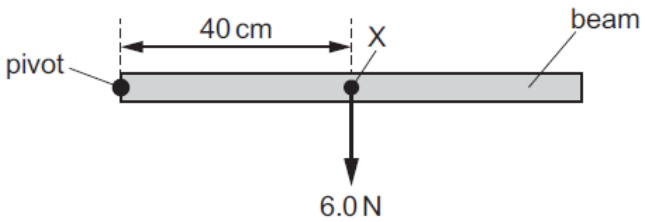
Turning Effect of Force – 2022 June IGCSE 0625

1. June/2022/Paper_11/No.7

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

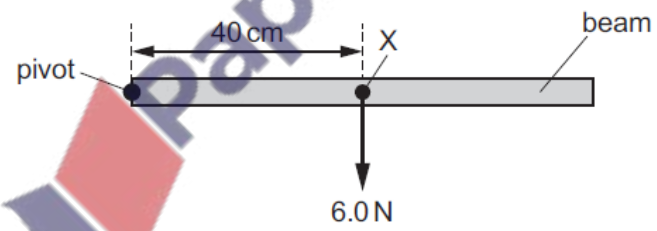
B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

2. June/2022/Paper_12/No.7

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

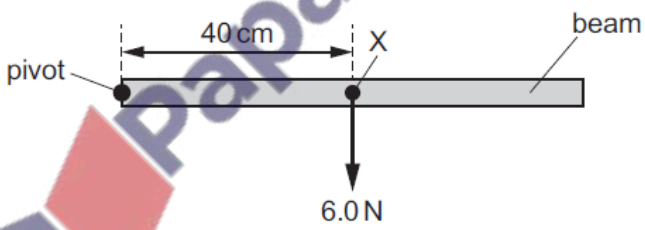
3. June/2022/Paper_12/No.8

What are the conditions for an object to be in equilibrium?

	forces on object	moment on object
A	no resultant force	no resultant moment
B	no resultant force	resultant moment
C	resultant force	no resultant moment
D	resultant force	resultant moment

4. June/2022/Paper_13/No.6

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

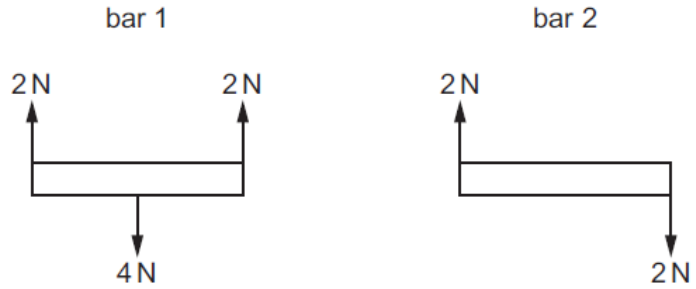
B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

5. June/2022/Paper_13/No.7

The diagram shows two identical bars of negligible weight. All the forces acting on each bar are marked.



Which bars are in equilibrium?

A bar 1 and bar 2

B bar 1 only

C bar 2 only

D neither bar 1 nor bar 2

6. June/2022/Paper_13/No.8

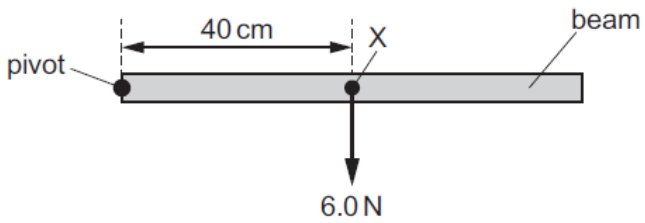
Four objects have different base areas and their centres of mass are in different positions.

Which object is most stable?

	base area	position of centre of mass
A	large	high
B	large	low
C	small	high
D	small	low

7. June/2022/Paper_21/No.7

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

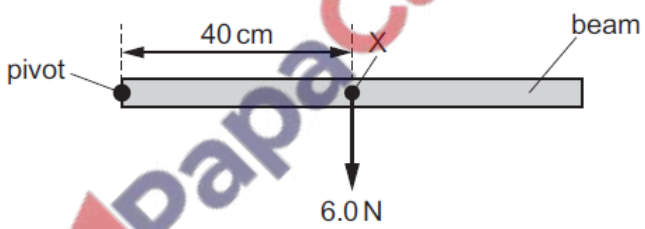
B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

8. June/2022/Paper_22/No.7

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

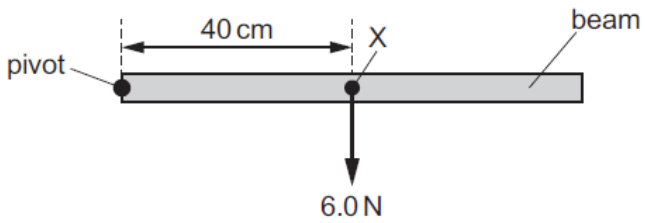
B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

9. June/2022/Paper_23/No.7

A beam is pivoted at one end, as shown.



The beam weighs 6.0 N and its weight acts at a point X 40 cm from the pivot.

A force of 4.0 N is applied to the beam causing it to balance horizontally.

In which direction and where is the 4.0 N force applied?

A vertically downwards at 20 cm to the left of X

B vertically downwards at 20 cm to the right of X

C vertically upwards at 20 cm to the left of X

D vertically upwards at 20 cm to the right of X

10. June/2022/Paper_31/No.4(b)

(b) Fig. 4.3 shows the force on the pulley from the load M.

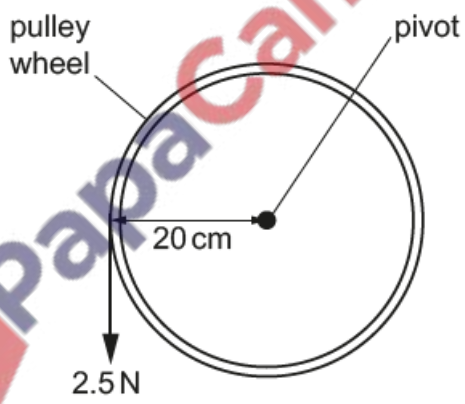


Fig. 4.3

The weight of load M is 2.5 N and the weight acts at a distance of 20 cm from the pivot of the pulley wheel.

Calculate the moment of the weight of load M about the pivot.

moment = ... N cm [3]

11. June/2022/Paper_33/No.3(b)

(b) Fig. 3.2 shows the handle used to open and close a cupboard door on the aeroplane.

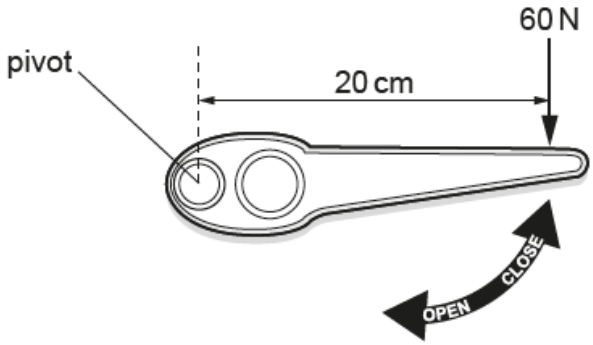


Fig. 3.2 (not to scale)

A force of 60 N acts at a distance of 20 cm from the pivot of the handle.

Calculate the moment of the 60 N force about the pivot.

moment = ... N cm [3]