

Problem 1.12

At 45° latitude, the gravitational acceleration as a function of elevation z above sea level is given by $g = a - bz$, where $a = 9.807 \text{ m/s}^2$ and $b = 3.32 \times 10^{-6} \text{ s}^{-2}$. Determine the height above sea level where the weight of an object will decrease by 0.3 percent.

Answer: 8862m