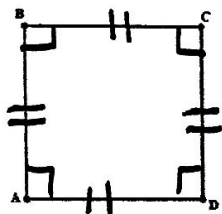


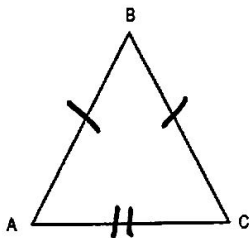
Unit 2 Congruence and Proof

Based on the definition of the given words, what do you know about the diagram?

1. Given square ABCD, I know: 4 lines of symmetry
4 90° angles in the corner
 $\angle A \cong \angle B \cong \angle C \cong \angle D = 90$
4 sides have the same length
 $\overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{DA}$

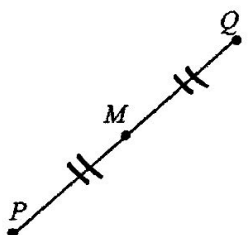


2. Given isosceles triangle ABC with legs \overline{AB} and \overline{BC} , and base \overline{AC} , I know:



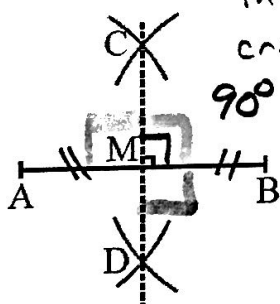
2 sides the same length (legs)
 $\overline{AB} \cong \overline{BC}$

3. Given M is the midpoint of \overline{PQ} , I know:



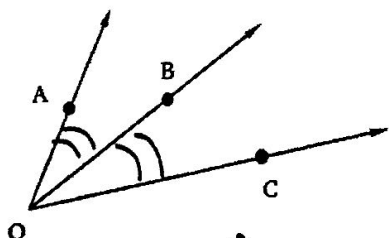
M is in the middle of the segment
 $\overline{PM} \cong \overline{MQ}$

4. Given \overline{CD} is the perpendicular bisector of \overline{AB} , I know:



intersect at the middle (bisector of segment)
creating 4 right angles (perpendicular)
 $90^\circ = \angle CMB \cong \angle DMB \cong \angle DMA \cong \angle CMA$
 $\overline{AM} \cong \overline{MB}$

5. Given \overline{OB} is the angle bisector of $\angle AOC$, I know:



the angle is split through the middle of the angle

$$\angle AOB \cong \angle BOC$$

ex) $m \angle AOC = 70^\circ$
 $m \angle AOB = 35^\circ$
 $m \angle BOC = 35^\circ$