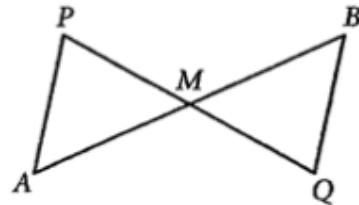


GEOMETRY
CONGRUENT TRIANGLES PROOFS

Name _____

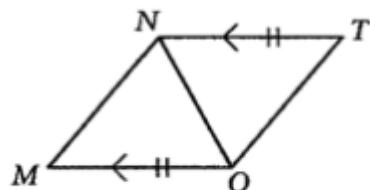
Write a two column proof for the following problems.

1. Given: M is the midpoint of \overline{AB} and \overline{PQ}
Prove: $\Delta APM \cong \Delta QBM$



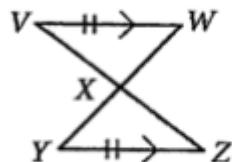
Statements	Reasons
1. M is the midpoint of AB and PQ	1. Given
2.	2. Def of midpoint
3. $\angle PMA \cong \angle QMB$	3.
4. $\Delta APM \cong \Delta QBM$	4.

2. Given: \overline{NT} is parallel and \cong to \overline{MO}
Prove: $\angle M \cong \angle T$



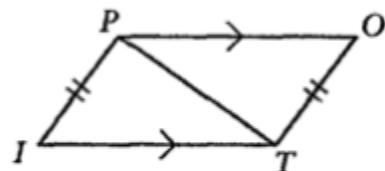
Statements	Reasons
1.	1.
2.	2. Reflexive
3. $\angle NOM \cong \angle TNO$	3.
4. $\Delta MON \cong \Delta TNO$	4.
5. $\angle M \cong \angle T$	5.

3. Given: \overline{VW} is parallel and \cong to \overline{YZ}
 Prove: $\Delta Xvw \cong \Delta XZY$



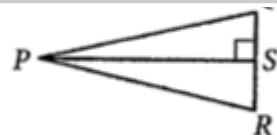
Statements	Reasons
1. \overline{VW} is parallel and \cong to \overline{YZ}	1.
2. _____ And _____	2.
3. $\Delta Xvw \cong \Delta XZY$	3.

4. Given: \overline{PO} is parallel to \overline{IT}
 $\overline{PI} \cong \overline{TO}$
 $\angle O \cong \angle I$
 Prove: $PO \cong IT$



Statements	Reasons
1. PO is // to IT, PI \cong TO, $\angle O \cong \angle I$	1. Given
2.	2. // lines form \cong alt. int. $\angle s$
3.	3. Reflexive
4. $\Delta PIT \cong \Delta$ _____	4.
5. $PO \cong IT$	5.

5. Given: \overline{PS} is the angle bisector of $\angle QPR$
 $\angle QSP \cong \angle RSP$
 Prove: S is the midpoint of QR



Statements	Reasons
1. PS is an \angle bisector of $\angle QPR$, $\angle QSP \cong \angle RSP$	1. Given
2.	2. Def. of Angle bisector
3.	3. Reflexive
4. $\Delta PQS \cong \Delta$ _____	4.
5. $QS \cong RS$	5.
6.	6. Def. of Midpoint