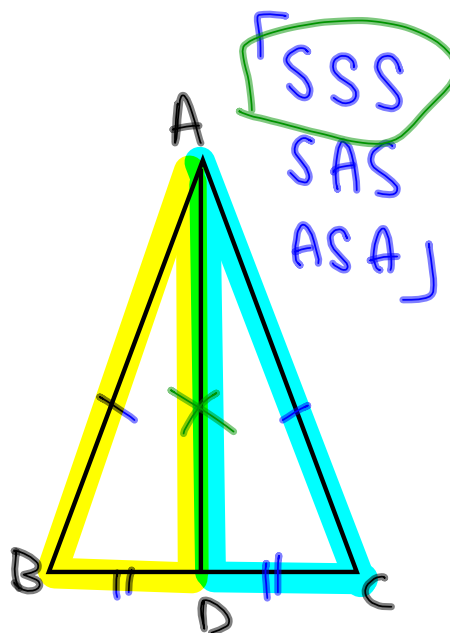How do we show that 2 triangles are congruent?

Do Now
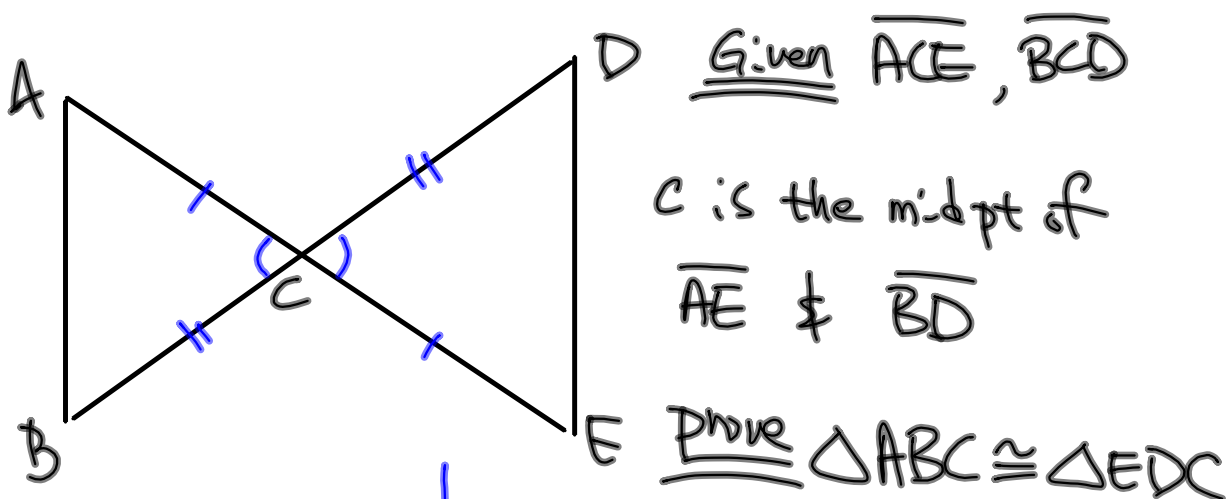
Given $\overline{AB} \cong \overline{AC}$

D is the midpt of $\overline{BC}$.

Show that
$\triangle ABD \cong \triangle ACD$

SSS
SAS
ASA

Statement	Reason
S ① $\overline{AB} \cong \overline{AC}$ D is the midpt of $\overline{BC}$	Given
S ② $\overline{BD} \cong \overline{DC}$	A midpt divides a line seg in to 2 $\cong$ parts.
S ③ $\overline{AD} \cong \overline{AD}$	reflexive prop.
④ $\triangle ABD \cong \triangle ACD$	SSS postulate

A

D <u>Given</u> $\overline{ACE}$, $\overline{BCD}$

C is the midpt of

$\overline{AE}$ & $\overline{BD}$

B

E <u>Prove</u> $\triangle ABC \cong \triangle EDC$

Statement	Reason
① $\overline{ACE}$, $\overline{BCD}$ C is the midpt of $\overline{AE}$ & $\overline{BD}$	Given
② $\overline{AC} \cong \overline{CE}$ $\overline{BC} \cong \overline{CD}$	A midpt divides a line seg in 2 $\cong$ parts.
③ $\angle ACB \cong \angle ECD$	vertical $\angle$'s formed by 2 straight line seg are $\cong$
④ $\triangle ACB \cong \triangle ECD$	SAS