14.43:  a) \[ \rho g h = \left( 1.03 \times 10^3 \text{ kg}/\text{m}^3 \right) \left( 9.80 \times \text{m} / \text{s}^2 \right) \left( 10.92 \times 10^3 \text{ m} \right) = 1.10 \times 10^8 \text{ Pa}. \]

b) The fractional change in volume is the negative of the fractional change in density. The density at that depth is then

\[ \rho = \rho_0 \left( 1 + k \Delta p \right) = \left( 1.03 \times 10^3 \text{ kg}/\text{m}^3 \right) \left( 1 + 1.16 \times 10^8 \frac{\text{Pa}}{45.8 \times 10^{-11} \text{ Pa}^{-1}} \right) \]

\[ = 1.08 \times 10^3 \text{ kg}/\text{m}^3, \]

A fractional increase of 5.0. Note that to three figures, the gauge pressure and absolute pressure are the same.