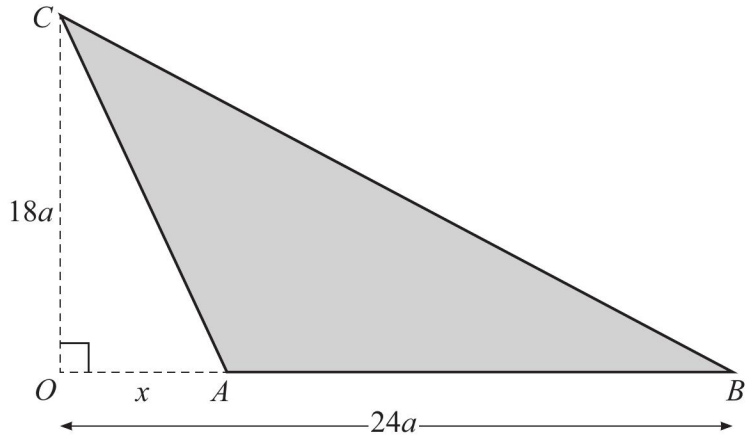

A uniform lamina is in the form of a triangle OBC, with $OC = 18a$, $OB = 24a$ and angle $COB = 90°$. The point A on OB is such that $OA = x$ (see diagram). The triangle OAC is removed from the lamina.

(a) Find, in terms of a and x, the distance of the centre of mass of the remaining object ABC from OC. [3]

The object ABC is suspended from C. In its equilibrium position, the side AB makes an angle θ with the vertical, where $\tan\theta = \frac{6}{5}$.

(b) Find x in terms of a. [4]