

# CPCTC

## UNIT 4 LESSON 4

# Match the Corresponding Parts

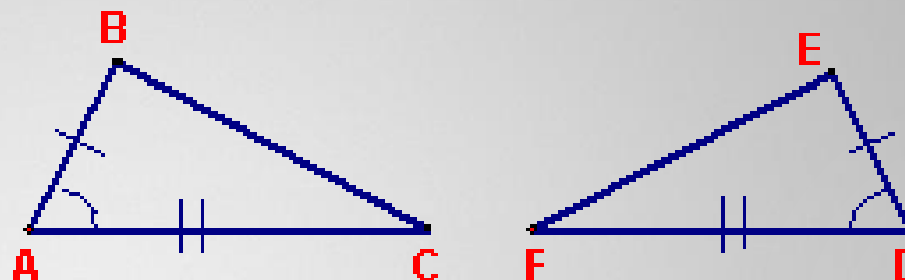
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Given:  $\overline{AB} \cong \overline{DE}$

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

$\angle A \cong \angle D$

Therefore:  $\triangle BAC \cong \triangle EDF$



$\angle A$

$\angle B$

$\angle C$

$AB$

$BC$

$AC$

$DF$

$DE$

$\angle D$

$EF$

$\angle E$

$\angle F$

# C.P.C.T.C.

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- ▶ **C**orresponding
- ▶ **P**arts (of)
- ▶ **C**ongruent
- ▶ **T**riangles (are)
- ▶ **C**ongruent

If two triangles are congruent, then their corresponding parts are also congruent.

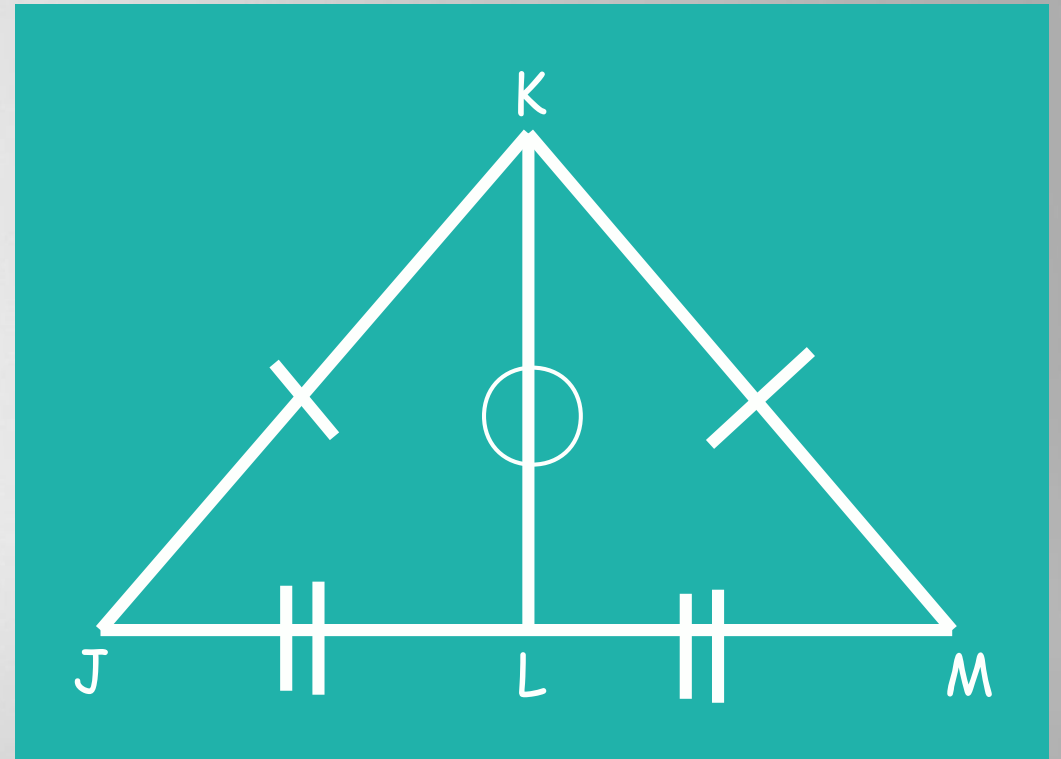
Very important!!!!

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- ▶ Before you use CPCTC you must prove or know that the two triangles congruent!!!

