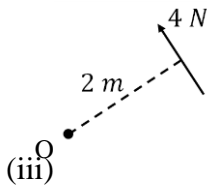


Section 1: The moment of a force

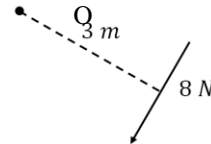
Exercise level 1

1. For each diagram below, find the total moment about O and state whether it is anticlockwise or clockwise.

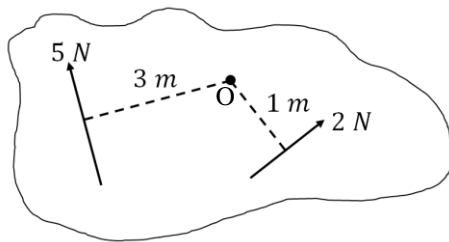
(i)



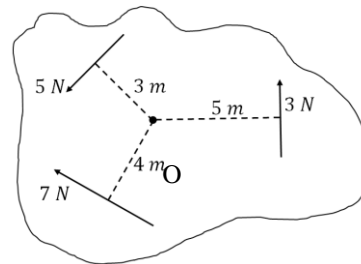
(ii)



(iii)



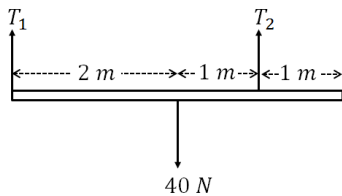
(iv)



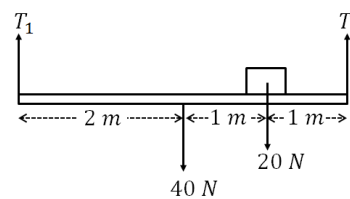
2. Each of the diagrams below shows a uniform beam held in equilibrium by two inextensible cables.

Find the tension in each cable.

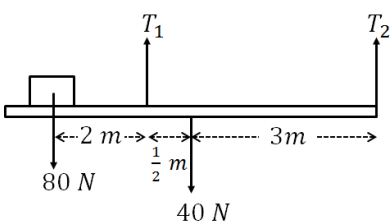
(i)



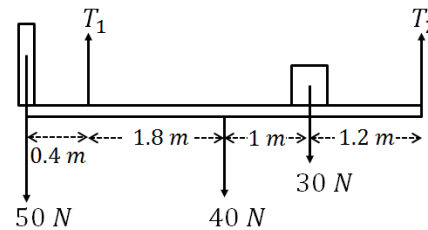
(ii)



(iii)

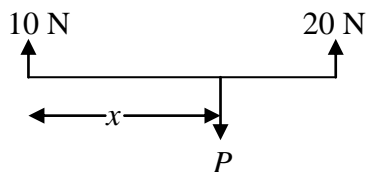


(iv)

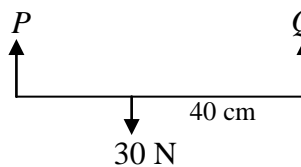


3. The diagrams below show a light horizontal rod of length 60 cm resting in equilibrium. Find the forces and distances marked with letters.

(i)



(ii)



4. A uniform bar AB of length 2.8 m and weight 80 N has loads of 20 N and 40 N attached at A and B respectively. If the bar balances in a horizontal position when smoothly supported at C, find the distance of C from A.