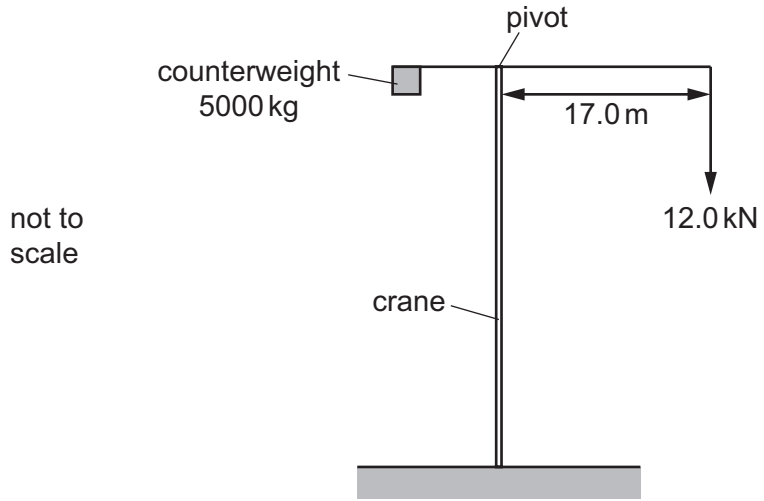
14 A crane uses a counterweight to stop it from toppling over when lifting a load, as shown.



The counterweight has a mass of 5000 kg. The crane is required to lift a load of 12.0 kN and the horizontal distance from the pivot to the load is 17.0 m.

How far from the pivot should the centre of gravity of the counterweight be positioned in order to keep the crane in equilibrium?

A 0.0408 m **B** 0.240 m **C** 4.16 m **D** 40.8 m