

NAME: \_\_\_\_\_

The air in a room measuring 10m x 10m x 3m contains 1 micron radius carbon particles. Each particle has a density of  $2.5 \text{ g/cm}^3$ . If the concentration of particles is  $10 \text{ particles/cm}^3$ , what is the total mass of carbon particles in the room's air?

useful formula:  $V_{\text{sphere}} = (4/3)\pi r^3$