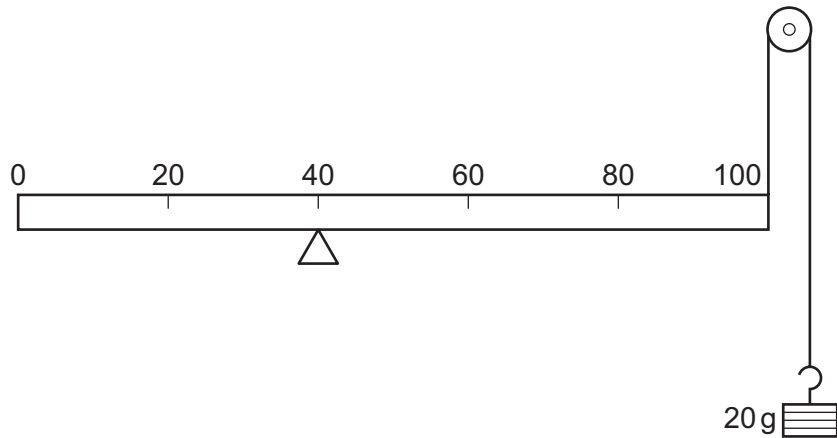


- 13** A uniform metre rule of mass 100 g is supported by a pivot at the 40 cm mark and a string at the 100 cm mark. The string passes round a frictionless pulley and carries a mass of 20 g as shown in the diagram.



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