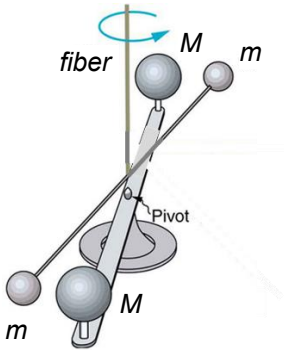
9 The 1798 Cavendish's experiment, similar to the set-up shown, investigated Newton's law by measuring the gravitational force between two unequal uniform lead spheres. The radius of the larger sphere was 100 mm and that of the smaller sphere was 25 mm.



Given that the density of lead is 11.3×10^3 kg m^{-3}, what is the gravitational force between a pair of larger and smaller spheres when their surfaces were in contact?

A 1.5×10^{-7} N

B 2.0×10^{-7} N

C 1.9×10^{-8} N

D 3.2×10^{-9} N