

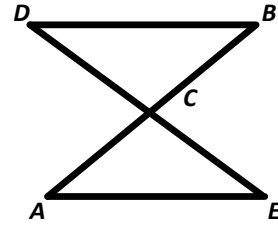
Proving Congruent Triangles

Directions: Write a proof for each.

1. Given: $\angle D \cong \angle E$

C is the midpoint of \overline{DE}

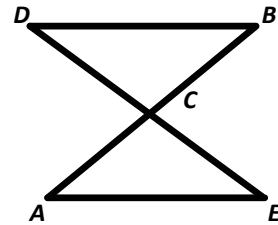
Prove: $\triangle DBC \cong \triangle EAC$



2. Given: \overline{DE} bisects \overline{BA}

\overline{BA} bisects \overline{DE}

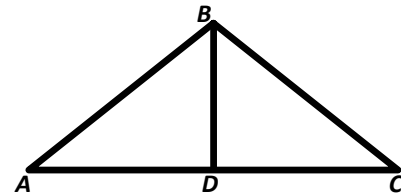
Prove: $\triangle DBC \cong \triangle EAC$



3. Given: $\triangle ABC$ is an isosceles triangle with vertex $\angle ABC$

D is the midpoint of \overline{AC}

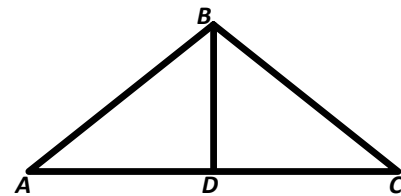
Prove: $\triangle ABD \cong \triangle CBD$



4. Given: $\overline{BD} \perp \overline{AC}$

\overline{BD} bisects \overline{AC}

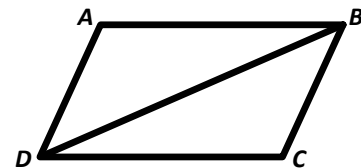
Prove: $\triangle ABD \cong \triangle CBD$



5. Given: $\overline{AB} \parallel \overline{DC}$

$\overline{BC} \parallel \overline{AD}$

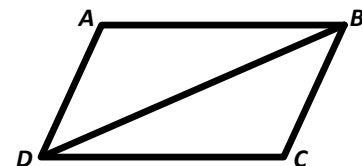
Prove: $\angle A \cong \angle C$



6. Given: $\angle ADB \cong \angle CBD$

$\overline{DA} \cong \overline{BC}$

Prove: $\overline{AB} \cong \overline{CD}$

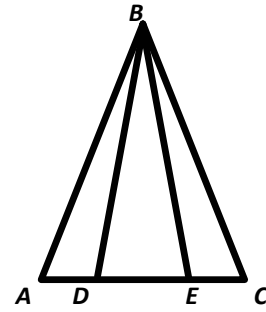


7. Given: $\angle BDE \cong \angle BED$

$$\angle A \cong \angle C$$

$$\overline{AD} \cong \overline{CE}$$

Prove: $\triangle BAE \cong \triangle BCD$

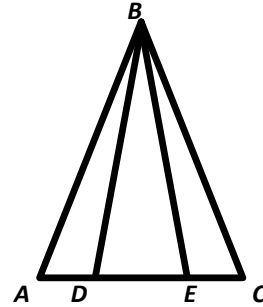


8. Given: $\angle ABE \cong \angle CBD$

$$\angle A \cong \angle C$$

$$\overline{AB} \cong \overline{CB}$$

Prove: $\triangle ABD \cong \triangle CBE$

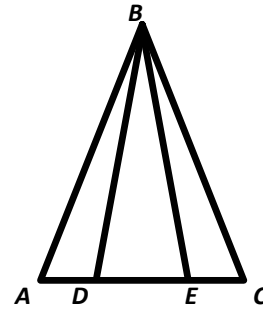


9. Given: $\angle ABD \cong \angle CBE$

$$\angle A \cong \angle C$$

$$\overline{AB} \cong \overline{CB}$$

Prove: $\overline{AE} \cong \overline{CD}$

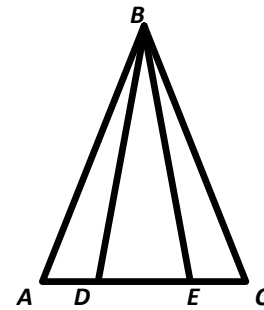


10. Given: $\overline{AE} \cong \overline{CD}$

$$\angle A \cong \angle C$$

$$\overline{AB} \cong \overline{CB}$$

Prove: $\overline{DB} \cong \overline{EB}$

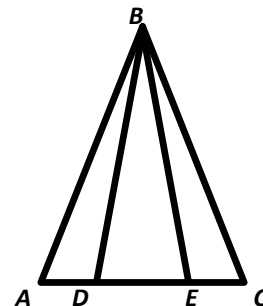


11. Given: $\triangle ABC$ is an isosceles triangle with base \overline{AC}

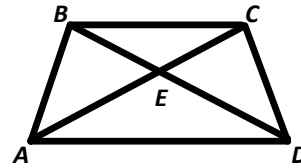
$$\angle BDE \cong \angle BED$$

$$\angle A \cong \angle C$$

Prove: $\triangle ABE \cong \triangle CBD$



12. Given: $\angle ABE \cong \angle DCE$
 $\angle EAD \cong \angle EDA$
Prove: $\overline{BA} \cong \overline{CD}$



13. Given: $\angle A \cong \angle ABE$
 $\angle ECD \cong \angle D$
 $\angle A \cong \angle D$
 $\overline{AE} \cong \overline{DE}$
Prove: $\triangle BEC$ is an isosceles triangle

