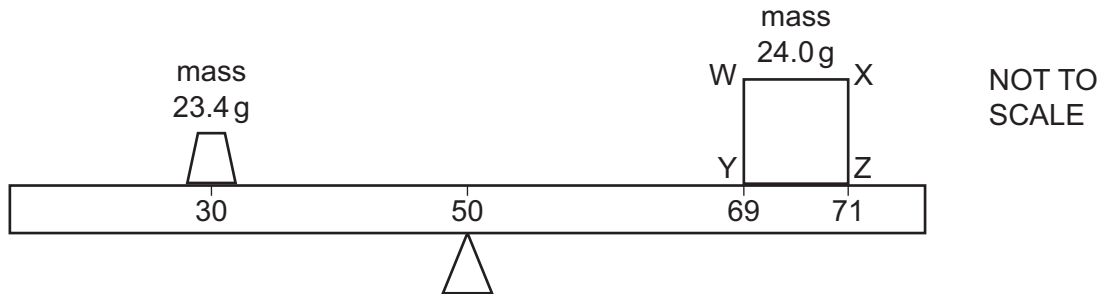


- 12 A cube WXZY has sides of length 2.0 cm and mass 24.0 g. The cube rests on a metre rule of negligible mass. The geometrical centre of the cube is vertically above the 70.0 cm mark on the scale of the rule.



The cube has a non-uniform density so that its centre of gravity is **not** at its geometrical centre. The centre of gravity of the cube is in the plane of the diagram.

The rule rests on a pivot at the 50.0 cm mark. A mass of 23.4 g is placed vertically above the 30.0 cm mark. The rule is horizontal and in equilibrium.

What can be determined about the position of the centre of gravity of the cube?

- A It must be somewhere along a horizontal line that is 0.5 cm from line WX.
- B It must be somewhere along a horizontal line that is 0.5 cm from line YZ.
- C It must be somewhere along a vertical line that is 0.5 cm from line WY.
- D It must be somewhere along a vertical line that is 0.5 cm from line XZ.