

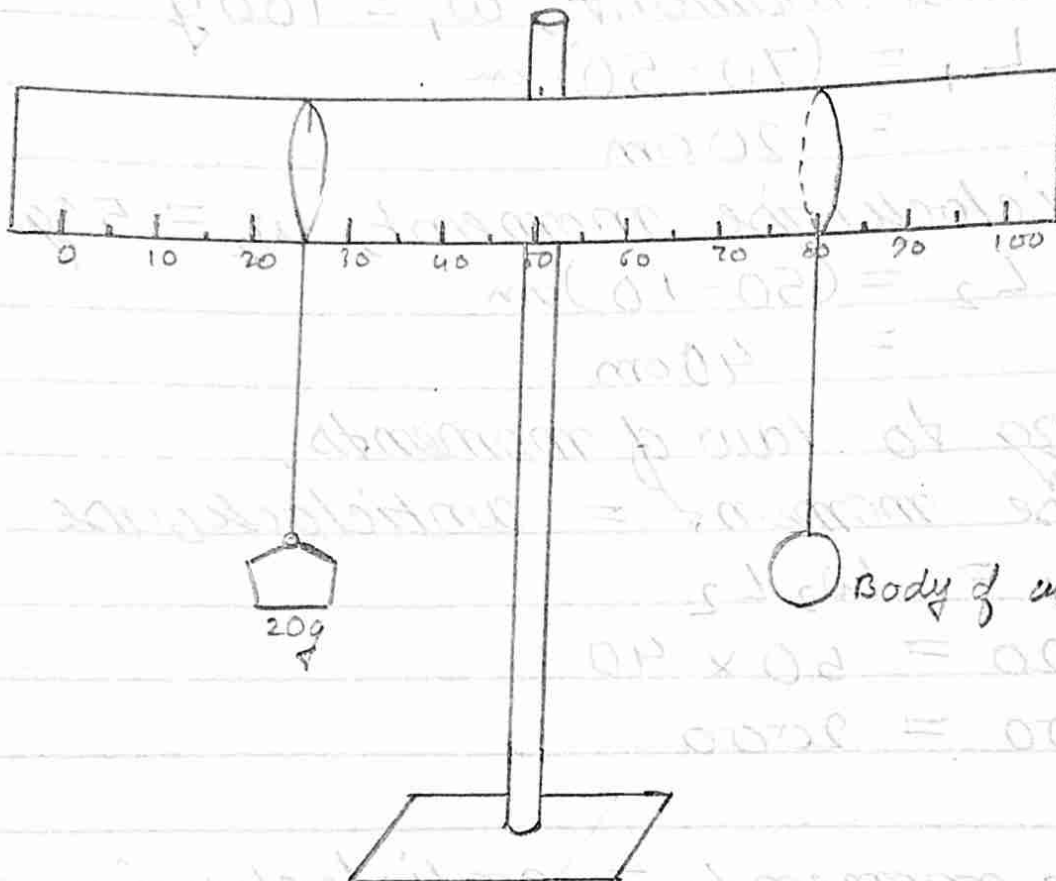
MEASUREMENT OF WEIGHT OF A BODY BY LAW OF MOMENTS

AIM: to measure the weight of a body using law of moments.

MATERIALS REQUIRED: a metre rule with hole added at centre of gravity, a thread piece, weight box.

PROCEDURE

- 1) Suspend metre rule at its centre of gravity to a support using thread loop.
- 2) The metre rule hangs in horizontal state. Hang the given body in thread loop and suspend the thread loop on right side of suspension point (say 80 cm mark).
- 3) Take 10g or 20g weight from the weight box and tie it with second thread loop. Suspend this loop on the left side of suspension point.
- 4) Slowly shift the position of the second loop till the metre scale attains a horizontal position. Note down its position on the scale.
- 5) Repeat the experiment by changing the position of given body on metre scale.



stand for supporting the scale
through the centre of gravity
of scale.

VERIFICATION OF PRINCIPLE OF MOMENTS

AIM: Verification of principle of moments.

MATERIALS REQUIRED: a metre scale, weight box, thread.

THEORY

Principle of moments state that in equilibrium state of a body, the sum of anticlockwise moment is equal to the sum of clockwise moment.

PROCEDURE

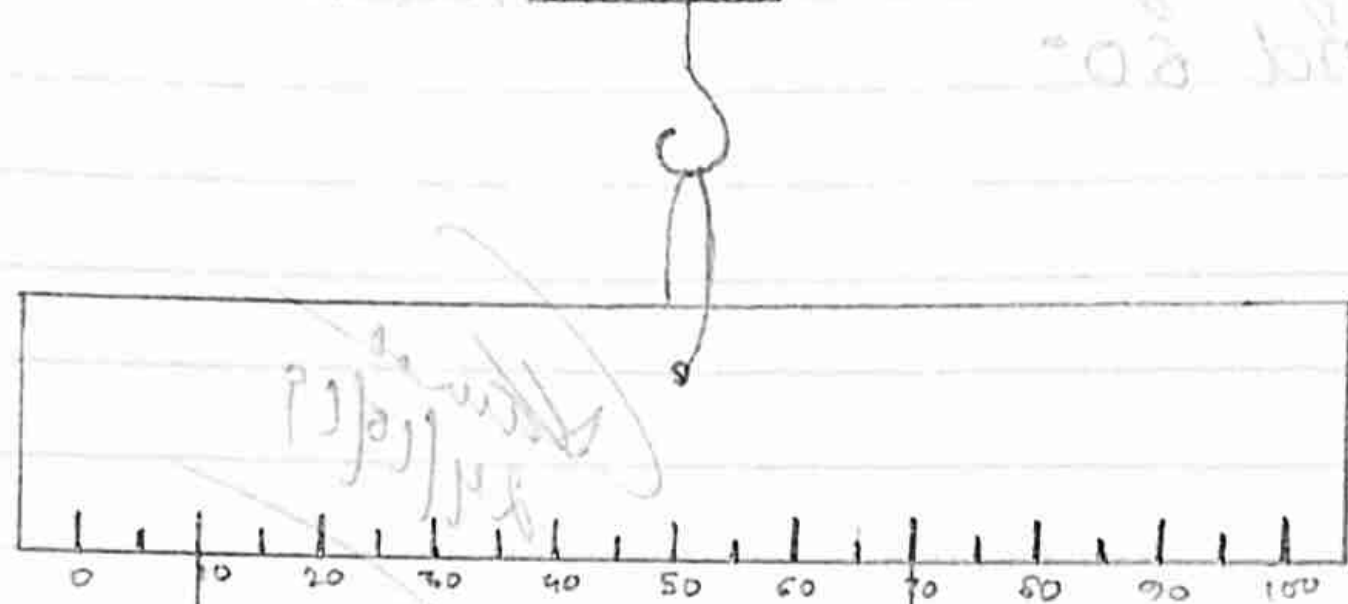
Make a hole at 50cm mark (at the centre of gravity) of the metre scale and suspend the metre scale by passing a thread through the hole and supporting the thread to a support of retort stand. Now, the metre scale is free to move horizontally.

Suspend a 100g weight at the 70cm mark of the metre scale and 50g weight on the other side.

Shift the 50g weight towards left till the metre scale attains horizontal position. Note down the distance of 50g weight from the point of suspension.

i) Repeat the experiment by changing the weight or by using same weight suspended at different distances from the point of suspension.

30. and 60.



50g weight
anticlockwise
moment



100g = clockwise moment