

Practice Worksheet

Another Test for Congruent Triangles

Draw and label triangles MNO and XYZ. Indicate the additional pairs of corresponding parts that would have to be proved congruent in order to use the given postulate or theorem to prove the triangles congruent.

1. $\angle N \cong \angle Y$ and $\overline{NO} \cong \overline{YZ}$ by ASA

2. $\angle O \cong \angle Z$ and $\angle M \cong \angle X$ by AAS

3. $\angle O \cong \angle Z$ and $\overline{MO} \cong \overline{XZ}$ by AAS

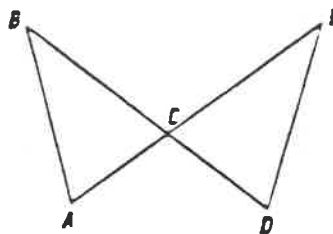
4. $\angle N \cong \angle Y$ and $\angle M \cong \angle X$ by ASA

5.

Given: $\angle A \cong \angle D$

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

Prove: $\overline{CA} \cong \overline{CD}$



Statements

Reasons

a. $\overline{BA} \cong \overline{ED}$

a. _____

b. $\angle A \cong \angle D$

b. _____

c. $\angle BCA \cong \angle ECD$

c. _____

d. $\triangle CAB \cong \triangle CDE$

d. _____

e. $\overline{CA} \cong \overline{CD}$

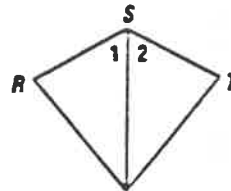
e. _____

6. Write a two-column proof.

Given: $\angle R$ and $\angle T$ are right angles.

$\angle 1 \cong \angle 2$

Prove: $\overline{RV} \cong \overline{TV}$



Statements

Reasons

a. $\angle R$ and $\angle T$ are right angles;
 $\angle 1 \cong \angle 2$

a. _____

b. $\angle R \cong \angle T$

b. _____

c. $\overline{SV} \cong \overline{SV}$

c. _____

d. $\triangle SRV \cong \triangle STV$

d. _____

e. $\overline{RV} \cong \overline{TV}$

e. _____

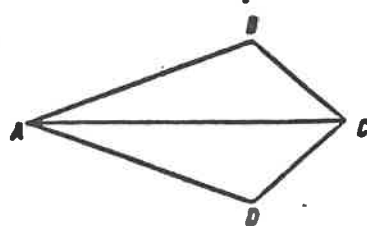
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Practice Worksheet

Tests for Congruent Triangles

For each figure, mark all congruent parts. Then complete the prove statement and identify the postulate that can be used to prove the triangles congruent.

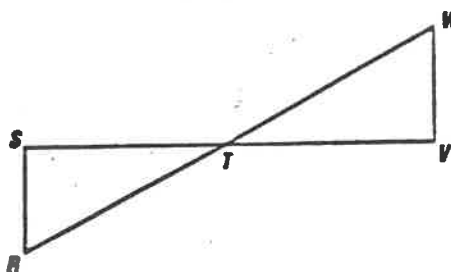
1.



Given: $\overline{AB} \cong \overline{AD}$
 $\overline{BC} \cong \overline{DC}$

Prove: $\triangle BCA \cong \triangle ?$

2.



Given: $\angle S$ and $\angle V$ are right angles.
 T bisects \overline{SV} .

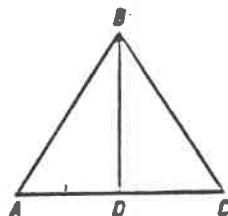
Prove: $\triangle RST \cong \triangle ?$

Write a two-column proof.

3. Given: $\overline{BD} \perp \overline{AC}$

D bisects \overline{AC} .

Prove: $\overline{AB} \cong \overline{CB}$

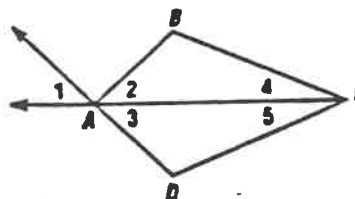


Statements	Reasons
a. D bisects \overline{AC}	a. _____
b. $\overline{AD} \cong \overline{CD}$	b. _____
c. $\angle ADB$ and $\angle CDB$ are right angles	c. _____
d. $\angle ADB \cong \angle CDB$	d. _____
e. $\overline{BD} \cong \overline{BD}$	e. _____
f. $\triangle ABD \cong \triangle CBD$	f. _____
g. $\overline{AB} \cong \overline{CB}$	g. _____

4. Given: $\angle 1 \cong \angle 2$

$\angle 4 \cong \angle 5$

Prove: $\overline{BC} \cong \overline{DC}$



Statements	Reasons
a. $\angle 1 \cong \angle 2$	a. _____
b. $\angle 1 \cong \angle 3$	b. _____
c. $\angle 2 \cong \angle 3$	c. _____
d. $\overline{AC} \cong \overline{AC}$	d. _____
e. $\angle 4 \cong \angle 5$	e. _____
f. $\triangle ABC \cong \triangle ADC$	f. _____
g. $\overline{BC} \cong \overline{DC}$	g. _____