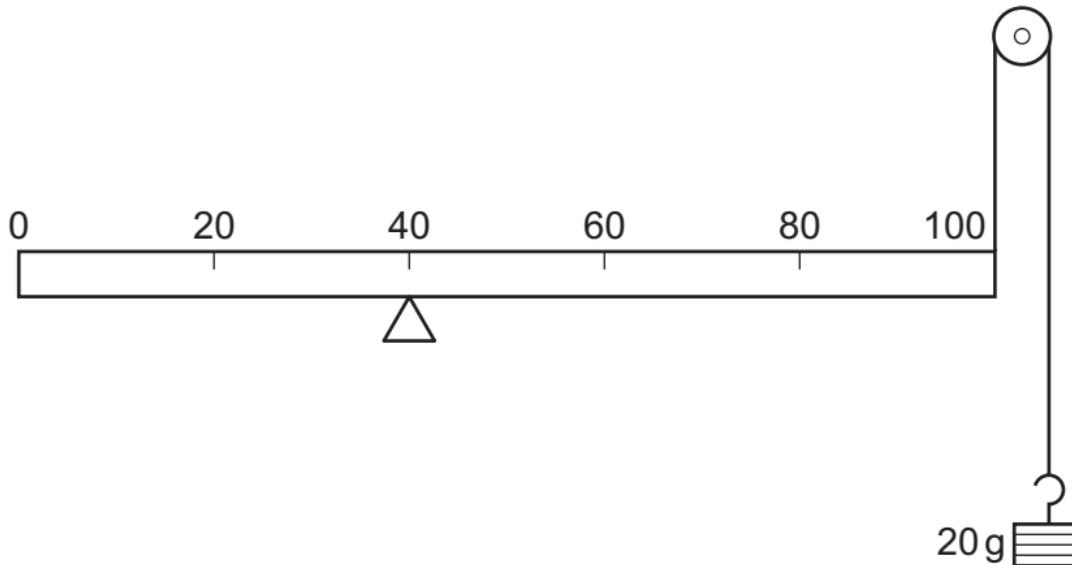


- 13 A uniform metre rule of mass 100 g is supported by a pivot at the 40 cm mark and a string at the 100 cm mark. The string passes round a frictionless pulley and carries a mass of 20g as shown in the diagram.



At which mark on the rule must a 50 g mass be suspended so that the rule balances?

A 4 cm

B 36 cm

C 44 cm

D 64 cm

- 14 A steel sphere is dropped vertically onto a horizontal metal plate. The sphere hits the plate with a