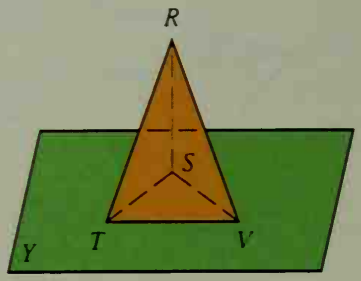
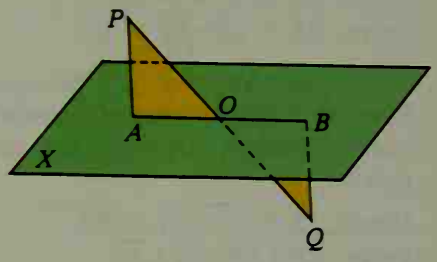
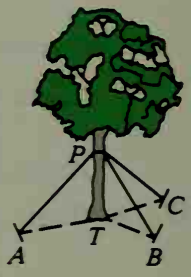
**13.** Given: $\overline{RS} \perp$ plane $Y$;
$\angle TRS \cong \angle VRS$
Prove: $\triangle RTV$ is isosceles.




**14.** Given: $\overline{PA} \perp$ plane $X$; $\overline{QB} \perp$ plane $X$;
$O$ is the midpoint of $\overline{AB}$.
Prove: $O$ is the midpoint of $\overline{PQ}$.




**15.** A young tree on level ground is supported at $P$ by three wires of equal length. The wires are staked to the ground at points $A$, $B$, and $C$, which are equally distant from the base of the tree, $T$. Explain in a paragraph how you can prove that the angles the wires make with the ground are all congruent.




C **16.** Napoleon, on a river bank, wanted to know the width of the stream. A young soldier faced directly across the stream and adjusted the visor of his cap until the tip of the visor was in line with his eye and the opposite bank. Next he did an about-face and noted the spot on the ground now in line with his eye and visor-tip. He paced off the distance to this spot, made his report, and earned a promotion. What postulate is this method based on? Draw a diagram to help you explain.

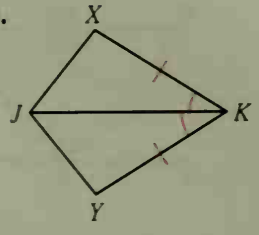
# Self-Test 1

**Given:** $\triangle KOP \cong \triangle MAT$

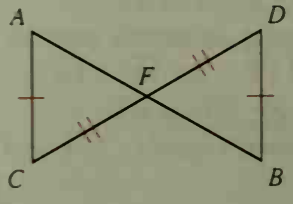
1. What can you conclude about $\angle P$? Why?
2. Name three pairs of corresponding sides.

**Decide whether the two triangles must be congruent. If so, write the congruence and name the postulate used. If not, write *no congruence can be deduced.***

**3.**




**4.**




**5.**