18*a* \boldsymbol{A} \boldsymbol{x}

8

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

24*a*

 	 	 	•••••	 	
 	 	 	•••••	 	
 	 	 	•••••	 	

(b)

* 0019655479109 *

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

9

Find x in terms of a .	[4]