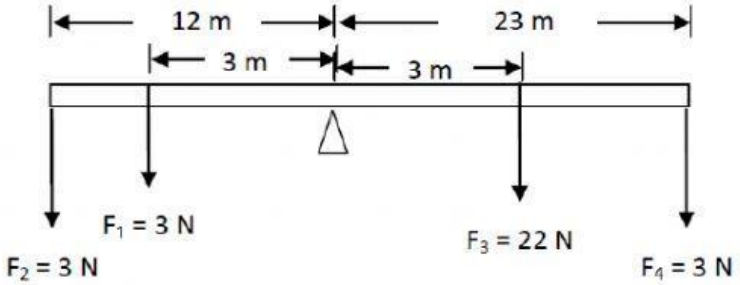
Forces and moments

1 Find (i) The moments due to **each force** and its corresponding direction.
(ii) The resultant moments and its direction.
Assume the plank has negligible mass.

(a)



Working and answers

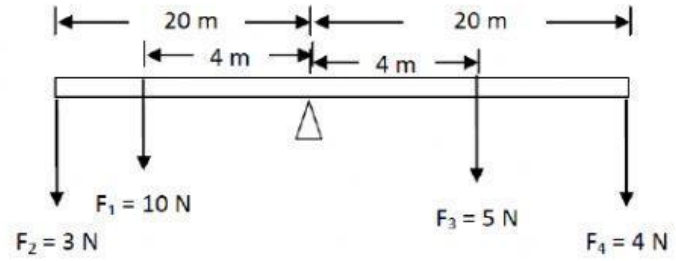
Moments due to F1	
Moments due to F2	
Moments due to F3	
Moments due to F4	
Total clockwise moments	
Total anti-clockwise moments	
Resultant moment	
Direction of rotation	

Model answers – enter in this format

Moments due to F1	**56Nm clockwise**
Moments due to F2	**14Nm clockwise**
Moments due to F3	**40Nm anticlockwise**
Moments due to F4	**16Nm anticlockwise**
Total clockwise moments	**70Nm**
Total anti-clockwise moments	**56Nm**
Resultant moment	**14Nm clockwise ('0' if there is no R.M.)**
Direction of rotation	**Clockwise**

LIVEWORKSHEETS

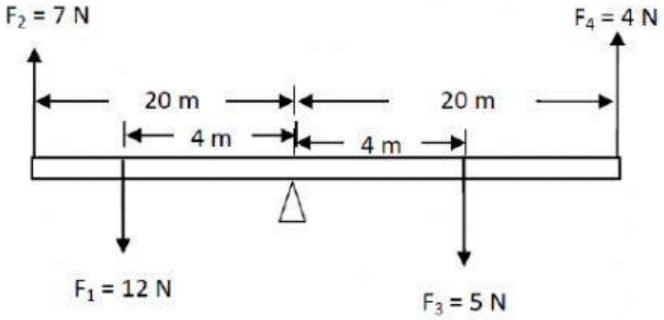
(b)



Working and answers

Moments due to F1	
Moments due to F2	
Moments due to F3	
Moments due to F4	
Total clockwise moments	
Total anti-clockwise moments	
Resultant moment	
Direction of rotation	

(c)



Working and answers

Moments due to F1	
Moments due to F2	
Moments due to F3	
Moments due to F4	
Total clockwise moments	

LIVEWORKSHEETS

Total anti-clockwise moments	
Resultant moment	
Direction of rotation	

LIVEWORKSHEETS