Using CPCTC

$$\triangle LJK \cong \triangle LMK$$



$$\overline{JK} \cong \overline{MK}, \overline{JL} \cong \overline{ML}, \overline{KL} \cong \overline{KL}$$

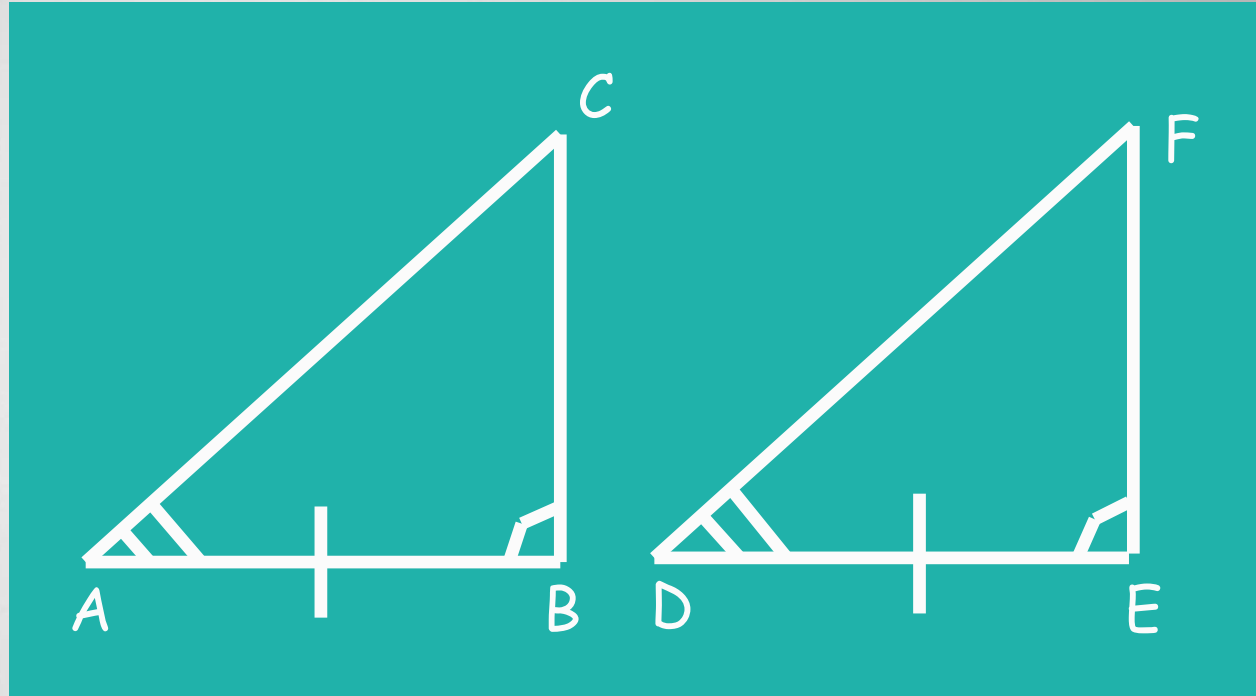
$$\angle JLK \cong \angle MLK, \angle LJK \cong \angle LMK, \angle J \cong \angle M$$

# Using CPCTC

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With your partner  
write down all  
congruent parts.

