

Write each statement as a conditional

Example: The measure of an angle is 90° . So, the angle is a right angle.
If the measure of an angle is 90° , then the angle is a right angle.

- 1) Three points are all located on the same line. So, the points are collinear points.
- 2) Two lines are not on the same plane. So, the lines are skew.
- 3) Two angles are supplementary angles if the sum of their angle measures is equal to 180° .

Identify the hypothesis and the conclusion of each conditional statement.

Example: If two lines intersect at right angles, then the lines are perpendicular.

The hypothesis is "Two lines intersect at right angles."

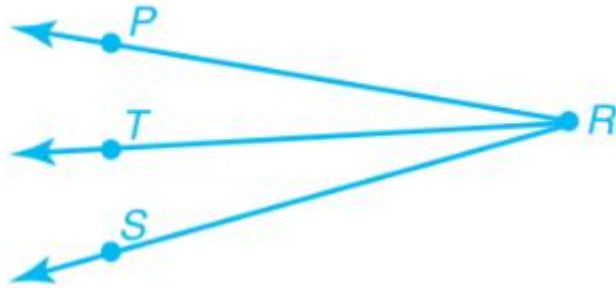
The conclusion is "The lines are perpendicular."

- 4) If the sum of two angles is 180° , then the angles are supplementary.
- 5) If the sum of two adjacent angles is 180° , then the angles form a linear pair.
- 6) If the measure of an angle is 180° , then the angle is a straight angle.

For each conditional statement, draw a diagram and then write the hypothesis as the “Given” and the conclusion as the “Prove.”

If \overrightarrow{RT} bisects $\angle PRS$, then $\angle PRT$ and $\angle SRT$ are adjacent angles.

Example:



Given: \overrightarrow{RT} bisects $\angle PRS$

Prove: $\angle PRT$ and $\angle SRT$ are adjacent angles

7) If $\angle QRS$ and $\angle SRT$ are complementary angles, then $m\angle QRS + m\angle SRT = 90^\circ$.

Given:

Prove:

8) If $\overleftrightarrow{AB} \perp \overline{KJ}$ and \overleftrightarrow{AB} bisects \overline{KJ} , then \overleftrightarrow{AB} is the perpendicular bisector of \overline{KJ} .

Given:

Prove:

9) If \overrightarrow{PG} bisects $\angle FPH$, then $\angle FPG \cong \angle GPH$.

Given:

Prove: