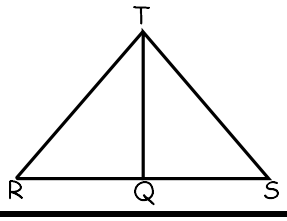
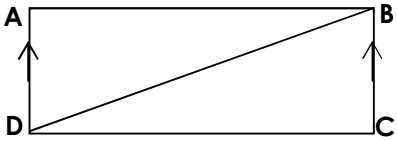
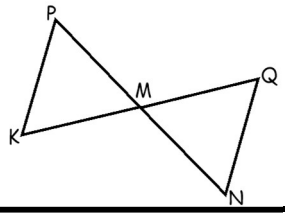
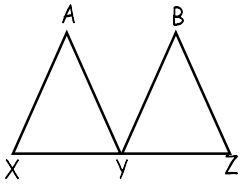
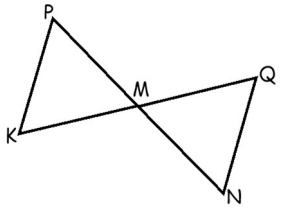
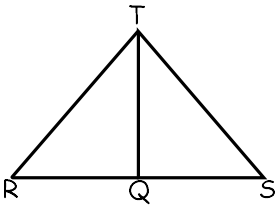
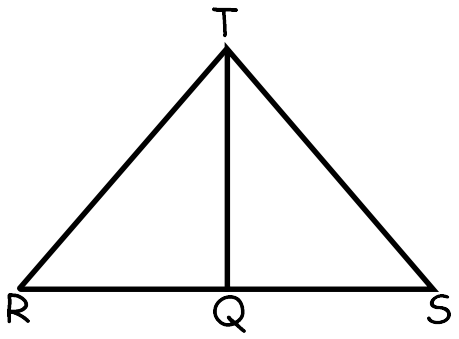
Name: _____ Date: _____

Triangle Proofs

IF…		THEN…	
an angle or side is ALREADY marked on the picture, or if it is given in the directions			
the triangles share a side			
$\overline{AD} \parallel \overline{CB}$			
you see vertical angles			
Y is the midpoint of $\overline{XZ}$			
$\overline{PN}$ *and* $\overline{KQ}$ *bisect each other*			
$\overline{QT}$ *bisects* $\angle RTS$			
Δ _____ $\cong \Delta$ _____			
the triangles have already been proven to be congruent, and now we are trying to prove sides or angles are congruent			

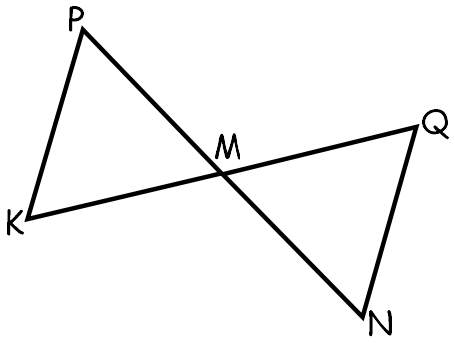
1. Given: Q is the midpoint of $\overline{RS}$ & ΔRTS is isosceles with legs $\overline{RT}$ & $\overline{TS}$.
Prove: $\Delta RTQ \cong \Delta STQ$

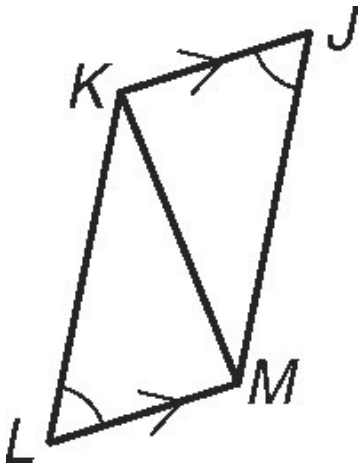
Statements	Reasons
1. Q is the midpoint of $\overline{RS}$	
2.	
3. ΔRTS is isosceles with legs $\overline{RT}$ & $\overline{TS}$	
4.	
5.	
6. $\Delta RTQ \cong \Delta STQ$	



2. Given: $\angle P \cong \angle N, \overline{PM} \cong \overline{NM}$
Prove: $\Delta PMK \cong \Delta NMQ$

Statements	Reasons
1.	
2.	
3.	
4.	



3. Given: $\angle L \cong \angle J$, $\overline{LM} \parallel \overline{KJ}$
Prove: $\Delta LKM \cong \Delta JMK$

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