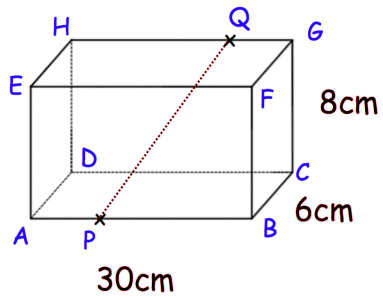
1st September **Higher Plus 5-a-day**

Corbettmaths



P is a point on AB, such that AP:PB is 1:2
Q is a point on GH, such that GQ:QH is 2:3

Calculate the distance PQ.

The line Q passes through the points (–10, –2) and (–8, –8)

The line R passes through the points (1, 2) and (10, a)

The lines Q and R are perpendicular.

Find a.

A square based pyramid, with a perpendicular height of 15cm is placed on a table.

The weight of the pyramid is 70.56N.
The pyramid exerts a pressure of 4900N/m² on the table.

Work out the volume of the square based pyramid.

Solve the equations

$$x^2 + y^2 = 20$$

$$x + y = 6$$