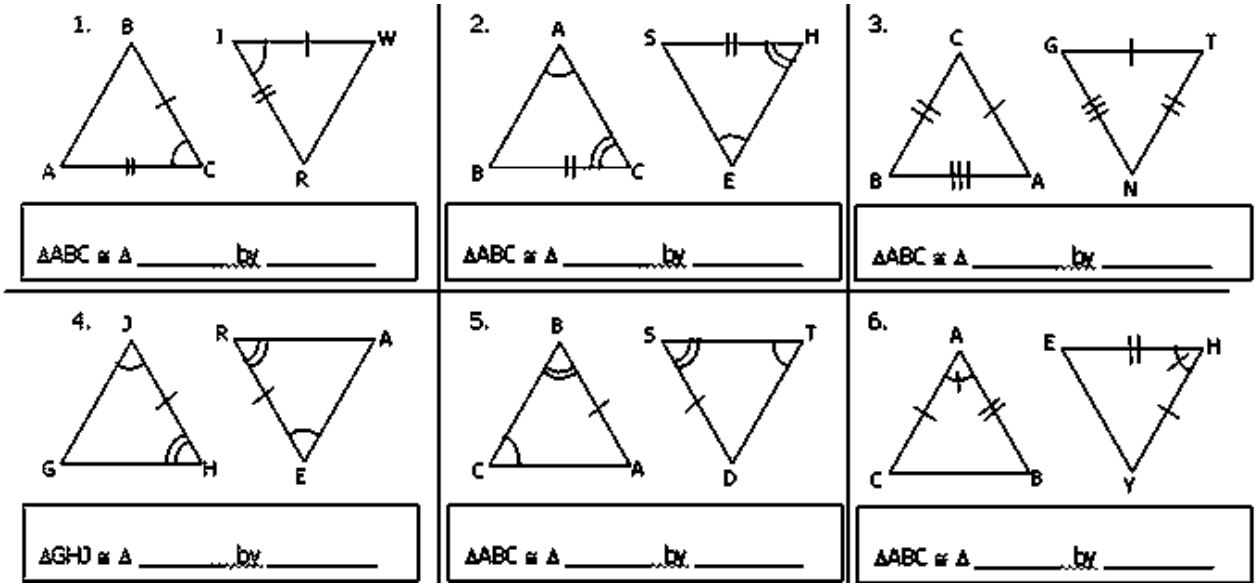
First name: _____ Last name: _____ Student ID: _____

Chapter 10 Congruent Triangles Homework

Basic problems

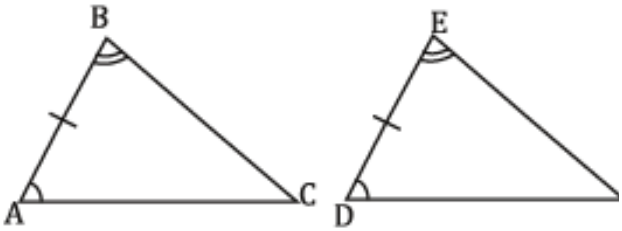
1. **For each problem, give the correct naming order of the congruent triangles. Write that name in order on the lines. Also, indicate which postulate or theorem is being used.**



2. **Fill in any missing statements or reasons.**

1.

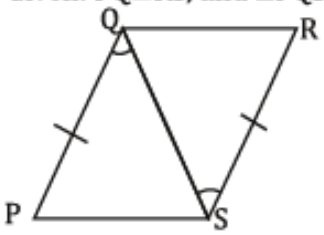
Given: $\overline{AB}\cong\overline{DE}$, $\angle B\cong\angle E$, and $\angle A\cong\angle D$



Prove: $\triangle ABC\cong\triangle DBC$

Statements	Reasons
1. $\overline{AB}\cong\overline{DE}$	1. Given
2.	2.Given
3. $\angle A\cong\angle D$	3.
4. $\triangle ABC\cong\triangle DEF$	4.

