Congruent Triangles

Criterion

(i) SAS (Side Angle Side)

(ii) ASA (Angle Side Angle)

(iii) AAS (Angle Angle Side)

(iv) SSS (Side Side Side)

(v) RHS (Right Hypolenuese Side)

Congruent Triangles

Properties

(i) Angle opposite to equal sides of an isosceles angle are equal.

(ii) Triangle is isosceles, if bisector of vertical angle bisects the base of triangle.

Inequalities

(i) $a + b > c$, $b + c > a$, $c + a > b$

(ii) $a - b < c$, $b - c < a$, $c - a < b$

(iii) If $a > b$, then $\angle A > \angle B$ & vice versa

e.g. Any 2 side of D are greater than twice the median drawn to third side. In DABC and AD is median so, $AB + AC > 2AD$.