

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

Hypothesis: An angle measures 90 degrees

Conclusion: It is a right angle.

Converse: If an angle is a right angle, then it measures 90°

Is the converse true or false? True

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

An angle is a right angle if and only if it measures 90 degrees.

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

Hypothesis: You live in Houston

Conclusion: You live in Texas

Converse: If you live in Texas, then you live in Houston

Is the converse true or false? False

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

You live in Dallas
or You live in San Antonio

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

Hypothesis: A figure is a rectangle

Conclusion: It has four sides

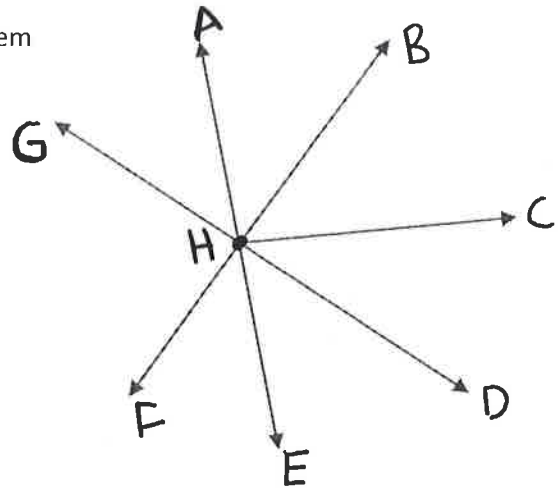
Converse: If it has four sides, then it is a rectangle

Is the converse true or false? False

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

It is a square
or It is a rhombus
or It is a parallelogram

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



1. $\angle AHB \cong \angle EHF$ Vertical Angle Theorem
2. If \overrightarrow{HC} bisects $\angle BHD$, then $m\angle BHC = m\angle CHD$ Definition of angle bisector
3. $GH + HD = GD$ Segment Addition Postulate
4. If $m\angle GHA + m\angle AHB = 90^\circ$, then $\angle GHA$ and $\angle AHB$ are complementary angles. Definition of complementary angles
5. $\overline{HB} \cong \overline{HB}$ Reflexive Property
6. If H is the midpoint of \overline{AE} , then $AH = \frac{1}{2}AE$. Midpoint Theorem
7. If $GH = FH$ and $FH = AH$, then $GH = AH$. Transitive Property
8. $m\angle FHE + m\angle EHD = m\angle FHD$. Angle Addition Postulate
9. If H is the midpoint of \overline{AE} , then $\overline{AH} \cong \overline{HE}$. Definition of midpoint
10. If \overrightarrow{HC} bisects $\angle BHD$, then $m\angle BHC = \frac{1}{2}m\angle BHD$.
Angle Bisector Theorem
11. If $\angle GHC - \angle AHB = \angle FHC - \angle AHB$, then $\angle GHC = \angle FHC$
Addition Property - You are just adding $\angle AHB$ to both sides