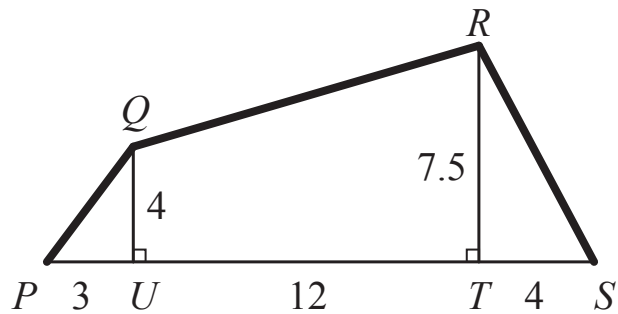# Problem of the Week
Problem C
Under the Big Top

A large tent is being set up for a fair.

Two poles, QU and RT, are placed perpendicular to the ground and 12 m apart. Pole QU is 4 m in length and pole RT is 7.5 m in length.

A tarp is placed over the poles and secured to the ground at P, 3 m from the base of pole QU, and S, 4 m from the base of pole RT.

Determine $PQ + QR + RS$, the length of the tarp.

The *Pythagorean Theorem* states, "In a right triangle, the square of the length of hypotenuse (the side opposite the right angle) equals the sum of the squares of the lengths of the other two sides"

In the following right triangle, $p^2 = r^2 + q^2$.
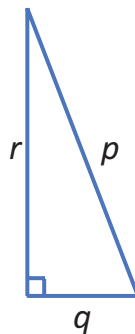
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