

TRIANGLES

- Two figures are congruent if they are of the same shape and of the same size.
- Two circles of same radii are congruent.
- Two squares of same side are congruent.

- If two triangles ABC and PQR are congruent under the correspondence $A \leftrightarrow P, B \leftrightarrow Q, C \leftrightarrow R$, then symbolically it is expressed as $\Delta ABC \cong \Delta PQR$.

- SAS congruence

If two sides and the included angle of one triangle are equal to two sides and the included angle of other triangle then the two triangles are congruent.

- ASA congruence

If two angles and the included side of one triangle are equal to two angles and the included side of other triangle, then the two triangles are congruent.

- SSS congruence

If three sides of one triangle are equal to three sides of other triangle, then the two triangles are congruent.

- Angles opposite to equal sides are equal.
- Sides opposite to equal angles are equal.
- Each angle of an equilateral triangle is 60° .
- In a triangle, angle opposite to longer side is greater.
- In a triangle, side opposite to the greater angle is longer.
- Sum of any two sides of a triangle is greater than the third side.
- Exterior angle is greater than either of the interior opposite angles.

- RHS congruence

If in two right triangles hypotenuse and one side of one triangle are equal to the hypotenuse and one side of other triangle then the two triangles are congruent

- AAS congruence

If two angles and one side of one triangle are equal to two angles and the corresponding side of other triangle, then the two triangles are congruent.