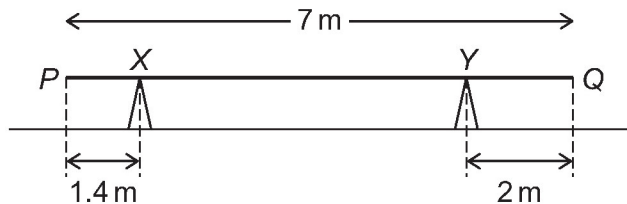**17**   A uniform plank PQ, of length 7 metres, lies horizontally at rest, in equilibrium, on two fixed supports at points X and Y

The distance PX is 1.4 metres and the distance QY is 2 metres as shown in the diagram below.

17 (a)   The reaction force on the plank at X is $4g$ newtons.

17 (a) (i)   Show that the mass of the plank is 9.6 kilograms.

[2 marks]

17 (a) (ii)   Find the reaction force, in terms of g, on the plank at Y

[2 marks]

17 (b)   The support at Y is moved so that the distance $QY = 1.4$ metres.

The plank remains horizontally at rest in equilibrium.

It is claimed that the reaction force at Y remains unchanged.

Explain, with a reason, whether this claim is correct.

[2 marks]