Class 7

Important Formulas

Chapter 7 – Congruence of Triangles

1. Two figures are congruent, if they have exactly the same shape and size.

2.

(i) Two line segments are congruent, if they have the same length.

(ii) Two angles are congruent, if they have the same measure.

(iii) Two squares are congruent, if they have the same side length.

(iv) Two rectangles are congruent, if they have the same length and breadth.

(v) Two circles are congruent, if they have the same radius.

3. Two triangles are congruent, if in matching of their vertices, the three sides and the three angles of one triangle are respectively equal to the corresponding parts of the other.

4. SSS Congruence Condition: Two triangles are congruent, if three sides of one triangle are respectively equal to the three sides of the other.

5. SAS Congruence Condition: Two triangles are congruent, if two sides and the included angle of one are respectively equal to the two sides and the included angle of the other.

6. ASA Congruence Condition: Two triangles are congruent, if two angles and the included side of the one are respectively equal to the two angles and the included side of the other.

7. RHS Congruence Condition: Two right triangles are congruent, if the hypotenuse and one side of the one triangle are respectively equal to the hypotenuse and one side of the other

8. In an isosceles triangle, the angles opposite to equal sides are equal.

9. The bisector of the vertical angle of an isosceles triangle bisects the base at right angles.

10. Two congruent figures are equal in area but two figures having the same area need not be congruent.