HW 7-1 Soln)

The notes show the relationship between mass and radius as

$$\log(M) = 3 \log(R) - 0.85$$
.

Then,

$$log(M) = log(R^{3}) - 0.85$$
$$M = 10^{-0.85}R^{3}$$
$$M = 0.141R^{3}$$
$$M = \left(\frac{3}{4\pi}0.141\right)\left(\frac{4\pi}{3}R^{3}\right)$$

The density is then

The currently accepted value is about $2 \times 10^{+17}$ kg/m³.