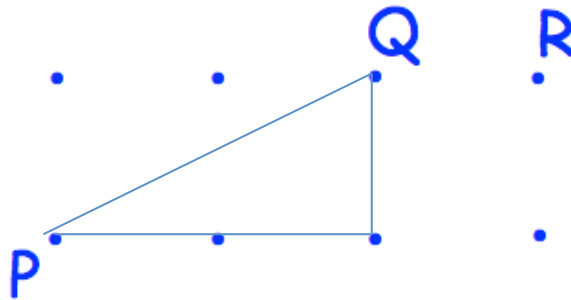


November 5th

On a square grid, $PQ = 3\sqrt{5}$. Find PR .



If $QR = x$

Pythagoras gives $(2x)^2 + x^2 = (3\sqrt{5})^2$

Hence $5x^2 = 45$

Giving $x = 3$

Now $PR^2 = 3^2 + 9^2 = 90$

$$PR = \sqrt{90} = 3\sqrt{10}$$