

12. (a) The total weight is

$$W = \rho ghA = (1.00 \times 10^3 \text{ kg/m}^3) (9.8 \text{ m/s}^2) (200 \text{ m}) (3000 \text{ m}^2) = 6.06 \times 10^9 \text{ N} .$$

- (b) The water pressure is

$$p = \rho gh = (1.03 \times 10^3 \text{ kg/m}^3) (9.8 \text{ m/s}^2) (200 \text{ m}) \left(\frac{1 \text{ atm}}{1.01 \times 10^5 \text{ Pa}} \right) = 20 \text{ atm}$$

which is too much for anybody to endure without special equipment.