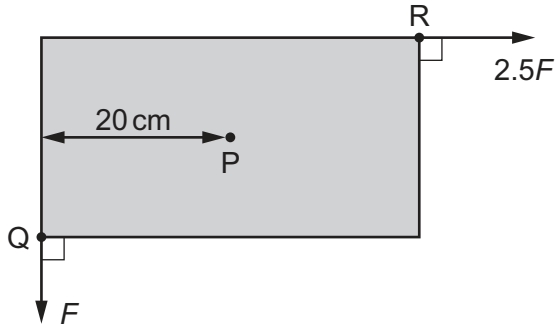
12 A uniform rectangular board is supported by a frictionless pivot at its centre point P.



Two forces act in the plane of the board. Force *F* acts at corner Q and force 2.5*F* acts at corner R. The perpendicular distance between the line of action of force *F* and point P is 20 cm. The board is in equilibrium.

What is the area of the board?

A 160 cm^2 **B** 320 cm^2 **C** 640 cm^2 **D** 1600 cm^2