



Congruence Ex 16.1 Q3

Answer :

We have,

$$\angle POQ \cong \angle ROS \quad (1)$$

$$\text{Also, } \angle ROQ \cong \angle ROQ \quad (\text{same angle})$$

Therefore, adding $\angle ROQ$ to both sides of (1), we get:

$$\angle POQ + \angle ROQ \cong \angle ROQ + \angle ROS$$

$$\text{Therefore, } \angle POR \cong \angle QOS$$

Hence proved.

Congruence Ex 16.1 Q4

Answer :

We have,

$$\angle AOB = \angle BOC = \angle COD$$

$$\text{Therefore, } \angle AOB = \angle COD$$

$$\text{Also, } \angle AOB + \angle BOC = \angle BOC + \angle COD$$

$$\angle AOC = \angle BOD$$

$$\text{Hence, } \angle AOC \cong \angle BOD$$

$\angle BOD$ is congruent to $\angle AOC$

Congruence Ex 16.1 Q5

Answer :

Two right angles are congruent to each other because they both measure 90 degrees.

We know that two angles are congruent if they have the same measure.

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