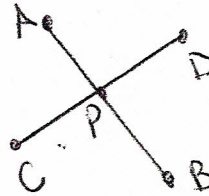


Geometry Honors- Chapter 2 Mixed Review

- 1) Given:  $\angle FBD$  is a right angle  
 Prove:  $\angle FBA$  and  $\angle ABD$  are complementary



- 2) Given:  $\overline{AP} \cong \overline{CP}$  and  $\overline{BP} \cong \overline{DP}$   
 Prove:  $\overline{AB} \cong \overline{CD}$



- 3) Given: M is the midpoint of  $\overline{AB}$   
 Prove:  $AB = 2(AM)$

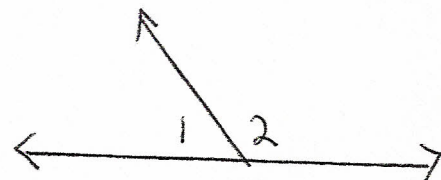


- 4) Given:  $\angle 1$  and  $\angle 2$  are complementary  
 $\angle 3$  and  $\angle 2$  are complementary

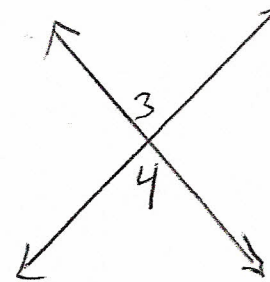
Prove:  $\angle 1 \cong \angle 3$

- 5) Solve and justify each step with an algebraic property:  $-2(x + 4) - 6x = 40 - 2x$   
 6) Give the correct reason for each statement.

<u>Statement</u>	<u>Reason</u>
1) $\angle 1$ and $\angle 2$ are a linear pair	1)
2) $m\angle 1 + m\angle 2 = 180$	2)



<u>Statement</u>	<u>Reason</u>
1) $\angle 3$ and $\angle 4$ are vertical angles	1)
2) $\angle 3 \cong \angle 4$	2)
3) $m\angle 3 = m\angle 4$	3)



- 7) Consider each relationship below and decide it is reflexive, symmetric, and/or transitive.

- a) \_\_\_\_\_ is the "same age as" \_\_\_\_\_  
 b) \_\_\_\_\_ is the "square of" \_\_\_\_\_  
 c) \_\_\_\_\_ is a "reflection of" \_\_\_\_\_

- 8) Write the Converse of the following conditional. Decide if the converse is True or False, if False give a counterexample.

"If two angles are vertical angles, then they are congruent."

- 9) Determine whether a valid conclusion can be reached. If so state the conclusion and the Law of Logic used.

a) If I pass Geometry Honors, then I will take Algebra 2 Honors next year.  
Shelly is taking Algebra 2 Honors next year.

b) If the WHS football team beats St. Bonaventure, then they will beat Newbury Park.  
If the WHS football team beats Newbury Park, then they will win their league.

- 10) Draw Plane A intersecting Planes B and C, with Planes B and C not intersecting.

- 11) Graph  $2x + 3y = 12$  and  $-2x + 6y = 24$ . Find the coordinates of their intersection. Show algebraically that this is the point of intersection.

- 12) Write a bi-conditional statement for the definition of a Regular Polygon.

- 13) Solve for  $x$  and  $y$ .

