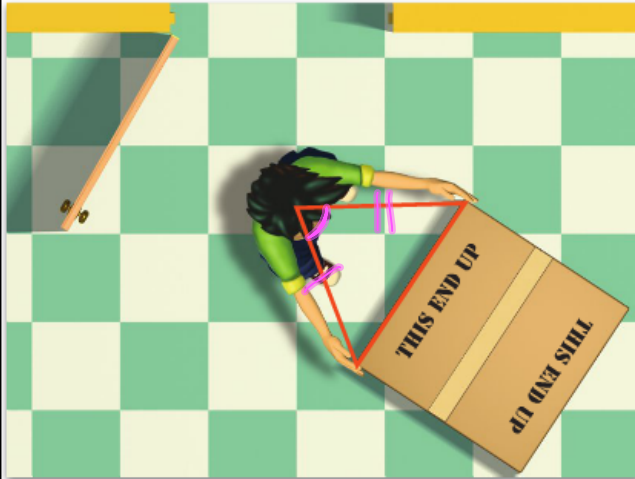


# Geometry

## Chapter 4

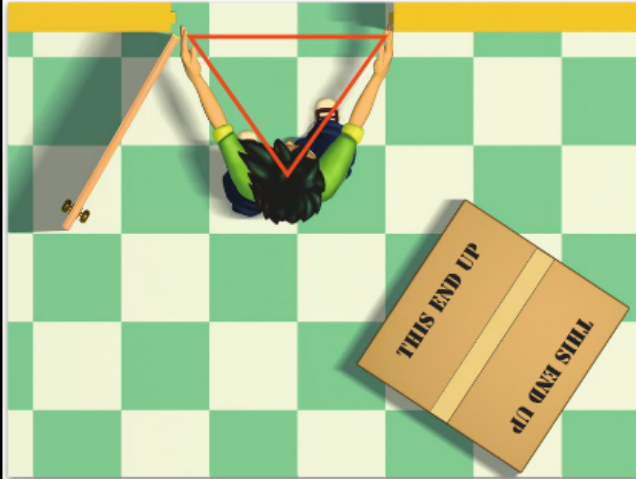
### Section 4-2

May 13-10:02 PM



You measure the width of a box using your arms (which form a triangle). How can you tell if the box will fit through the door?

Oct 16-10:24 PM



You measure the width of a box using your arms (which form a triangle). How can you tell if the box will fit through the door?

Oct 16-10:24 PM

take note

**Postulate 4-2 Side-Angle-Side (SAS) Postulate**

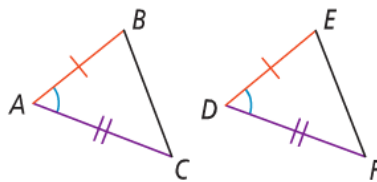
**Postulate**

If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the two triangles are congruent.

If ...

$$\textcircled{1} \overline{AB} \cong \overline{DE}, \angle A \cong \angle D,$$

$$\textcircled{2} \overline{AC} \cong \overline{DF}$$



Then ...

$\triangle ABC \cong \triangle DEF$

Oct 16-10:24 PM

take note

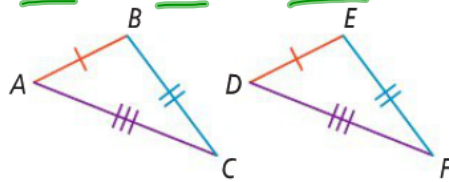
**Postulate 4-1 Side-Side-Side (SSS) Postulate**

**Postulate**

If the three sides of one triangle are congruent to the three sides of another triangle, then the two triangles are congruent.

If ...

$$\overline{AB} \cong \overline{DE}, \overline{BC} \cong \overline{EF}, \overline{AC} \cong \overline{DF}$$



Then ...

$$\triangle ABC \cong \triangle DEF$$

Oct 16-10:23 PM

**Given:**  $\overline{LM} \cong \overline{NP}$ ,  $\overline{LP} \cong \overline{NM}$

**Prove:**  $\triangle LMN \cong \triangle NPL$

$$\overline{LM} \cong \overline{NP}, \overline{LP} \cong \overline{NM}$$

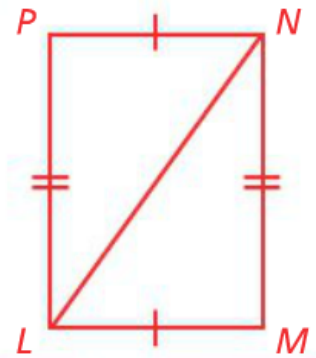
Given

$$\overline{LN} \cong \overline{LN}$$

Reflexive

$$\triangle LMN \cong \triangle NPL$$

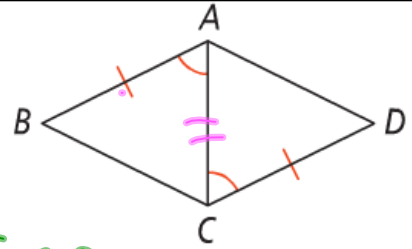
SSS



Oct 16-10:37 PM

**Given:**  $\overline{AB} \cong \overline{CD}, \angle BAC \cong \angle ACD$

**Prove:**  $\triangle ABC \cong \triangle CDA$



$\overline{AB} \cong \overline{CD}, \angle BAC \cong \angle ACD$  Given

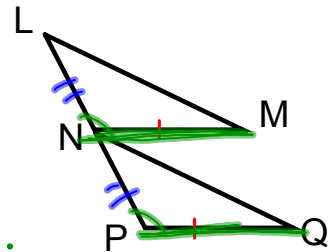
$\overline{AC} \cong \overline{AC}$  Reflexive

$\triangle ABC \cong \triangle CDA$  SAS

Oct 16-10:36 PM

**Given:**  $\overline{NM} \parallel \overline{PQ}$ , N is the midpoint of  $\overline{LP}$

**Prove:**  $\triangle LNM \cong \triangle NPQ$



$\overline{NM} \parallel \overline{PQ}$ , N is midpt of  $\overline{LP}$  Given

①  $\overline{LN} \cong \overline{NP}$

Def. of midpoint

②  $\overline{PQ} \cong \overline{NM}$

Given (Picture)

③  $\angle P \cong \angle LNM$

Corresponding  $\angle$ s Thm

$\triangle LNM \cong \triangle NPQ$

SAS

Oct 8-10:00 PM

# Homework

Pages 230-232

#9 - 10, 16 - 17, 28 - 31

May 13-10:02 PM