

Geometry  
HW - Proving Triangle Congruence and CPCT Practice

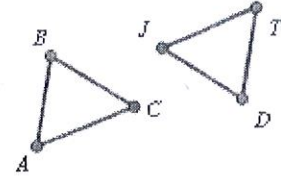
Name \_\_\_\_\_

1.  $\triangle HYZ$  is congruent  $\triangle KLR$ . Complete the following congruent statements.

$\angle L \cong \angle Y$        $\overline{LR} \cong \overline{YZ}$        $\angle H \cong \angle K$        $\overline{ZH} \cong \overline{RK}$

2.  $\triangle ABC$  is congruent to  $\triangle TDJ$ . Complete the following congruent statements.

$\angle B \cong \angle D$        $\overline{JD} \cong \overline{CB}$   
 $\angle T \cong \angle A$        $\overline{BC} \cong \overline{DJ}$

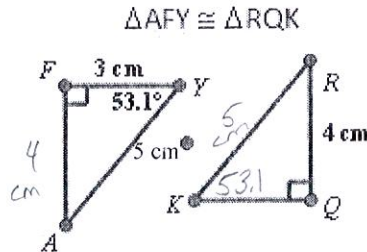
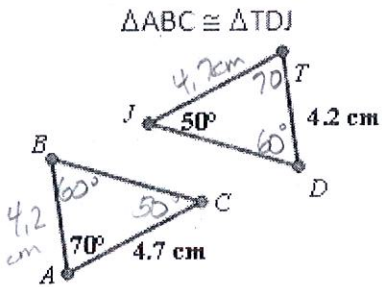


3.  $\triangle ABC$  is congruent to another triangle. Provided is some information about the two triangles,  $\overline{AB} \cong \overline{AL}$  and  $\overline{CA} \cong \overline{GA}$ . From this information determine the triangle congruence statement.



$\triangle ABC \cong \triangle ALG$

4. Determine the missing information.



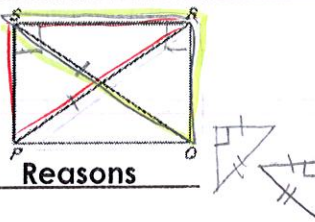
$m\angle C = 50^\circ$      $TJ = 4.7 \text{ cm}$      $m\angle K = 53.1^\circ$      $AF = 4 \text{ cm}$      $m\angle I = 79^\circ$      $BK = 7.3 \text{ cm}$   
 $m\angle B = 60^\circ$      $AB = 4.2 \text{ cm}$      $m\angle A = 36.9^\circ$      $KR = 5 \text{ cm}$      $m\angle JCK = 31^\circ$      $JK = 6.6 \text{ cm}$

Proof Practice:

1. Given:  $\overline{QS} \cong \overline{PR}$ ,  $\overline{PS} \perp \overline{RS}$

$\overline{QR} \perp \overline{RS}$

Prove:  $\triangle PRS \cong \triangle QSR$



Statements

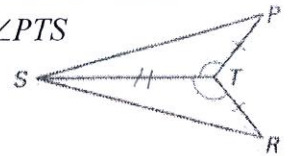
Reasons

Reasons

- $\overline{QS} \cong \overline{PR}$ ,  $\overline{PS} \perp \overline{RS}$   
 $\overline{QR} \perp \overline{RS}$
- $\angle S$  and  $\angle R$  are right  $\angle$ s
- $\overline{SR} \cong \overline{SR}$
- $\triangle PRS \cong \triangle QSR$

- Given
- Definition of perpendicular lines.
- Reflexive Property
- HL

2. Given:  $\overline{PT} \cong \overline{RT}$ ;  $\angle RTS \cong \angle PTS$



Prove:  $\triangle TPS \cong \triangle TRS$

Statements

- $\overline{PT} \cong \overline{RT}$ ,  $\angle RTS \cong \angle PTS$
- $\overline{ST} \cong \overline{ST}$
- $\triangle TPS \cong \triangle TRS$

- Given (all)
- Reflexive Prop.
- SAS