1 The radius of a helium-4 atom is of the order 10^{-10} m and its nucleus has a radius that is of the order of 10^{-15} m.

If all the empty space in the helium atom is removed and the atom size is reduced to that of the nucleus, what is the approximate density of the matter that is formed?

A 10^{14} kg m^{-3}
B 10^{18} kg m^{-3}
C 10^{22} kg m^{-3}
D 10^{26} kg m^{-3}