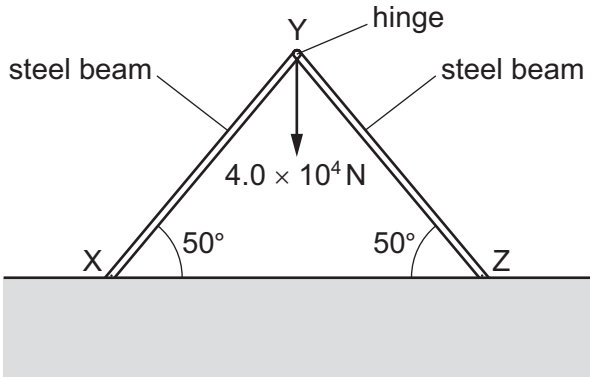
14 Two rigid steel beams XY and YZ are fixed at their lower ends and are hinged at Y. Each beam is inclined at 50° to the horizontal, as shown. A weight of 4.0×10^4 N hangs from Y. The structure is in equilibrium.



What is the force exerted by each beam on the hinge at Y?

A 2.6×10^4 N **B** 3.1×10^4 N **C** 5.2×10^4 N **D** 6.2×10^4 N