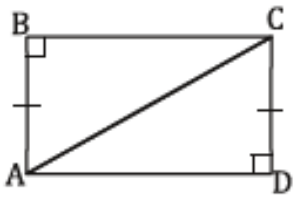
2. Given: $\overline{PQ}\cong\overline{RS}$, and $\angle PQS\cong\angle RSQ$



Prove: $\Delta PQS \cong \Delta RSQ$

Statements	Reasons
1.	1. Given
2.	2. Given
3. $\overline{QS}\cong\overline{QS}$	3.
4. $\triangle PQS\cong\triangle RSQ$	4.

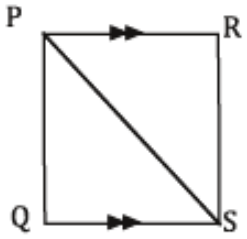
3. Given: $\overline{AB} \cong \overline{DC}$



Prove: $\triangle ABC \cong \triangle CDA$

Statements	Reasons
1.	1. Given
2. $\overline{AC} \cong \overline{AC}$	2.
3. $\triangle ABC \cong \triangle CDA$	3.

4. . Given: $\overline{PR} \| \overline{QS}$, $\angle QPS \cong \angle RSP$



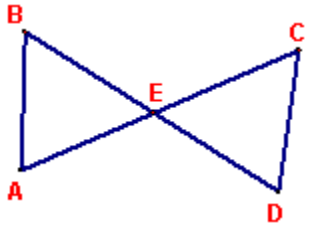
Prove: $\triangle PQS \cong \triangle SRP$

Statements	Reasons
1. $\overline{PR} \| \overline{QS}$	1.
2. $\angle QPS \cong \angle RSP$	2.
3. $\angle PSQ \cong \angle SPR$	3. Alternate Interior
4.	4. Reflexive Property
5. $\Delta PSQ \cong \Delta SPR$	5.

Word problems

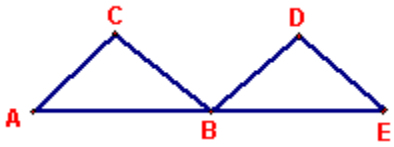
1. **Given**: E is the midpoint of $\overline{BD}$, $\overline{AE} \cong \overline{EC}$. **Prove:** $\Delta AEB \cong \Delta CED$.

Statement	Reason

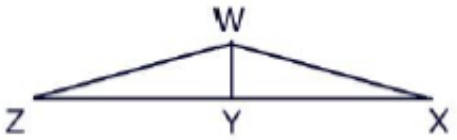


2. **Given**: $\measuredangle A \cong \measuredangle E$, $\measuredangle ABC \cong \measuredangle EBD$, B is the midpoint of $\overline{AE}$. **Prove:** $\Delta ABC \cong \Delta EBD$.

Statement	Reason

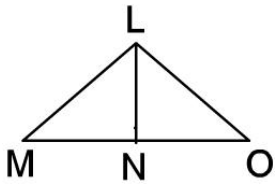


3. **Given** WZ = WX, WY bisects ZX. **Prove:** $\Delta WYZ \cong \Delta WYX$.



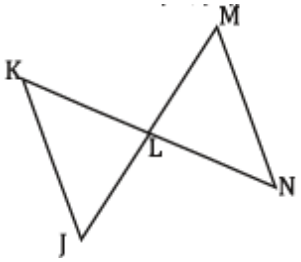
Statement	Reason

4. **Given:** LN is an altitude, LM ≅ LO. **Prove:** Δ LNM ≅ Δ LON.



Statement	Reason

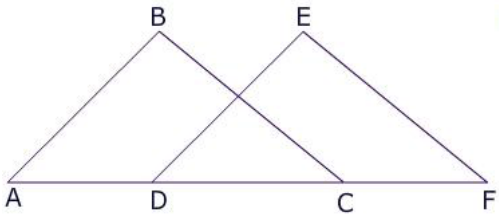
5. **Given:** KN bisects JM, JK // MN. **Prove:** $\Delta JKL \cong \Delta MNL$.



Statement	Reason

6. **Given:** $\measuredangle ABC \cong \measuredangle DEF$, BC // EF, AD = CF. **Prove:** $\triangle ABC \cong \triangle DEF$.

Statement	**Reason**



7. **Given:** PQRS is a parallelogram. **Prove:** $\triangle RPS \cong \triangle QSP$.

Statement	**Reason**