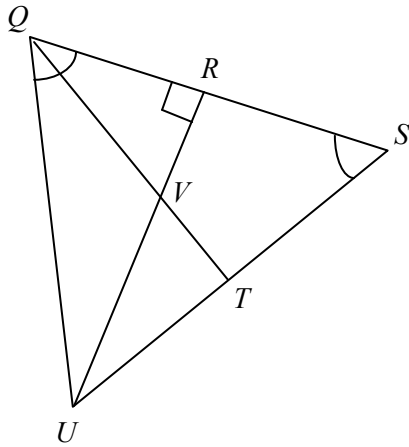
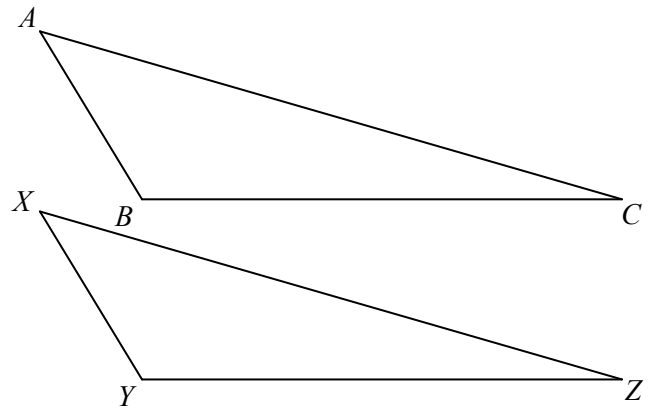


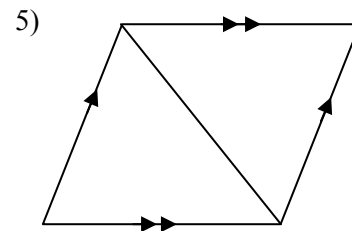
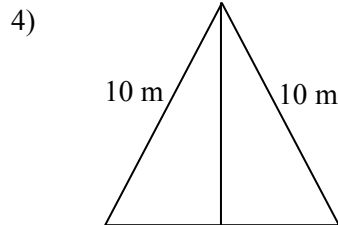
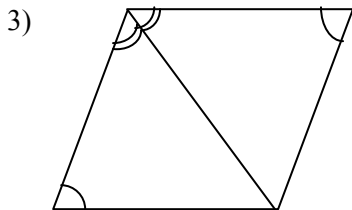
1) Determine which triangles in the figure are congruent by AAS. Write a congruency statement.



2) Given:  $\angle A \cong \angle X, \angle B \cong \angle Y, \overline{BC} \cong \overline{YZ}$   
 Prove:  $\triangle ABC \cong \triangle XYZ$

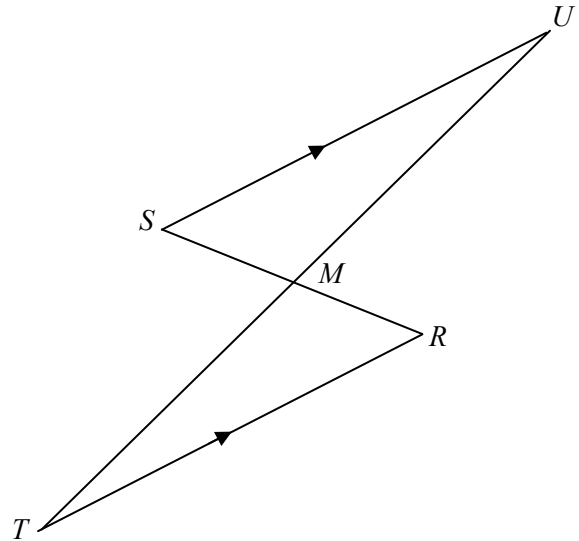


Decide whether you can use the ASA or AAS Postulate to prove that the triangles below are congruent. If so a) write the congruence statement and b) identify the postulate. If not, write not possible.

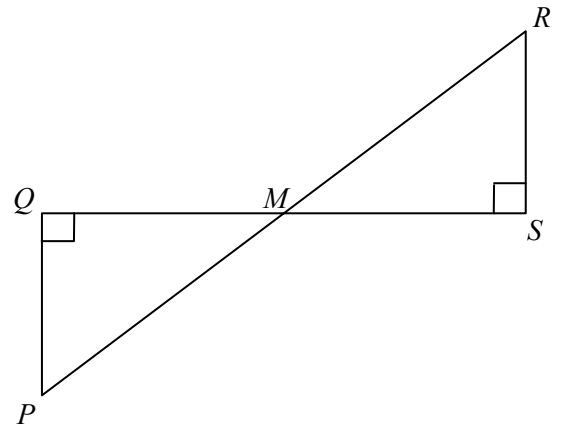


Write a two Column Proof.