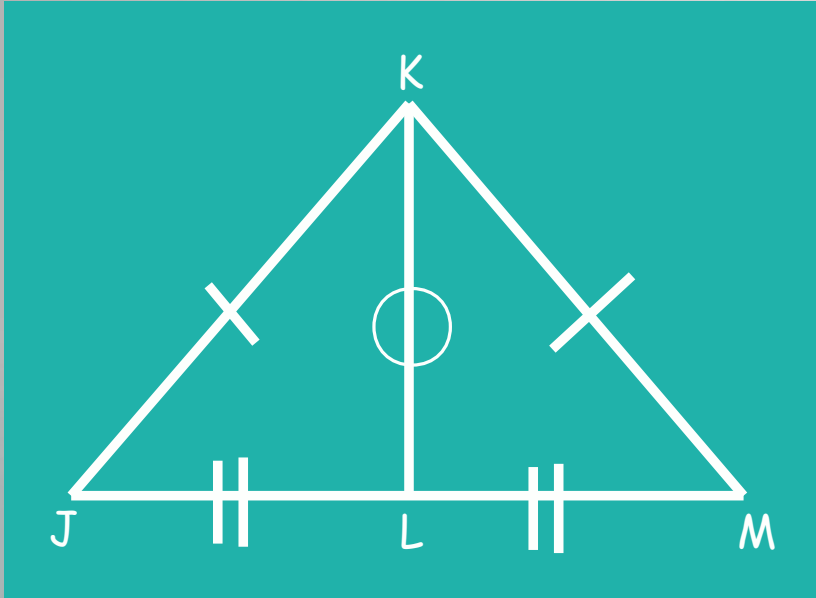
$$\triangle ABC \cong \triangle DEF$$



$$\angle A \cong \angle D, \angle B \cong \angle E, \angle C \cong \angle F$$

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

Find the value of all the angles



$$\triangle JKL \cong \triangle MKL$$

$$\angle J = 3x + 2$$

$$\angle JLK = 90^\circ$$

$$\angle M = 5x - 32$$

$$\angle J = 53$$

$$\angle JKL = 37$$

$$\angle JLK = 90$$

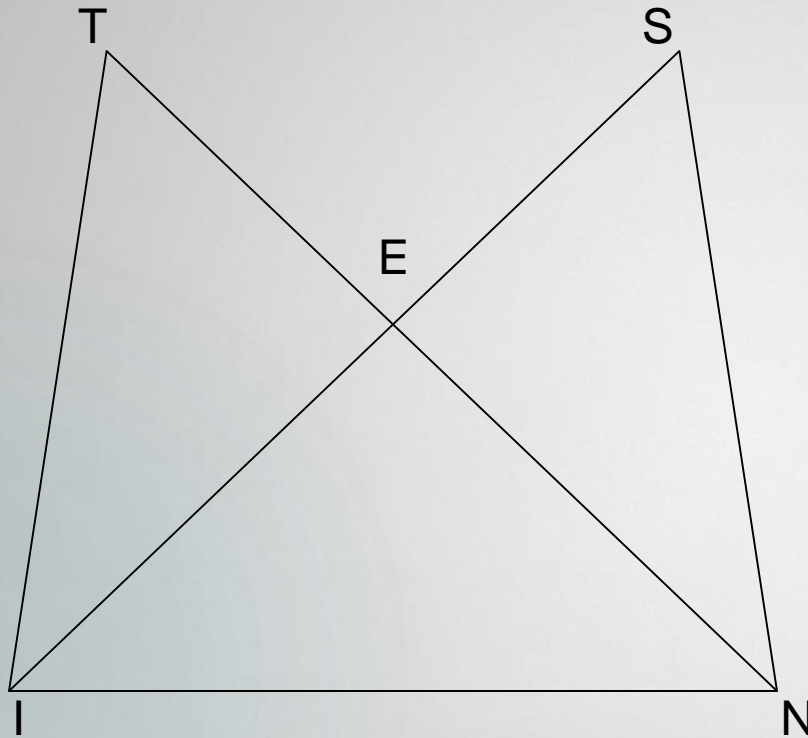
$$\angle MLK = 90$$

$$\angle MKL = 37$$

$$\angle M = 53$$

# CPCTC in a Proof:

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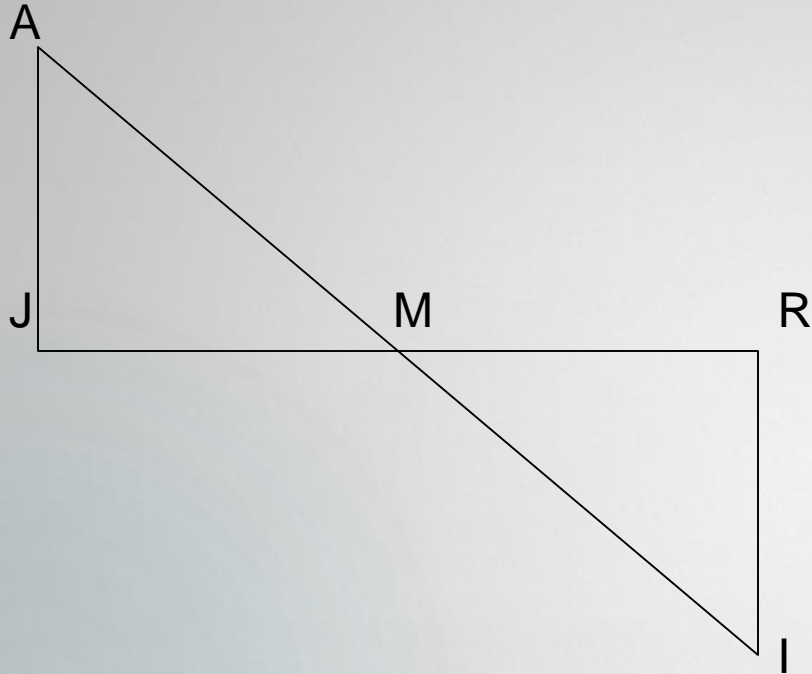


**Given:**  $TI \cong SN$   
 $TN \cong SI$

**Prove:**  $\angle T \cong \angle S$

# CPCTC in Proofs:

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**Given:  $JM \cong RM$   
 $AM \cong MI$**

**Prove:  $AJ \cong RI$**