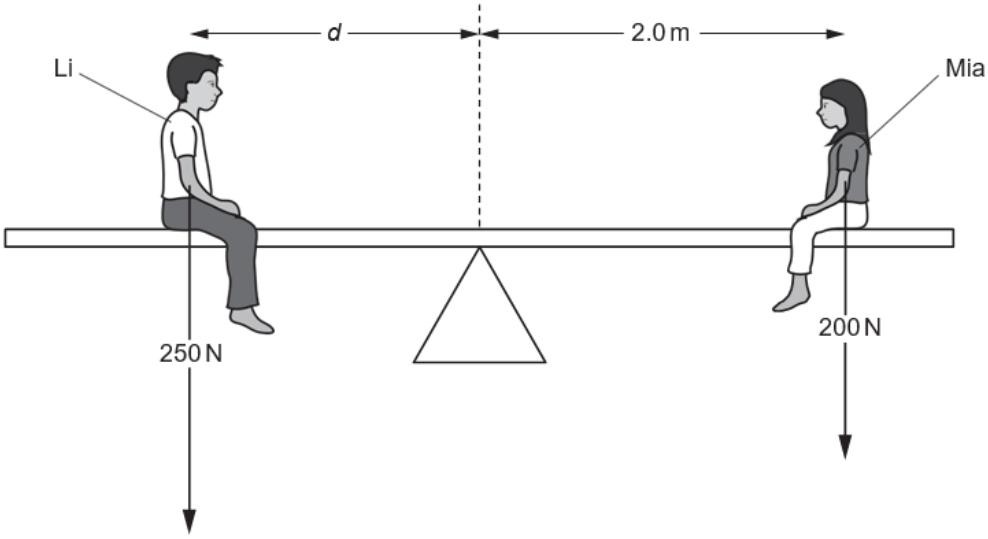
OCR
Oxford Cambridge and RSA

GCSE Physics B (Twenty First Century Science)

J259/01 Breadth in Physics (Foundation Tier)

Question Set 5

1 The figure shows Li and Mia balanced on a see-saw.



(a) Mia weighs 200 N.

Calculate the moment of Mia's weight about the centre of the see-saw.

Moments = Force x distance perpendicular to force
= 200 x 2
= 400 Nm

Moment = ... 400 ..... N m **[3]**

(b) Li weighs 250 N.

To balance Mia as shown in the diagram, he needs to sit at a distance *d* from the centre of the see-saw.

Calculate the distance *d*.

To balance : Anticlockwise moments = Clockwise moments

Mai (CW) : 400 Nm

Li (ACW) : 250 x d

$400 = 250d \quad d = \frac{400}{250} = 1.6\text{m}$

Distance *d* = ... 1.6 ..... m **[3]**

Total Marks for Question Set 5: 6