Geometry/Trig HW #6 Name_____

1. Conditional Statement: If an angle measures 90 degrees, then it is a right angle.

   Hypothesis:

   Conclusion:

   Converse:

   Is the converse true or false?

   If true, write a biconditional statement. If false give a counterexample.

2. Conditional Statement: If you live in Houston, then you live in Texas.

   Hypothesis:

   Conclusion:

   Converse:

   Is the converse true or false?

   If true, write a biconditional statement. If false give a counterexample.

3. Conditional Statement: If a figure is a rectangle, then it has four sides.

   Hypothesis:

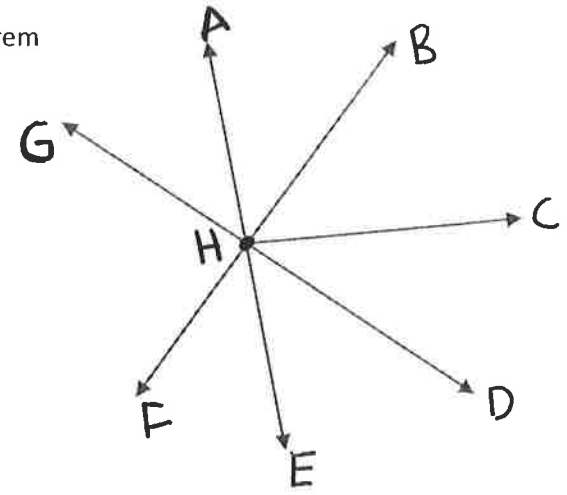
   Conclusion:

   Converse:

   Is the converse true or false?

   If true, write a biconditional statement. If false give a counterexample.

State the postulate, definition, property, or theorem that allows you to draw each conclusion.



1. $\angle AHB \cong \angle EHF$ _____

2. If $\overrightarrow{HC}$ bisects $\angle BHD$, then $m\angle BHC = m\angle CHD$ _____

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3. $GH + HD = GD$ _____

4. If $m\angle GHA + m\angle AHB = 90°$, then $\angle GHA$ and $\angle AHB$ are complementary angles. _____

5. $\overline{HB} \cong \overline{HB}$ _____

6. If H is the midpoint of $\overline{AE}$, then $AH = \frac{1}{2}AE$. _____

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7. If $GH = FH$ and $FH = AH$, then $GH = AH$. _____

8. $m\angle FHE + m\angle EHD = m\angle FHD$. _____

9. If H is the midpoint of $\overline{AE}$, then $\overline{AH} \cong \overline{HE}$. _____

10. If $\overrightarrow{HC}$ bisects $\angle BHD$, then $m\angle BHC = \frac{1}{2}m\angle BHD$.

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11. If $\angle GHC - \angle AHB = \angle FHC - \angle AHB$, then $\angle GHC = \angle FHC$

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