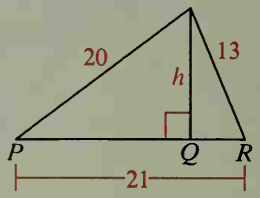
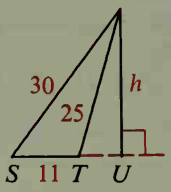
Find the value of h.

C 37.



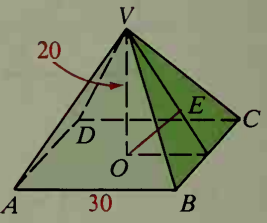
(*Hint*: Let $PQ = x$; $QR = 21 - x$.)

38.



(*Hint*: Let $TU = x$; $SU = x + 11$.)

39. O is the *center* of square $ABCD$ (the point of intersection of the diagonals) and $\overline{VO}$ is perpendicular to the plane of the square. Find OE, the distance from O to the plane of $\triangle VBC$.



Mixed Review Exercises

Given: $\triangle ABC$. Complete.

1. If $m\angle A > m\angle B$, then $BC >$ ___?___.
2. If $AB > BC$, then $m\angle C$ ___?___ $m\angle$ ___?___.
3. $AB + BC$ ___?___ AC
4. If $\angle C$ is a right angle, then ___?___ is the longest side.
5. If $AB = AC$, then $\angle$ ___?___ $\cong \angle$ ___?___.
6. If $\angle A \cong \angle C$, then $BC =$ ___?___.
7. If $\angle C$ is a right angle and X is the midpoint of the hypotenuse, then $AX =$ ___?___ $=$ ___?___.

Challenge

Start with a right triangle. Build a square on each side. Locate the center of the square drawn on the longer leg. Through the center, draw a parallel to the hypotenuse and a perpendicular to the hypotenuse.

Cut out the pieces numbered 1–5. Can you arrange the five pieces to cover exactly the square built on the hypotenuse? (This suggests another proof of the Pythagorean Theorem.)