Final speed of object dropped from $v_0 = 0$

Neglecting air resistance ($F = mg$ vs. $F = \frac{GMm}{r^2}$)
Correction factor for $F=mg$ for variation of gravity with altitude

$$\left(\frac{R}{R+h}\right)^2$$

$R = \text{Radius of Earth}$

$h = \text{altitude}$

Height above surface of Earth (km)