Writing congruent triangle proofs:

1. Label the figure with symbols representing the given information and whay you know is true by the way the figure is drawn.

2. "Read" the triangles to see what postulate is used to prove that the triangles are congruent (SAS or SSS).

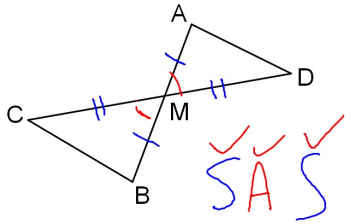
3. Write the proof. All three parts of the postulate you are using must be included in the proof.

4. Your last line of your proof should be a congruence statement and then either SAS or SSS as the reason.

1.

Given: AB and CD bisect each other.

Prove: $\triangle ADM \cong \triangle BCM$



SAS

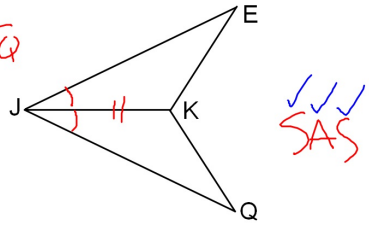
Statement	Reason
1. $\overline{AB}$ & $\overline{CD}$ BISECT	1. Given
2. $\overline{AM} \cong \overline{BM}$ $\overline{DM} \cong \overline{CM}$	2. def of bisect
3. $\angle AMD \cong \angle BMC$	3. vert $\angle$s
4. $\triangle ADM \cong \triangle BCM$	4. SAS

2.

Given: $\overline{JK}$ bisects $\angle EJQ$

$\overline{JE} \cong \overline{JQ}$

Prove: $\triangle KEJ \cong \triangle KQJ$



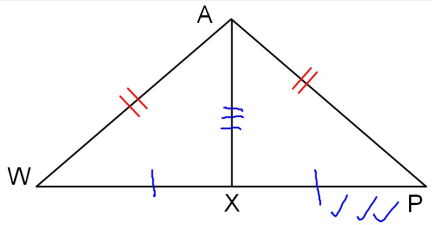
SAS

Statement	Reason
1. $\overline{JK}$ bisects $\angle EJQ$ $\overline{JE} \cong \overline{JQ}$	1. Given
2. $\overline{JK} \cong \overline{JK}$	2. Reflexive
3. $\angle EJK \cong \angle QJK$	3. df bisect
4. $\triangle KEJ \cong \triangle KQJ$	4. SAS

3.

Given: X is the midpoint of $\overline{WP}$.

Prove: $\triangle XAW \cong \triangle XAP$



SSS

Statement	Reason
1. X is the midpoint of $\overline{WP}$. $\overline{AW} \cong \overline{AP}$	1. Given
2. $\overline{WX} \cong \overline{PX}$	2. def mdpt
3. $\overline{AX} \cong \overline{AX}$	3. Reflexive
4. $\triangle XAW \cong \triangle XAP$	4. SSS