28. The diagonals of a rectangle are 8 units long and intersect at a 60° angle. Find the dimensions of the rectangle.

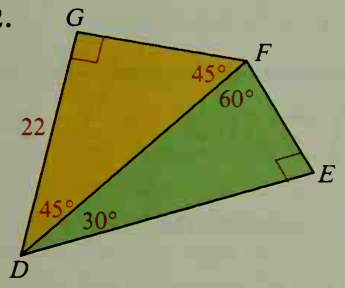
29. The perimeter of a rhombus is 64 and one of its angles has measure 120. Find the lengths of the diagonals.

30. Prove Theorem 8-6.

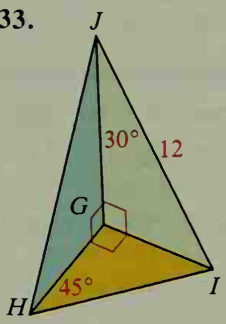
31. Explain why any triangle having sides in the ratio $1:\sqrt{3}:2$ must be a 30°-60°-90° triangle.

Find the lengths of as many segments as possible.

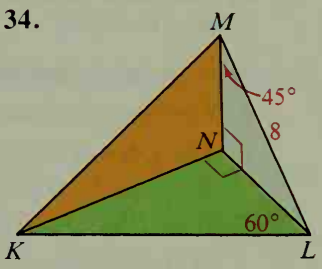
32.



33.



34.

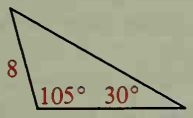


C **35.** In quadrilateral $QRST$, $m\angle R = 60$, $m\angle T = 90$, $QR = RS$, $ST = 8$, and $TQ = 8$.

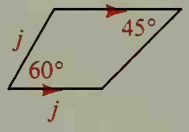
a. How long is the longer diagonal of the quadrilateral?

b. Find the ratio of RT to QS.

36. Find the perimeter of the triangle.



37. Find the length of the median of the trapezoid in terms of j.



38. If the wrench just fits the hexagonal nut, what is the value of x?

★ **39.** The six edges of the solid shown are 8 units long. A and B are midpoints of two edges as shown. Find AB.