The diagram shows a uniform lamina $ABCD$ with $AB = 0.75$ m, $AD = 0.6$ m and $BC = 0.9$ m. Angle $BAD =$ angle $ABC = 90°$.

 (i) Show that the distance of the centre of mass of the lamina from AB is 0.38 m, and find the distance of the centre of mass from BC. [5]

The lamina is freely suspended at B and hangs in equilibrium.

 (ii) Find the angle between BC and the vertical. [2]