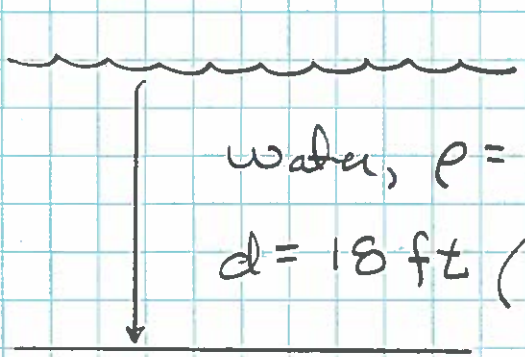
a.) MU Dive Well



So, at d:

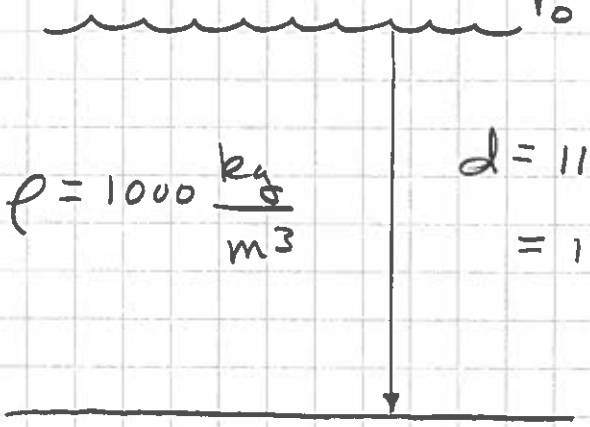
$$P = P_0 + \rho g d$$

$$= 1.551 \times 10^5\ Pa$$

$$= \underline{1.53\ atm}$$

So, the pressure at the bottom of the dive well is ~50% higher than atmospheric pressure. That's what you feel on your ears.

b.) Deepest point in the Ocean.



$$P(\text{at } d) = P_o + \rho g d$$

$$= 1.079 \times 10^8 \text{ Pa.}$$

or $P(\text{at } d) = 1065 \text{ atm}$

NOTE: The density of sea water is actually 1030 kg/m^3 which gives a slightly different answer.

At this depth, the pressure is more than 1000x higher than atmospheric — how would your body respond?