

**Geometric Proofs**  
Emphasis on Similarity by Side – Angle - Side

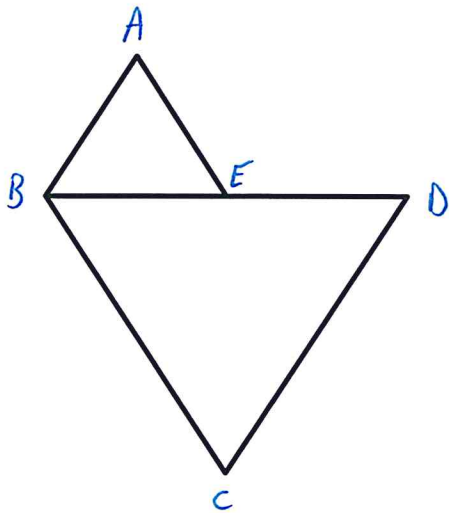
Prove each of the following using Side – Angle - Side:

1. **Given:**  $\angle B$  is bisected by  $\overline{BD}$

$$AB = 4, BE = 6$$

$$CB = 8, ED = 6$$

**Prove:**  $\triangle ABE \sim \triangle CBD$

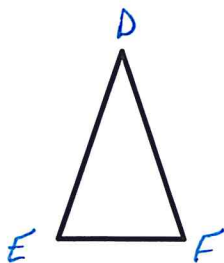
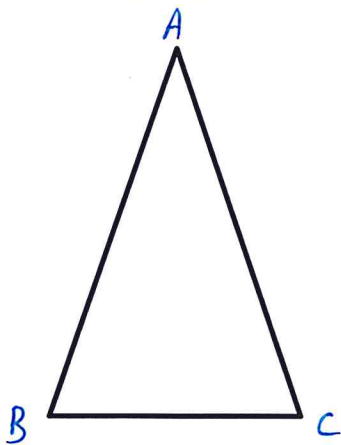


2. **Given:**  $AC = 15, AB = 15$

$$DF = 6, DE = 6$$

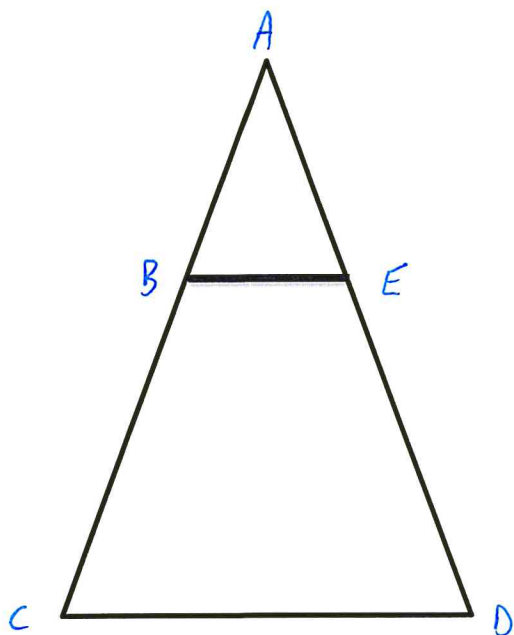
$$\angle A \cong \angle D$$

**Prove:**  $\triangle DEF \sim \triangle ABC$



3. **Given:**  $AB = 3, AE = 3$   
 $BC = 6, ED = 6$

**Prove:**  $\triangle ABE \sim \triangle ACD$



4. **Given:**  $\overline{CE} \perp \overline{AD}$   
 $AE = 3, BE = 4$   
 $DE = 12, CB = 12$   
**Prove:**  $\triangle CDE \sim \triangle BAE$

