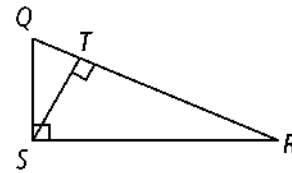# HW-32

Similarity in Right Triangles
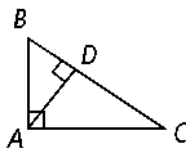
Identify the following in right△*QRS*.

1. the hypotenuse

2. the segments of the hypotenuse

3. the altitude

4. the segment of the hypotenuse adjacent to leg $\overline{QS}$
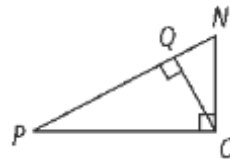
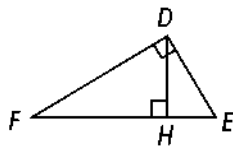**Write a similarity statement relating the three triangles in the diagram.**

5.

6.

7.

Algebra Find the geometric mean of each pair of numbers.

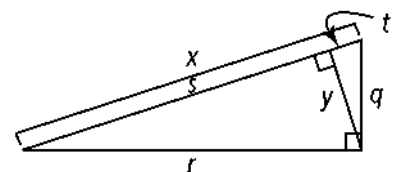**11.** 9 and 4   **12.** 14 and 6   **13.** 9 and 30
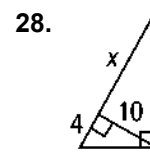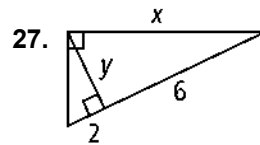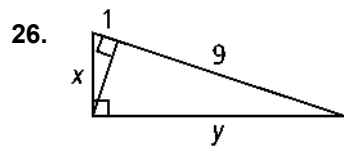
Use the figure at the right to complete each proportion.

20. $\dfrac{q}{r} = \dfrac{\square}{y}$ **21.** $\dfrac{s}{y} = \dfrac{\square}{t}$ **22.** $\dfrac{t}{q} = \dfrac{q}{\square}$

Algebra Solve for the value of the variables in each right triangle.

26.

27.

28.

The diagram shows the parts of a right triangle with an altitude to the hypotenuse. For the two given measures, find the other four. Use simplest radical form.

32. $h = 12$, $h_1 = 4$

$\overline{}$
$\diagdown$

36. The altitude of the hypotenuse of a right triangle divides the hypotenuse into 45 in. and 5 in. segments. What is the length of the altitude?

$\sqrt{}$