

Problema 894: Calcula el radio de Marte sabiendo que:  $g_M = 3,72 \text{ N/kg}$  y  $M_M = 6,419 \cdot 10^{23} \text{ kg}$  y  $G = 6,67 \cdot 10^{-11} \text{ N} \cdot \text{m}^2 \cdot \text{kg}^{-2}$

$$F = G \cdot \frac{m \cdot M_M}{R_M^2} = m \cdot g_M$$

$$g_M = G \cdot \frac{M_M}{R_M^2}$$

$$R_M = \sqrt{\frac{G \cdot M_M}{g_M}} = \sqrt{\frac{6,67 \cdot 10^{-11} \text{ N} \cdot \text{m}^2 \cdot \text{kg}^{-2} \cdot 6,419 \cdot 10^{23} \text{ kg}}{3,72 \text{ N} \cdot \text{kg}^{-1}}} = 3,393 \cdot 10^6 \text{ m} = \underline{3393 \text{ km}}$$