4. When $m\angle A + m\angle B = 90$, $\angle A$ and $\angle B$ are complementary. When $m\angle C + m\angle D = 180$, $\angle C$ and $\angle D$ are supplementary. Complements (or supplements) of the same angle or of congruent angles are congruent.
5. Vertical angles are congruent.
6. Perpendicular lines are two lines that form right angles (90° angles). If two lines are perpendicular, then they form congruent adjacent angles. If two lines form congruent adjacent angles, then the lines are perpendicular.
7. If the exterior sides of two adjacent acute angles are perpendicular, then the angles are complementary.
8. The proof of a theorem consists of five parts, which are listed on page 60.

Chapter Review

Use the conditional: If $m\angle 1 = 120$, then $\angle 1$ is obtuse.

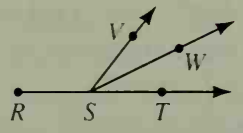
1. Write the hypothesis and the conclusion of the conditional. **2–1**
2. Write the converse of the conditional.
3. Provide a counterexample to disprove the converse.
4. Write a definition of a straight angle as a biconditional.

Justify each statement with a property from algebra or a property of congruence.

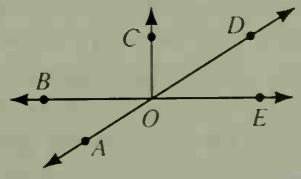
5. If $m\angle A + m\angle B + m\angle C = 180$ and $m\angle C = 50$, then $m\angle A + m\angle B + 50 = 180$. **2–2**
6. If $m\angle A + m\angle B + 50 = 180$, then $m\angle A + m\angle B = 130$.
7. If $6x = 18$, then $x = 3$.
8. If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$, then $\overline{AB} \cong \overline{EF}$.

Name the definition, postulate, or theorem that justifies the statement.

9. If $\overline{RS} \cong \overline{ST}$, then S is the midpoint of $\overline{RT}$. **2–3**
10. If $\overrightarrow{SW}$ bisects $\angle VST$, then $\angle VSW \cong \angle WST$.
11. If $\overrightarrow{SW}$ bisects $\angle VST$, then $m\angle WST = \frac{1}{2}m\angle VST$.



12. If $\angle BOC$ is a right angle and $m\angle COD = 58$, then $m\angle DOE =$ ___?___, $m\angle BOA =$ ___?___, and $m\angle AOC =$ ___?___. **2–4**
13. Name a supplement of $\angle AOE$.



14. A supplement of a given angle is four times as large as a complement of the angle. Find the measure of the given angle.