

1/7

$$g_h = \frac{G m_e}{(R+h)^2}$$

$$= \frac{(3.439 \times 10^{-8})(4.095 \times 10^{23})}{[(3959)(5280) + (150)(5280)]^2} = \underline{29.9 \text{ ft/sec}^2}$$

Mass of man : $m = \frac{W}{g} = \frac{200}{32.174} = 6.22 \text{ slugs}$

Absolute weight at $h = 150$ miles :

$$W_h = m g_h = (6.22)(29.9) = \underline{186.0 \text{ lb}}$$

The terms "zero-g" and "weightless" are definitely misnomers in this instance.