### Linear Pair Congruent Angles Theorem

If two lines intersect to form a linear pair of congruent angles, then the lines are perpendicular.

![Diagram](j, 1, 2, h, 1, 2)

If \( \angle 1 \cong \angle 2 \), then

### Perpendicular Complements Theorem

If two sides of two adjacent acute angles are perpendicular, then the angles are complementary.

![Diagram](j, 1, 2, k, 1, 2)

If \( \overline{jk} \perp \angle 1 \) and \( \angle 1 \cong \angle 2 \), then

### Perpendicular Lines Theorem

If two lines are perpendicular, then they intersect to form four right angles.

![Diagram](j, 4, 1, h, 3, 2)

If \( \overline{hj} \perp \overline{jk} \), then

### Perpendicular Transversal Theorem (from 3-2 notes)

If a transversal is perpendicular to one of two parallel lines, then it is perpendicular to the other.

![Diagram](j, k, h, j, h, k)

If \( \overline{jk} \perp \overline{hk} \), then

**The shortest distance from a point to a line is a segment perpendicular to the line.** We can use this to define the distance from a point to a line.

**EX 1)** Name the shortest distance from \( P \) to \( \overline{AC} \). Then write an inequality to solve for \( x \).

![Diagram](x+3, 5, A, B, C, P)