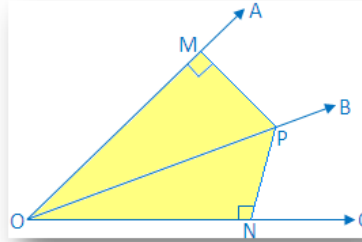
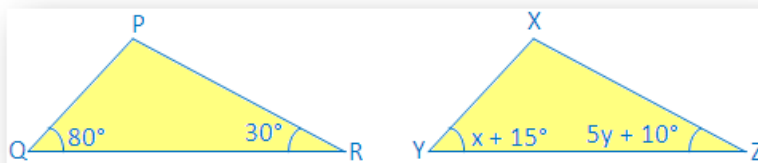


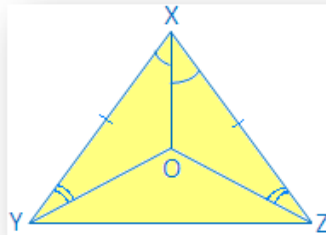
1. OB is the bisector of  $\angle AOC$ ,  $PM \perp OA$  and  $PN \perp OC$ . Show that  $\triangle MPO \cong \triangle NPO$ .



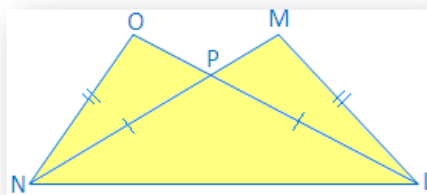
2.  $\triangle PQR \cong \triangle XYZ$  by ASA congruence condition. Find the value of x and y.



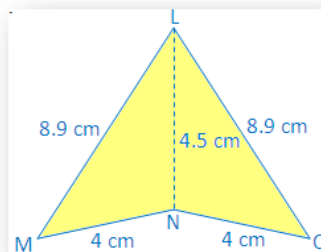
3.  $\triangle XYZ$  is an equilateral triangle such that XO bisects  $\angle X$ . Also,  $\angle XYO = \angle XZO$ . Show that  $\triangle YXO \cong \triangle ZXO$ .



4.  $LM = NO$  and  $LO = MN$ . Show that  $\triangle LON \cong \triangle NML$



5. In the adjoining figure, apply S-S-S congruence condition and state the result in the symbolic form.



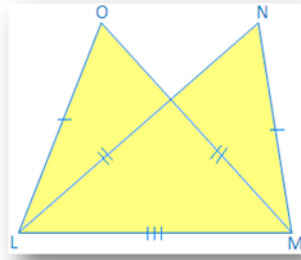
7. By Side Side Side congruence prove that 'Diagonal of the rhombus bisects each other at right angles'.

8. In a quadrilateral LMNP,  $LM = LP$  and  $MN = NP$ .

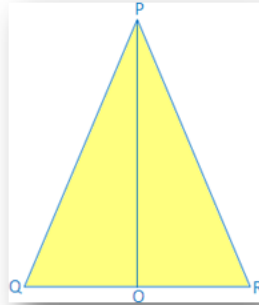
Prove that  $LN \perp MP$  and  $MO = OP$  [O is the point of intersection of MP and LN]

6.  $\triangle OLM$  and  $\triangle NML$  have common base LM,  $LO = MN$  and  $OM = NL$ . Which of the following are true?

- (i)  $\triangle LMN \cong \triangle LMO$
- (ii)  $\triangle LMO \cong \triangle LNM$
- (iii)  $\triangle LMO \cong \triangle MNL$

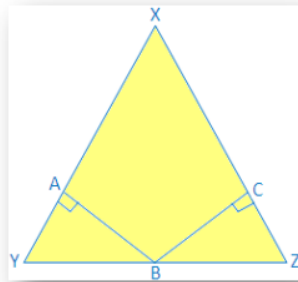


9.  $\triangle PQR$  is an isosceles triangle such that  $PQ = PR$ , prove that the altitude  $PO$  from  $P$  on  $QR$  bisects  $QR$ .



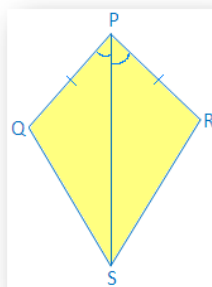
10.  $\triangle XYZ$  is an isosceles triangle such that  $XY = XZ$ , prove that the altitude  $XO$  from  $X$  on  $YZ$  bisects  $YZ$ .

11. In the adjoining figure, given that  $AB = BC$ ,  $YB = BZ$ ,  $BA \perp XY$  and  $BC \perp XZ$ . Prove that  $XY = XZ$

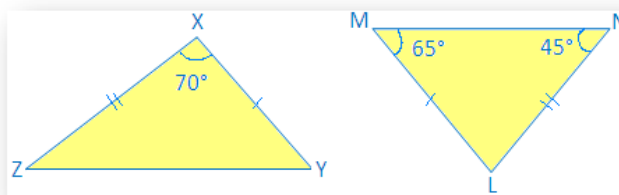


12. In the kite shown,  $PQ = PS$  and  $\angle QPR = \angle SPR$ .

- (i) Find the third pair of corresponding parts to make  $\triangle PQR \cong \triangle PSR$  by SAS congruence condition.
- (ii) Is  $\angle QRP = \angle SRP$ ?



13. Identify the congruent triangle:



14. By using SAS congruency proof that, angles opposite to equal side of an isosceles triangle are equal.

15. Show that bisector of the vertical angle of an isosceles triangle bisects the base at right angle.