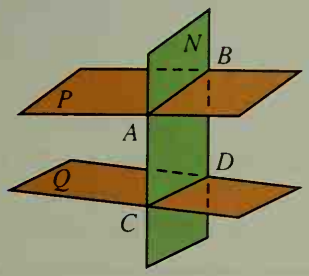
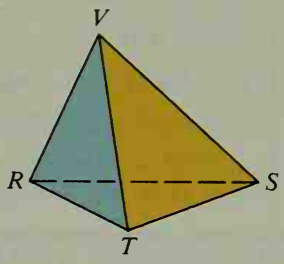
B **11.** Given: $\overleftrightarrow{AB} \nparallel \overleftrightarrow{CD}$
Prove: Planes P and Q intersect.

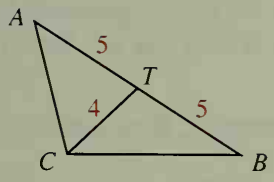


12. Given: $\triangle RVT$ and SVT are equilateral; $\triangle RVS$ is not equilateral.
Prove: $\triangle RST$ is not equilateral.

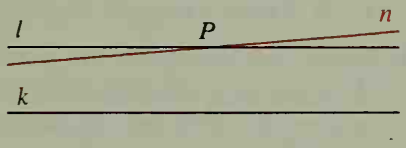


13. Given: quad. $EFGH$ in which $m\angle EFG = 93$; $m\angle FGH = 20$; $m\angle GHE = 147$; $m\angle HEF = 34$
Prove: $EFGH$ is not a convex quadrilateral.

14. Given: $AT = BT = 5$; $CT = 4$
Prove: $\angle ACB$ is not a rt. $\angle$.



15. Given: Coplanar lines l, k, n; n intersects l in P; $l \parallel k$
Prove: n intersects k.



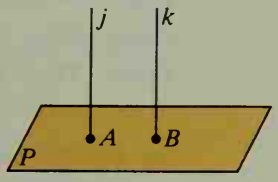
16. Prove that if two angles of a triangle are not congruent, then the sides opposite those angles are not congruent.

17. Prove that there is no regular polygon with an interior angle whose measure is 155.

18. Prove that the diagonals of a trapezoid do not bisect each other.

C **19.** Prove that if two lines are perpendicular to the same plane, then the lines do not intersect.

20. Given: Points R, S, T, and W; $\overleftrightarrow{RS}$ and $\overleftrightarrow{TW}$ are skew.
Prove: $\overleftrightarrow{RT}$ and $\overleftrightarrow{SW}$ are skew.



Ex. 19

Challenge

One of four children ate the last piece of lasagna. When questioned they responded as follows:

Joan: I didn't eat it. Ken: Leo ate it.
Leo: Martha ate it. Martha: Leo is lying.

If only one of the four children lied, who ate the last piece?