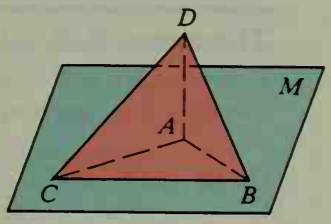
26. Draw an isosceles $\triangle ABC$ whose vertex angle, $\angle A$, has measure 80.
a. Draw $\overrightarrow{AX}$, the bisector of an exterior angle at A. Is $\overrightarrow{AX} \parallel \overline{BC}$? Explain.
b. Would your answer change if the measure of $\angle A$ changed?

Find the values of x and y.

27. In equiangular $\triangle ABC$, $AB = 4x - y$, $BC = 2x + 3y$, and $AC = 7$.

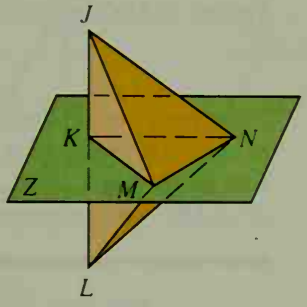
28. In equilateral $\triangle DEF$, $m\angle D = x + y$ and $m\angle E = 2x - y$.

29. In $\triangle JKL$, $\overline{JK} \cong \overline{KL}$, $m\angle J = 2x - y$, $m\angle K = 2x + 2y$, and $m\angle L = x + 2y$.



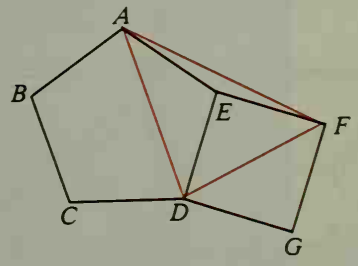
30. Given: $\triangle ABC$ in plane M; D not in plane M;
$\angle ACB \cong \angle ABC$; $\angle DCB \cong \angle DBC$
Name a pair of congruent triangles.
Prove that your answer is correct.

31. Given: $\overline{JL} \perp$ plane Z;
$\triangle KMN$ is isosceles, with $\overline{KM} \cong \overline{KN}$.
a. Prove that two other triangles are isosceles.
b. Must these two isosceles triangles be congruent? Explain.

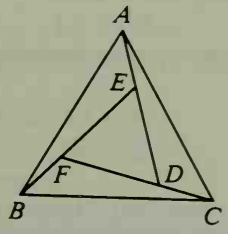


32. Draw an isosceles triangle and then join the midpoints of its sides to form another triangle. What can you deduce about this second triangle? Explain.

C **33.** $ABCDE$ is a regular pentagon and $DEFG$ is a square. Find the measures of $\angle EAF$, $\angle AFD$, and $\angle DAF$.



34. Given: $\triangle ABC$ is equilateral;
$\angle CAD \cong \angle ABE \cong \angle BCF$
Prove something interesting about $\triangle DEF$.



Challenge

The figure shown at the right can be dissected into three congruent pieces, as shown by the dashed lines. Can you dissect the figure into (**a**) two congruent pieces? (**b**) four congruent pieces?