

# MATHEMATICS

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**Class-7th**

**Chapter-7**

**Congruence of  
Triangles**

**Revision**

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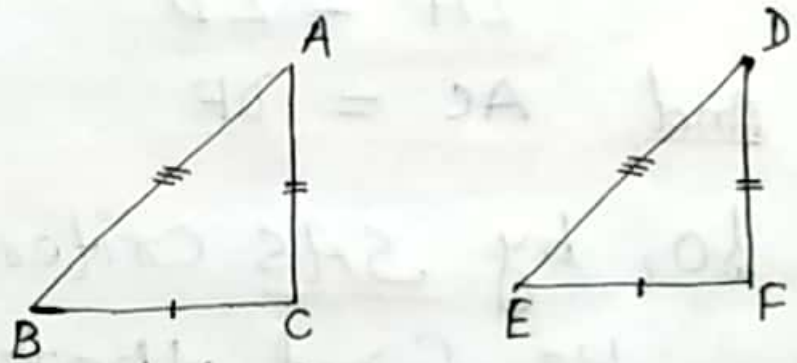


"Mathematics"  
'Class - VII' 'Ch - 07' "Congruence of Triangles"  
'Revision'

"Criteria for congruence of Triangles"

I. SSS Congruence criterion.

If under a given correspondence, the three sides of the triangle are respectively equal to the three sides of another triangle, then the triangles are congruent.



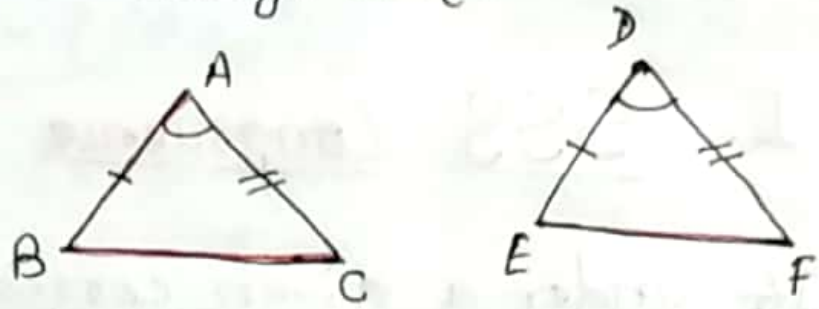
In the adjoining fig, we find that,  
 $AB = DE$ ,  $BC = EF$  and  $CA = FD$   
So, by SSS criterion of congruence,  
We find that  $\triangle ABC \cong \triangle DEF$ .

II. SAS Congruence criterion.

If under a correspondence two sides and the angle included between them of a

triangle are respectively equal to sides and the angle included between them of another triangle, then the triangles are congruent.

In the  
given



fig, we find that,

$$\underline{AB = DE}$$

$$\underline{\angle A = \angle D}$$

And  $\underline{AC = DF}$

So, by SAS criterion of Congruence  
we find that,

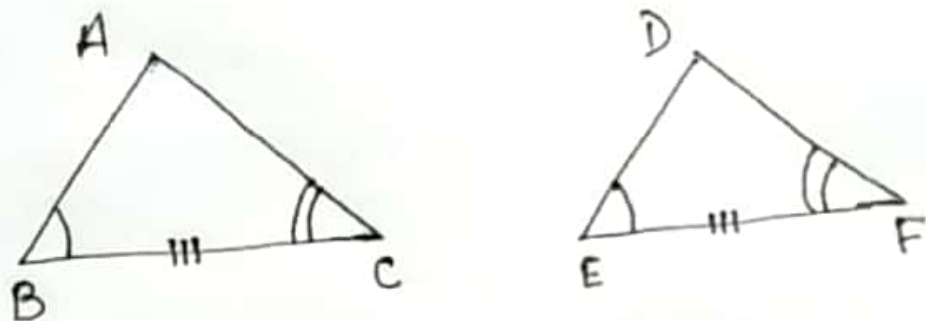
$$\underline{\triangle ABC \cong \triangle DEF}$$

### III. ASA Congruence criterion.

If under a correspondence, two angles & the included side of a triangle are equal to two corresponding angles and the included side of another triangle then the triangles are congruent.

→

In the adjoining fig. We find that,



$$\underline{\angle B = \angle E}, \quad \underline{\angle C = \angle F}$$

And  $\underline{BC = EF}$ .

So, By ASA congruence criterion,  
we find that

$$\underline{\triangle ABC \cong \triangle DEF},$$

#### IV. RHS Congruence criterion.

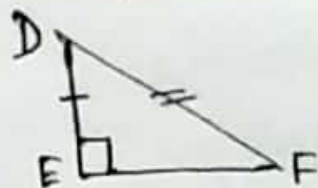
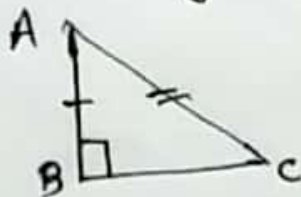
If under a correspondence, the hypotenuse and one side of a right-angled triangle are respectively equal to the hypotenuse and one side of another right-angled triangle, then the triangles are congruent.

In the adjoining fig. we find that,

$$\underline{\angle B = \angle E = 90^\circ}$$

$$\underline{AB = DE} \text{ And}$$

$$\underline{AC = DF}.$$



So, By RHS congruence-criterion, we find that  $\underline{\triangle ABC \cong \triangle DEF}$ .