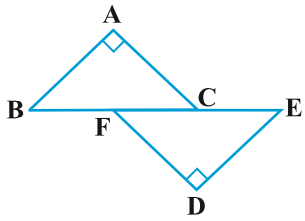
Exercise 7.3

Question 4:

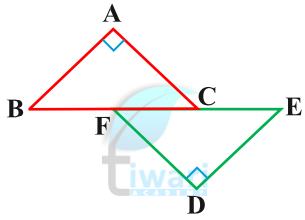
In Figure, BA ⊥ AC, DE ⊥ DF such that BA = DE and BF = EC. Show that ΔABC ≅ ΔDEF.



Answer 4:

Given: BA ⊥ AC, DE ⊥ DF & BA = DE and BF = EC.

To Prove: ΔABC ≅ ΔDEF.



Proof: BF = EC [∵ Given]

Adding FC both sides, we get

BF + FC = EC + FC

⟹ BC = EF

Now, in ΔABC & ΔDEF

∠BAC = ∠EDF [∵ Each 90°]

BC = EF [∵ Proved above]

BA = DE [∵ Given]

ΔABC ≅ ΔDEF [∵ RHS rule]

Hence Proved.