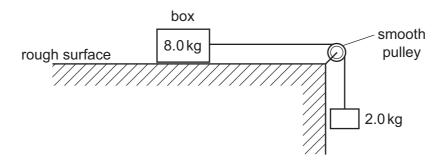
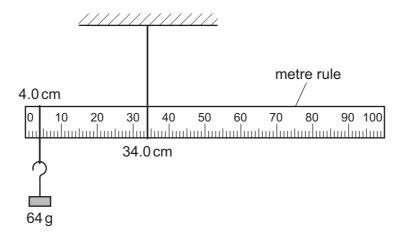
13 A box of mass 8.0 kg rests on a horizontal rough surface. A string attached to the box passes over a smooth pulley and supports a 2.0 kg mass at its other end.



When the box is released, a frictional force of 6.0 N acts on it.

What is the acceleration of the box?

- **A** $1.4 \,\mathrm{m \, s^{-2}}$
- **B** $1.7 \,\mathrm{m\,s^{-2}}$ **C** $2.0 \,\mathrm{m\,s^{-2}}$
- **D** $2.6 \,\mathrm{m \, s^{-2}}$
- 14 What is the **definition** of the force on a body?
 - the mass of the body multiplied by its acceleration
 - В the power input to the body divided by its velocity
 - the rate of change of momentum of the body C
 - **D** the work done on the body divided by its displacement
- **15** A uniform metre rule is pivoted at the 34.0 cm mark, as shown.



The rule balances when a 64 g mass is hung from the 4.0 cm mark.

What is the mass of the metre rule?

- **A** 38 g
- **B** 44 g
- **C** 120 g
- **D** 136 g