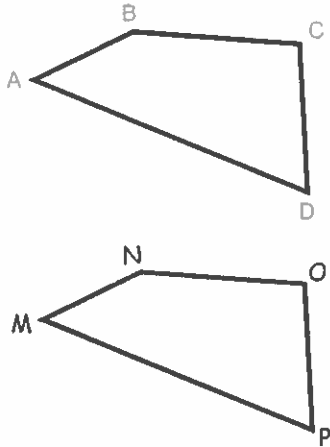


Congruent Figures: ☆ Same Size, Same Shape

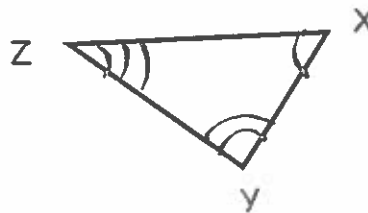
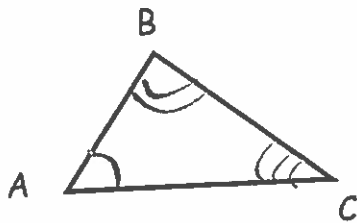
Congruent Polygons: ☆ Corresponding Parts of Congruent Polygons are Congruent. (Definition)

CPCTC



These two figures are congruent.
Write a congruence statement.

$$ABCD \cong MNOP$$



Given: $\triangle ABC \cong \triangle XYZ$

What can you conclude?

$$\angle A \cong \angle X$$

$$\angle B \cong \angle Y, \angle C \cong \angle Z$$

$$\overline{AB} \cong \overline{XY}$$

$$\overline{BC} \cong \overline{YZ}$$

$$\overline{AC} \cong \overline{XZ}$$

Reason

Def. of \cong Polygons ☺ CPCTC

CPCTC

||

p. 119 CE #1-11

$$\triangle FIN \cong \triangle WEB$$

Corresponding Angles

$$\angle F \cong \angle W$$

$$\angle I \cong \angle E$$

$$\angle N \cong \angle B$$

[CPCTC]

Corresponding Sides

$$\overline{FI} \cong \overline{WE}$$

$$\overline{IN} \cong \overline{EB}$$

$$\overline{FN} \cong \overline{WB}$$

Are these statements valid? Explain.

$$\triangle NIF \cong \triangle BEW$$

Yes

$$\triangle INF \cong \triangle EWB$$

No

☆ Reason:

Def. of \cong Polygons

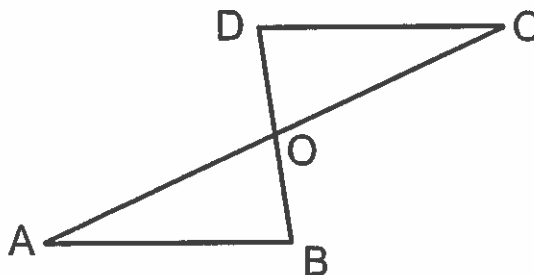
$\angle N$ does not correspond to $\angle W$

$$\triangle ABO \cong \triangle CDO$$

By CPCTC:

$$\angle A \cong \angle C \quad \overline{AO} \cong \overline{CO}$$

$$BO = DO$$

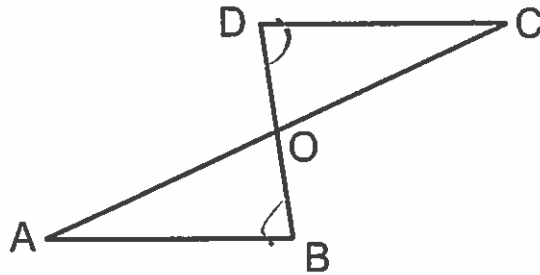


Can you deduce that O is the midpoint of any segment? Explain.

$$\textcircled{1} \overline{AO} \cong \overline{CO}, \overline{BO} \cong \overline{DO} \quad [\text{CPCTC}]$$

$\textcircled{2}$ O is the midpoint of \overline{AC} and \overline{BD} [Def. of midpoint]

Geometry 4.1 and 4.2-Congruent Figures and Proving Triangles Congruent Day 1



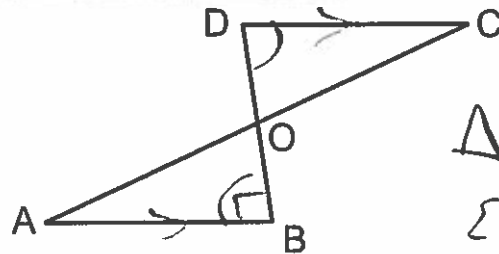
$$\triangle ABO \cong \triangle CDO$$

$$\{G.M.\}$$

Explain how you can deduce that $\overline{DC} \parallel \overline{AB}$

$$\textcircled{1} \angle D \cong \angle B \{CPCTC\}$$

$$\textcircled{2} \overline{DC} \parallel \overline{AB} \{Alt. \text{ Int. } \angle s \text{ Conv.}\}$$



$$\triangle ABO \cong \triangle CDO$$

$$\{G.M.\}$$

$$\textcircled{1} \angle D \cong \angle B \{CPCTC\}$$

$$\textcircled{2} \overline{DC} \parallel \overline{AB} \{Alt. \text{ Int. } \angle s \text{ Conv.}\}$$

Suppose you know that $\overline{DB} \perp \overline{DC}$

Explain how you can deduce that $\overline{DB} \perp \overline{BA}$

option 1:

$$\angle B \text{ is a Rt } \angle \{Def. of \perp\}$$

$$\angle D \text{ is a Rt } \angle \{Rt. \angle s \text{ Trn}\}$$

$$\overline{DB} \perp \overline{BA} \{Def. of \perp\}$$

option 2:

$$\overline{DB} \perp \overline{BA} \{ \perp \text{ Trans } \}$$

Thru

Assignment #29

Part I: R and TN p. 117-118.

p. 120-121 WE #1-11, 20-21, 23 and
Mixed Review #1-2

Part II: p. 114-115

Cumulative Review #14-22, 27-34, 45-46