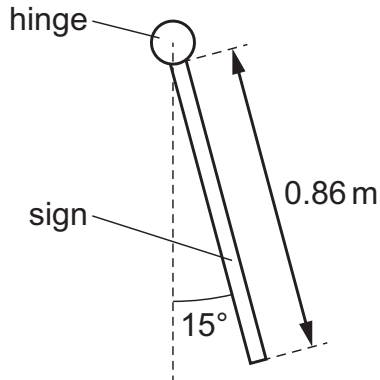


**15** A square shop sign of uniform density has mass 2.4 kg and sides of length 0.86 m.

The sign is supported by a hinge along its top edge.

There is friction in the hinge so that the sign hangs from it in equilibrium at an angle of  $15^\circ$  to the vertical, as shown.



What is the moment about the hinge of the weight of the sign?

**A** 2.6 N m

**B** 4.0 N m

**C** 5.2 N m

**D** 9.8 N m