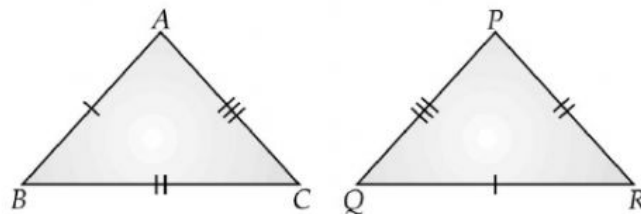


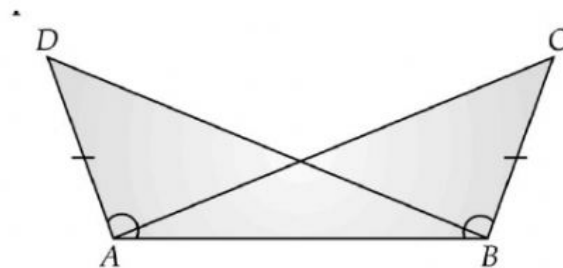
## Concept\_Grade-9\_Triangles

### Congruency Criteria

1. Write ASA congruence rule for two triangles.
2. In  $\triangle ABC$  and  $\triangle DEF$ ,  $AB = DE$ ,  $\angle A = \angle D$ . What will be the condition in which the two triangles will be congruent by SAS axiom?
3. What do we call a triangle if the angles are in the ratio 5 : 3 : 7?
4.  $\triangle ABC \cong \triangle PQR$ ,  $AB = PQ$ . Which statement has been followed in this?
5. In the given figure given below, if  $AB = QR$ ,  $BC = RP$  and  $CA = PQ$ , then.



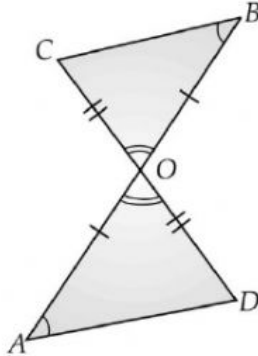
6. In given fig.,  $AD = BC$  and  $\angle BAD = \angle ABC$ , then prove that  $\angle ACB = \angle BDA$



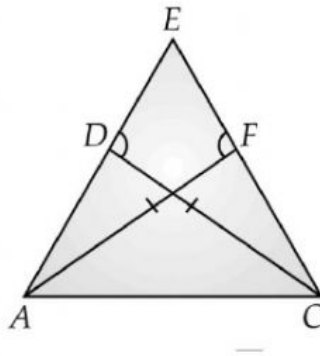
7.  $\triangle PQR \cong \triangle ABC$ , if  $PQ = 5$  cm,  $\angle Q = 40^\circ$  and  $\angle P = 80^\circ$ , calculate the value of  $\angle C$ .

8. In the figure,  $OA = OB$  and  $OD = OC$ . Show that:

- (i)  $\triangle AOD = \triangle BOC$ ,
- (ii)  $AD \parallel BC$



9. In the figure, if  $AF = CD$  and  $\angle AFE = \angle CDE$ , prove that  $EF = ED$ .



10. In the figure,  $BM$  and  $DN$  are both perpendicular to  $AC$  and  $BM = DN$ . Prove that  $AC$  bisects  $BD$ .

