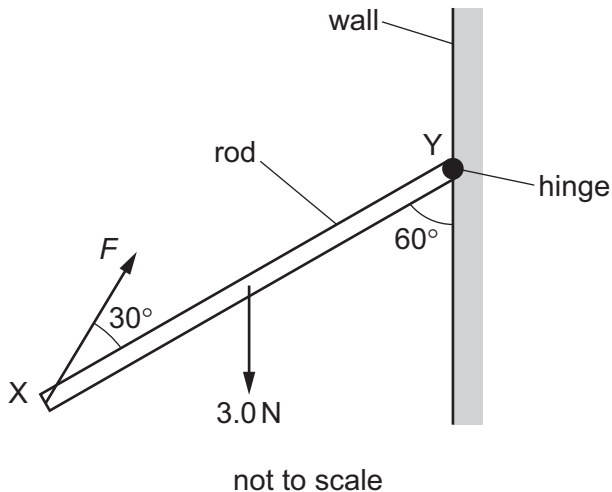12 The diagram shows a uniform rod, XY, that is freely hinged to a vertical wall at end Y. The rod is at an angle of 60° to the wall.

not to scale

A force F acts at an angle of 30° to the rod at end X. The rod has a weight of 3.0 N and is in equilibrium.

What is the magnitude of force F?

A   0.87 N   **B**   1.5 N   **C**   2.6 N   **D**   5.2 N