### Reasons

**Definition of Congruent Triangles (CPCTC)**

Triangles are \( \cong \) iff all corresponding sides and angles are \( \cong \).

\[ \Delta s \text{ are } \cong \text{ iff } \triangle \quad \triangle \]

**Side-Side-Side Postulate (SSS)**

If 3 sets of corresponding sides are \( \cong \), then the \( \Delta s \) are \( \cong \).

If \( \triangle \quad \triangle \), then the \( \Delta s \) are \( \cong \).

**Side-Angle-Side Theorem (SAS)**

If 2 sets of corresponding sides and the set of included angles are \( \cong \), then the \( \Delta s \) are \( \cong \).

If \( \triangle \quad \triangle \), then the \( \Delta s \) are \( \cong \).

**Angle-Side-Angle Theorem (ASA)**

If 2 sets of corresponding angles and the set of included sides are \( \cong \), then the \( \Delta s \) are \( \cong \).

If \( \triangle \quad \triangle \), then the \( \Delta s \) are \( \cong \).

**Angle-Angle-Side Theorem (AAS)**

If 2 sets of corresponding angles and a set of non-included corresponding sides are \( \cong \), then the \( \Delta s \) are \( \cong \).

If \( \triangle \quad \triangle \), then the \( \Delta s \) are \( \cong \).

**Hypotenuse-Leg Theorem (HL)**

If the set of hypotenuses and a set of corresponding legs are \( \cong \), then the right \( \Delta s \) are \( \cong \).

If \( \triangle \quad \triangle \), then the \( \Delta s \) are \( \cong \).