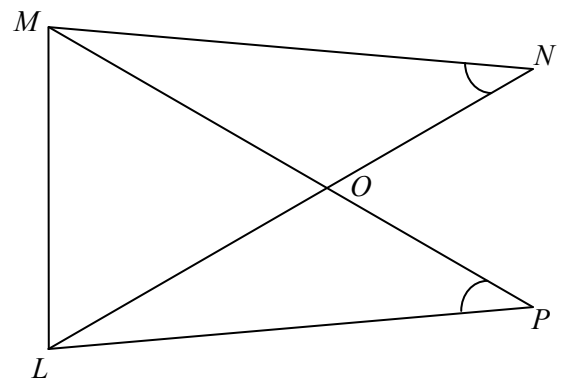
- 6) Given:  $\overline{SU} \cong \overline{TR}$ ,  $\overline{SR}$  bisects  $\overline{UT}$   
 Prove:  $\triangle SMU \cong \triangle RMT$



- 7) Given:  $\overline{PQ} \perp \overline{QS}$ ,  $\overline{RS} \perp \overline{QS}$ ,  $M$  is the midpoint of  $\overline{PR}$   
 Prove:  $\triangle PQM \cong \triangle RSM$

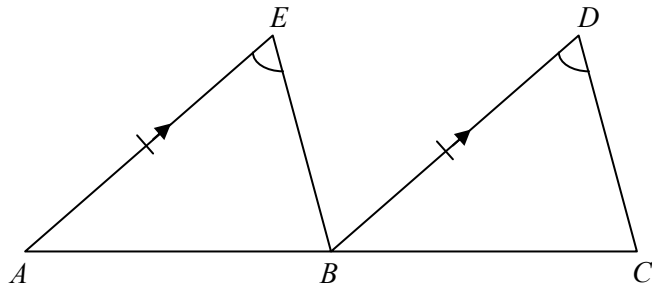


- 8) Given:  $\angle N \cong \angle P$ ,  $\overline{MO} \cong \overline{LO}$   
 Prove:  $\triangle MON \cong \triangle LOP$



Write a Two Column Proof or Paragraph Proof.

- 9) Given:  $\overline{AE} \cong \overline{BD}$ ,  $\overline{AE} \parallel \overline{BD}$ ,  $\angle E \cong \angle D$   
Prove:  $\triangle AEB \cong \triangle BDC$



*Answer Key*

1)  $\triangle QRU \cong \triangle SRU$

$\angle A \cong \angle X, \angle B \cong \angle Y, \overline{BC} \cong \overline{YZ}$       Given

2)  $\angle C \cong \angle Z$       if two angles of one triangle are congruent to two triangles of another, then the third angles are congruent  
 $\triangle ABC \cong \triangle XYZ$     ASA

3) AAS

4) Not Possible

5) ASA

$\overline{SQ} \cong \overline{TR}$       Given

$\angle U \cong \angle T$       If  $\parallel$  lines then alternate interior angles are  $\cong$

$\angle S = \angle R$       If  $\parallel$  lines then alternate interior angles are  $\cong$

6)  $\overline{SR}$  bisects  $\overline{UT}$       Given

$\overline{TM} \cong \overline{UM}$       Definition of segment bisector

$\triangle SMU \cong \triangle RMT$     AAS

$\overline{PQ} \perp \overline{QS}, \overline{RS} \perp \overline{QS}$  ..... Given

$\angle Q$  &  $\angle S$  are right angles ..... Def. of  $\perp$  lines

$\angle Q \cong \angle S$  ..... All right angles are  $\cong$

7)  $\angle QMP \cong \angle SMR$  ..... Vertical Angles are  $\cong$

$M$  is the midpoint of  $\overline{PR}$  ..... Given

$\overline{PM} \cong \overline{RM}$  ..... Definition of midpoint

$\triangle PQM \cong \triangle RSM$  ..... AAS

$\angle MON$  &  $\angle LOP$  ..... Vertical Angles are congruent

$\angle N \cong \angle P$  ..... Given

8)  $\overline{MO} \cong \overline{LO}$  ..... Given

$\triangle MON \cong \triangle LOP$  ..... AAS

$\overline{AE} \parallel \overline{BD}$  ..... Given

$\angle A \cong \angle DBC$  ..... If lines  $\parallel$ , then corresponding angles are  $\cong$

9)  $\angle E \cong \angle D$  ..... Given

$\overline{AE} \cong \overline{BD}$  ..... Given

$\triangle AEB \cong \triangle BDC$  ..... ASA