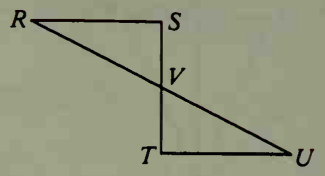
17. Supply the missing statements and reasons.

Given: $\overline{RS} \perp \overline{ST}$; $\overline{TU} \perp \overline{ST}$;
V is the midpoint of $\overline{ST}$.

Prove: $\triangle RSV \cong \triangle UTV$

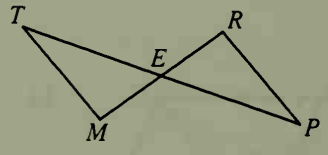


Proof:

Statements	Reasons
1. $\overline{RS} \perp \overline{ST}$; $\overline{TU} \perp \overline{ST}$	1. ?
2. $m\angle S = 90$; $m\angle$? $= 90$	2. ?
3. $\angle S \cong \angle T$	3. ?
4. V is the midpoint of $\overline{ST}$.	4. ?
5. $\overline{SV} \cong$?	5. ?
6. $\angle RVS \cong \angle$?	6. ?
7. $\triangle$? $\cong \triangle$?	7. ?

Write proofs in two-column form.

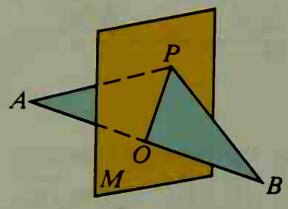
B **18.** Given: $\overline{TM} \cong \overline{PR}$; $\overline{TM} \parallel \overline{RP}$
Prove: $\triangle TEM \cong \triangle PER$



19. Given: E is the midpoint of $\overline{TP}$;
E is the midpoint of $\overline{MR}$.
Prove: $\triangle TEM \cong \triangle PER$

20. Given: Plane M bisects $\overline{AB}$; $\overline{PA} \cong \overline{PB}$
Prove: $\triangle POA \cong \triangle POB$

21. Given: Plane M bisects $\overline{AB}$; $\overline{PO} \perp \overline{AB}$
Prove: $\triangle POA \cong \triangle POB$



Draw and label a diagram. List, in terms of the diagram, what is given and what is to be proved. Then write a two-column proof.

22. In an isosceles triangle, if the angle between the congruent sides is bisected, then two congruent triangles are formed.

23. In an isosceles triangle, if a segment is drawn from the vertex of the angle between the congruent sides to the midpoint of the opposite side, then congruent triangles are formed.

24. If a line perpendicular to $\overline{AB}$ passes through the midpoint of $\overline{AB}$, and segments are drawn from any other point on that line to A and B, then two congruent triangles are formed.

25. If pentagon $ABCDE$ is equilateral and has right angles at B and E, then diagonals $\overline{AC}$ and $\overline{AD}$ form congruent triangles.