

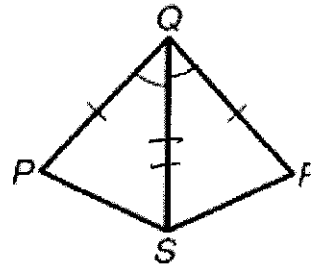
Problem #1

Method of
Choice:

SAS

Given: $\overline{PQ} \cong \overline{RQ}$, $\angle PQS \cong \angle RQS$

Prove: $\angle P \cong \angle R$



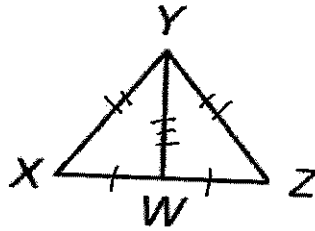
| Statements | Reasons |
|-------------------------------------|-----------------|
| $\overline{PQ} \cong \overline{RQ}$ | Given |
| $\angle PQS \cong \angle RQS$ | Given |
| $\overline{QS} \cong \overline{QS}$ | Reflexive Prop. |
| $\triangle PQS \cong \triangle RQS$ | SAS |
| $\angle P \cong \angle R$ | CPCTC |

Problem #2

Method of
Choice:

Given: \overline{YW} bisects \overline{XZ} , $\overline{XY} \cong \overline{YZ}$.

Prove: $\angle XYW \cong \angle ZYW$



| Statements | Reasons |
|---|----------------|
| \overline{YW} bisects \overline{XZ} | Given |
| $\overline{XY} \cong \overline{YZ}$ | Given |
| $\overline{YW} \cong \overline{YW}$ | Reflexive |
| $\overline{XW} \cong \overline{WZ}$ | Defn of Bisect |
| $\triangle WXY \cong \triangle WZY$ | SSS |
| $\angle XYW \cong \angle ZYW$ | CPCTC |

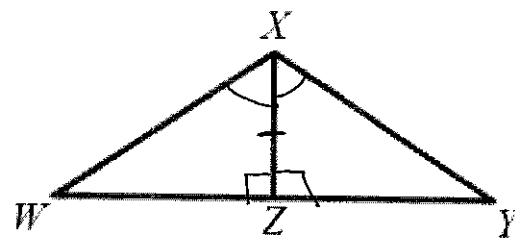
Problem #3

Method of
Choice:

Given: \overline{XZ} bisects $\angle WXY$

$\overline{XZ} \perp \overline{WY}$

Prove: $\triangle WXZ \cong \triangle YXZ$



| Statements | Reasons |
|---|--------------------------------|
| \overline{XZ} bisects $\angle WXY$ | Given |
| $\overline{XZ} \perp \overline{WY}$ | Given |
| $\angle WXZ \cong \angle YXZ$ | Defn of bisect |
| $\angle XZW$ and $\angle XZY$ are right angles | Defn of perpendiculars |
| $\angle XZW \cong \angle XZY$ | All Rt angles are congruent |
| $\overline{XZ} \cong \overline{XZ}$ | Reflexive |
| $\triangle WXZ \cong \triangle YXZ$ | ASA |