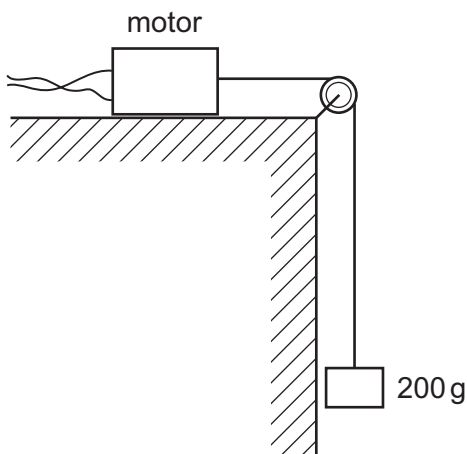


- 15 A small electric motor is mounted on a bench, as shown. The motor is connected to a 6.0 V supply and the current in the motor is 0.50 A. The motor is 50% efficient.



What is the time taken to lift a mass of 200 g up through a height of 90 cm?

- A** 0.59 s **B** 0.85 s **C** 1.2 s **D** 2.7 s
- 16 A projectile is launched at 45° to the horizontal with initial kinetic energy E .
Assuming air resistance to be negligible, what will be the kinetic energy of the projectile when it reaches its highest point?
- A** $0.50 E$ **B** $0.71 E$ **C** $0.87 E$ **D** E
- 17 What is the correct name for a material containing long-chain molecules that are tangled and coiled?
- A** amorphous metal
B amorphous polymer
C crystalline metal
D crystalline polymer

Space for working