HAND OUT

MODULE 3/3

Std VII MATHEMATICS

CONGRUENCE OF TRIANGLES

1. ASA congruence : Two triangles are congruent, if two angles and the included side of one is equal to the corresponding angles and side of the other. This condition is known as Angle- Side- Angle congruence. In short, we write it as ASA congruence condition.

Note 1. If any two angles of a triangle are equal to the two angles of another triangle, then by angle sum property of the triangles, the third angle will also be equal, so even if the side is not the included side, we may change it to the type, two angles and included side and hence ASA will be applied.

Note 2. Included side is the side on which two consecutive angles lie.

For eg: In ΔABC, $\angle B = 40°$, $\angle C = 60°$, then BC is the included side.

2. RHS Congruence: Two right triangles are congruent, if the hypotenuse and one side of one triangle are respectively equal to the hypotenuse and a side of the other triangle. This condition of congruence is known as Right angle- Hypotenuse- Side congruence. In short we write as RHS congruence condition.

Note : There is no AAA congruence of triangles. Two triangles with equal corresponding angles need not be congruent. In such a correspondence one of them can be an enlarged copy of the other, (they would be congruent only if they are exact copies of one another.

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