

Name _____ Date _____

Balancing a beam

Apparatus and materials

Materials

- *Beam with regular markings, simple*
- *Hooked masses*
- *Mass hangers*
- *Moment meter sticks*
- *Clamp stand*

Procedure

1. Place a mass hanger around the 50 cm mark of a meter stick. This wire acts as a fulcrum.
 2. Attach to the clamp stand.
 3. Place a mass hanger on the left and right side of your fulcrum to the 13 cm location. Attach a 50 g mass to each hanger
 4. Move the mass hangers until you are balanced.
 5. Calculate the clockwise and anti clockwise moment.
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6. Add 100 g to the mass on the left. Keeping the 50 g mass at the same location, move the 100 g mass until the moment stick is balanced. Calculate the new clockwise and anti clockwise moment

7. Add 100 g to the mass on the right. DO NOT MOVE THE LOCATION OF THIS MASS. Adjust the fulcrum until the moment stick is balanced. Calculate the new clockwise and anti clockwise moment

8. Repeat the experiment 5 more times by varying the masses. Record your results

9. Vary the location of the fulcrum 5 more times. Record your results.

10. What does the principle of moment's state?