

Aim: How can we prove quadrilaterals are rectangles?

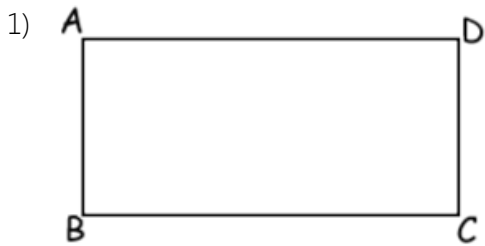
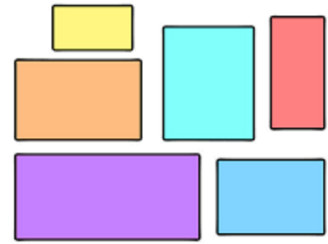
How to **prove** that a quadrilateral is a **rectangle**:

1) **First** show that the quadrilateral is a _____.

2) **Next** show that it has **any one** of the other properties of a rectangle.

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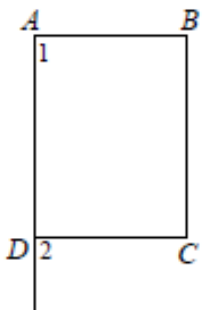
Given: Parallelogram ABCD

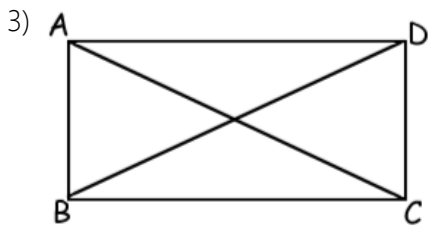
$$AB \perp BC$$

Prove: ABCD is a rectangle

2) Given: $\overline{AB} \cong \overline{DC}$,
 $\angle 1 \cong \angle 2$,
 $\overline{BC} \perp \overline{DC}$

Prove: ABCD is a rectangle.





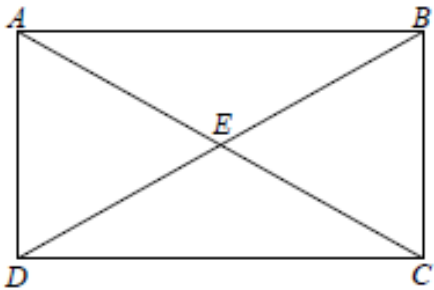
Given: Parallelogram ABCD

$$\triangle ABC \cong \triangle DCB$$

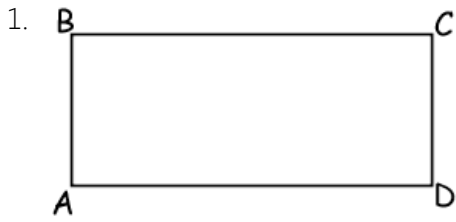
Prove: ABCD is a rectangle

- 4) Given: Right triangle ABC with
right angle ABC ,
 \overline{BE} is a median,
 $\overline{BE} \cong \overline{ED}$

Prove: $ABCD$ is a rectangle.



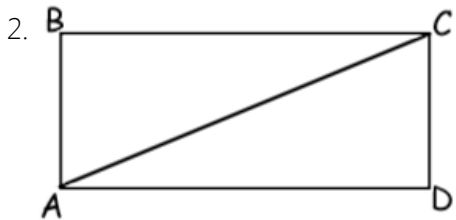
Practice Problems



Given: $AB \cong CD$, $BC \cong AD$

$\angle A$ is a right angle

Prove: ABCD is a rectangle



Given: $\triangle ABC \cong \triangle CDA$

$AB \perp BC$

Prove: ABCD is a rectangle