

Name: _____ Date: _____ Score: _____

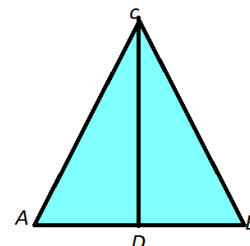
PROVING TWO TRIANGLES ARE CONGRUENT

Problem 1

Given: $\overline{AC} \cong \overline{BC}$, D is the midpoint of \overline{AB}

Prove: $\triangle ACD \cong \triangle BCD$

Proof:



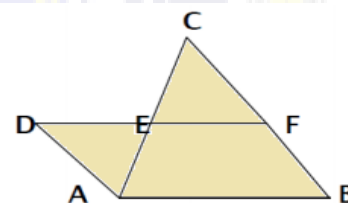
Statements	Reasons
1.	1. Given
2.	2. Given
3. _____ \cong _____	3.
4. _____ \cong _____	4.
5. $\triangle ACD \cong \triangle BCD$	5.

Problem 2

Given: \overline{AC} and \overline{DF} ,bisect each other at E

Prove: $\triangle DEA \cong \triangle FEC$

Proof:



Statements	Reasons
1.	1. Given
2.	2. Segment bisector \rightarrow _____
3. _____ \cong _____	3. _____ \rightarrow _____
4. _____ \cong _____	4. _____ \rightarrow _____
5. _____ \cong _____	5.
6. $\triangle DEA \cong \triangle FEC$	6.

Specific Week: Week 6

Target Competency: Proves two triangles are congruent.

Note to the Teacher: This is a summative assessment.

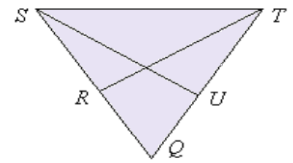
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Problem 3

Given: $\overline{SR} \perp \overline{RT}, \overline{TU} \perp \overline{US}, \angle STR \cong \angle TSU$

Prove: $\triangle TRS \cong \triangle SUT$

Proof:



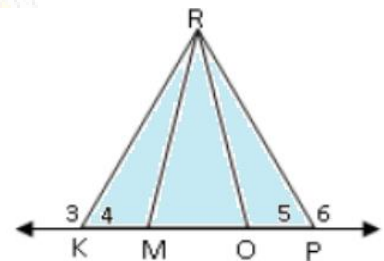
Statements	Reasons
1.	1. Given
2.	2. Given
3.	3. _____ \rightarrow _____
4. _____ \cong _____	4.
5. _____ \cong _____	5.
6. $\triangle TRS \cong \triangle SUT$	6.

Problem 4

Given: $\angle 3 \cong \angle 6, \overline{KR} \cong \overline{PR}, \angle KRO \cong \angle PRM$

Prove: $\triangle KRM \cong \triangle PRO$

Proof:



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

Specific Week: Week 6

Target Competency: Proves two triangles are congruent.

Note to the Teacher: This is a summative assessment.

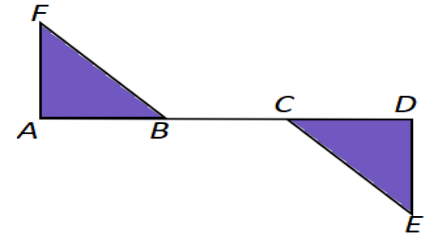
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Problem 5

Given: $\overline{FA} \perp \overline{AD}$, $\overline{ED} \perp \overline{AD}$ and $\overline{AC} \cong \overline{DB}$, $\angle F \cong \angle E$

