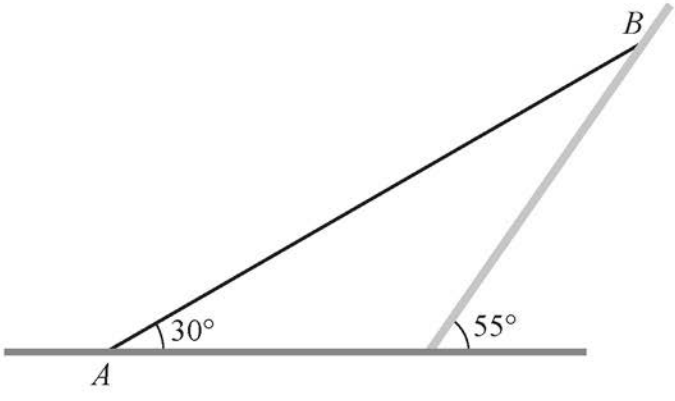
11



A uniform rod AB, of weight 20 N and length 2.8 m, rests in equilibrium with the end A in contact with rough horizontal ground and the end B resting against a smooth wall inclined at 55° to the horizontal. The rod, which rests in a vertical plane that is perpendicular to the wall, is inclined at 30° to the horizontal (see diagram).

(a) Show that the magnitude of the force acting on the rod at B is 9.56 N, correct to **3** significant figures. **[3]**

(b) Determine the magnitude of the contact force between the rod and the ground. Give your answer correct to **3** significant figures. **[5]**