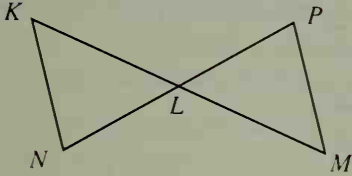
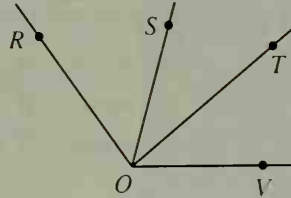


Write proofs in two-column form.

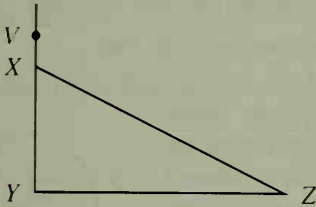
- B** 8. Given: $KL > NL$; $LM > LP$
 Prove: $KM > NP$



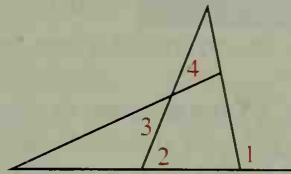
9. Given: $m\angle ROS > m\angle TOV$
 Prove: $m\angle ROT > m\angle SOV$



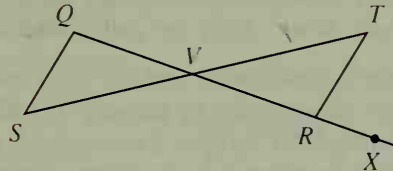
10. Given: $\overline{VY} \perp \overline{YZ}$
 Prove: $\angle VXZ$ is an obtuse angle.



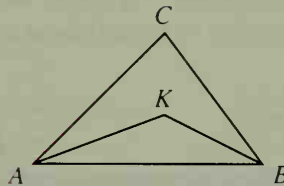
11. Given: The diagram
 Prove: $m\angle 1 > m\angle 4$



12. Given: \overline{QR} and \overline{ST} bisect each other.
 Prove: $m\angle XRT > m\angle S$



- C** 13. Given: Point K lies inside $\triangle ABC$.
 Prove: $m\angle K > m\angle C$



Challenge

A cube with sides n cm long is painted on all faces. It is then cut into cubes with sides 1 cm long. If $n = 4$, as the diagram at the right illustrates, how many of these smaller cubes will have paint on

- a. 3 surfaces? b. 2 surfaces?
 c. 1 surface? d. 0 surfaces?

Answer the questions for any positive integer n .