Prove: $\triangle ABF \cong \triangle DCE$

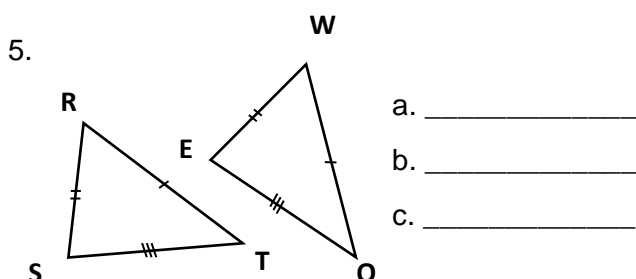
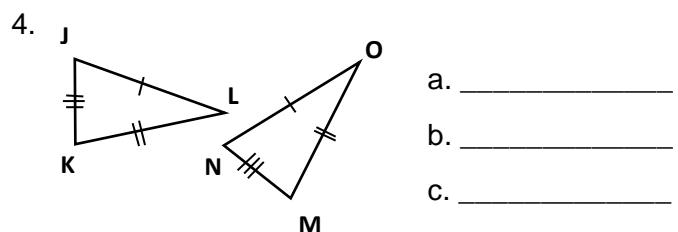
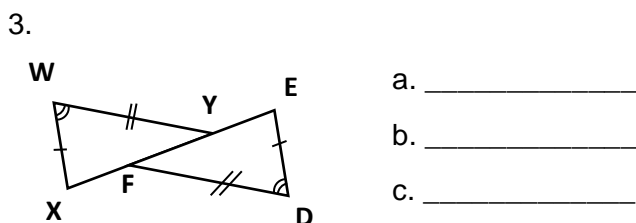
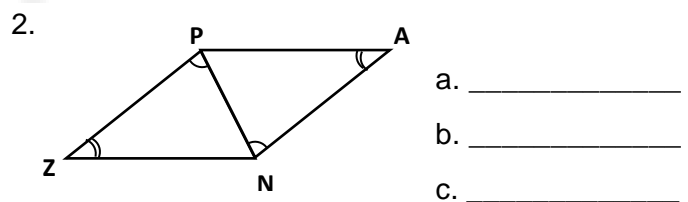
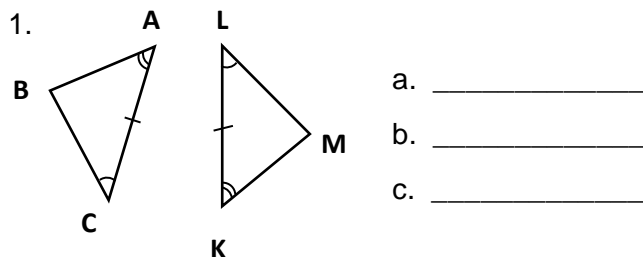
Proof:



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

Proving Statements on Triangle Congruence

A. Based on the given triangles, (a) name the triangles that are congruent, (b) give the postulate/theorem that satisfy it and (c) name the other pairs of corresponding congruent parts.



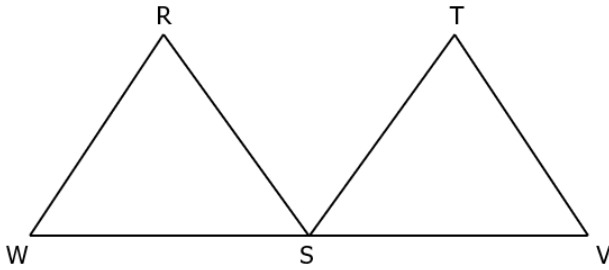
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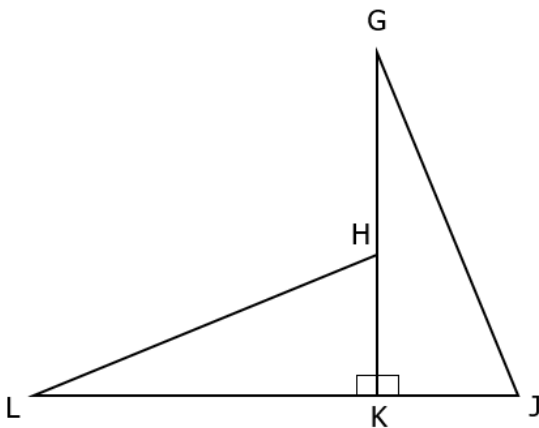
B. Complete the two-column proof.

1. Given: $\angle R \cong \angle T$, $\angle W \cong \angle V$
 $\overline{RW} \cong \overline{TV}$
 Prove: $\angle RSW \cong \angle TSV$



Statements	Reasons
1. $\angle R \cong \angle T$	1. Given
2. $\overline{RW} \cong \overline{TV}$	2. Given
3. $\angle W \cong \angle V$	3. Given
4. _____ (a)	4. _____ (b)
5. _____ (c)	5. CPCTC

2. Given: $\overline{GK} \perp \overline{LJ}$, $\overline{HK} \cong \overline{KJ}$
 $\overline{GK} \cong \overline{LK}$
 Prove: $\angle G \cong \angle L$



Statements	Reasons
1. $\overline{HK} \cong \overline{KJ}$	1. Given
2. $\overline{GK} \perp \overline{LJ}$	2. Given
3. $\angle LKH$ & $\angle GKJ$ are right angles	3. Definition of Perpendicular Lines
3. $\angle LKH \cong \angle GKJ$	3. _____ (a)
4. $\overline{GK} \cong \overline{LK}$	4. Given
5. _____ (b)	5. _____ (c)
6. $\angle G \cong \angle L$	6. _____ (d)