

# Proving Triangles Congruent: SSS and SAS

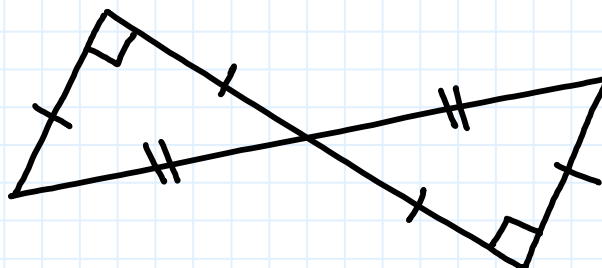
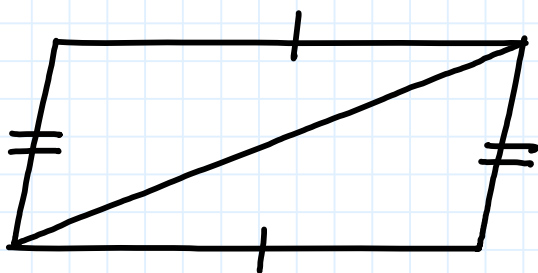
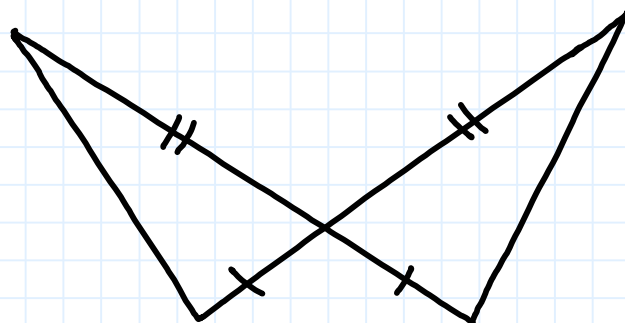
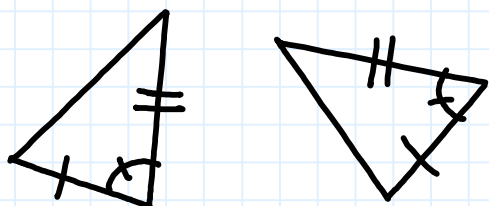


## Overview of problems



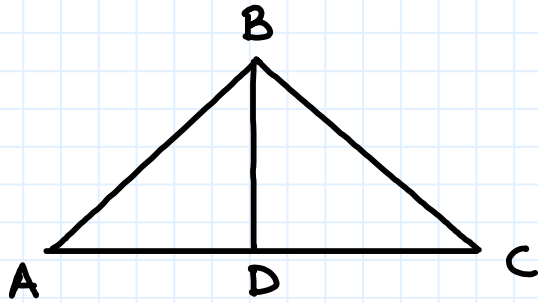
Example Set: A

Determine if the two triangles can be proved congruent





## Example Set: B



Given: D is the midpoint of  $\overline{AC}$ ,  
 $\overline{BD} \perp \overline{AC}$

Prove:  $\triangle ABD \cong \triangle DCB$

# Proving Triangles Congruent: SSS and SAS

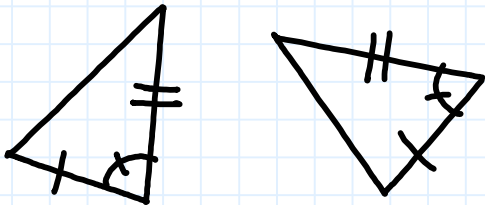


## Overview of problems- KEY

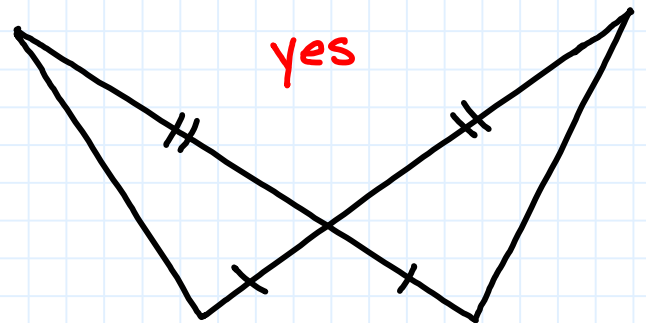


Example Set: A

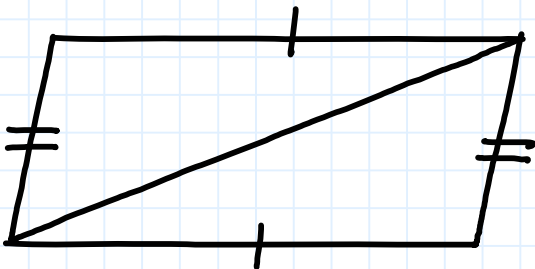
Determine if the two triangles can be proved congruent



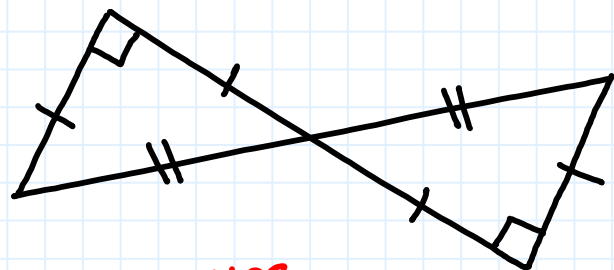
yes



yes



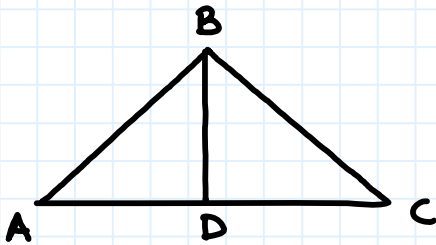
yes



yes



## Example Set: B



Given: D is the midpoint of  $\overline{AC}$ ,  
 $\overline{BD} \perp \overline{AC}$

Prove:  $\triangle ABD \cong \triangle DCB$

Statement	Reason
D is the midpoint between AC	Given
$AD \cong DC$	Def. of midpoint
$\overline{BD} \perp \overline{AC}$	Given
$\angle ADB \cong \angle BDC$	$\perp$ lines form $\cong$ adj. $\angle$ 's
$BD \cong BD$	Ref. Prop.
$\triangle ABD \cong \triangle DCB$	SAS Post.