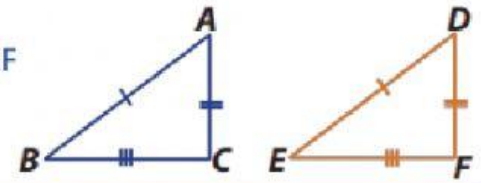
Congruent statements

There are four ways to know whether any given pair of triangles are congruent or not.

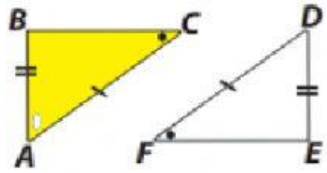
Side, Side, Side (SSS), Side, Angle, Side (SAS)
Angle, Angle, Side (AAS) and Angle, Side, Angle (ASA)

1. ***Side, Side, Side (SSS):*** If the 3 sides of the first triangle are equal to the 3 sides of the second triangle, the triangles are congruent.

In ΔABC and ΔDEF
AB = DE, AC = DF and BC = EF
Therefore,
ΔABC ≅ ΔDEF (by SSS)

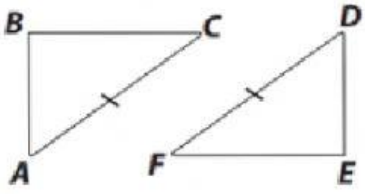


3. ***Angle, Angle, Side (AAS):*** If two angles and the length of a side not contained by them match two angles and the length of a corresponding side not contained by them on the other triangle, the triangles are congruent.



In ΔABC and ΔDEF
∠A = ∠D
∠C = ∠F
AB = DE
Therefore, ΔABC ≅ ΔDEF (by AAS)

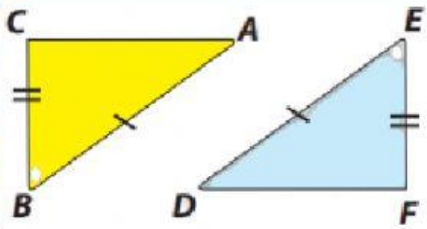
4. ***Angle, Side, Angle (ASA):*** If two angles and the length of the side contained by the angles in one triangle match two angles and the length of the side contained by the angles on the other triangle, the triangles are congruent.



In ΔABC and ΔDEF
∠A = ∠D
AC = DF
∠C = ∠F
Therefore, ΔABC ≅ ΔDEF (by ASA)

LIVEWORKSHEETS

2. *Side, Angle, Side (SAS):* If two sides and the included angle of a triangle are equal to two sides and the included angle of the other triangle, the triangles are congruent.



In ΔABC and ΔDEF

AB = DE

∠B = ∠E

BC = EF

Therefore, ΔABC ≅ ΔDEF (by SAS)

LIVEWORKSHEETS