Congruence of triangle

Congruent Figures: Objects that have exactly the same size and shape are congruent.

Types of congruent figures:

i)Congruence of line segment: If two lines superimpose each other because they have same length, then these lines are said to be congruent.

ii)Congruence of Angles: Two angles are congruent if they have the same measure.

iii)Congruence of Rectangles: Two rectangles are congruent to each other if they have same length and breadth.

iv)Congruence of Squares: Two squares are congruent to each other if they have same length.

v)Congruence of Circle: Two circles are congruent to each other if they have same radius.

vi)Congruence of triangles: Two triangles are congruent to each other if they have same size and shape.

Conditions for congruence of Triangles:

1)SSS(Side-side-side): Two triangles are said to be congruent by SSS congruence condition, if the three sides of one triangle are respectively equal to the corresponding sides of the other triangle.

2)SAS(Side-Angle-Side): Two triangles are said to be congruent by the SAS congruence condition if two sides and the included angle of one triangle are respectively equal to the corresponding sides and the included angle of the other triangle.

3)ASA(Angle-Side-Angle): Two triangles are said to be congruent by the ASA congruence condition,if two angles and the included side of one triangle are respectively equal to the corresponding two angles and the included side of the other triangle.

4)RHS(Right angle-Hypotenuse-side): Two right angled triangles are said to be congruent by RHS congruence condition, if the hypotenuse and one side of one triangle is respectively equal to the corresponding hypotenuse and one side of the other triangle.

Congruence of Area:

Two congruent figures are equal in area, but there can be two figures which are unequal in area and yet they may be congruent.