The container shown in the figure below is filled with oil. It is open to the atmosphere on the left. (a) What is the pressure at point A? (b) What is the pressure difference between points A and B? (c) What is the pressure difference between points A and C?

\[ P_A = P_1 \]
\[ P_1 = P_o + \rho g h_1 \]
\[ P_A = 101325 + (900)(9.8)(-5) \]

\[ P_A = 105735 \text{ Pa} \]

\[ \Delta P_{AB} = P_B - P_A \]
\[ P_B = P_c \]
\[ P_c = P_o + \rho g h_c \]
\[ P_B = P_o + \rho g h_c \]
\[ \Delta P_{AB} = (P_o + \rho g h_c) - (P_o + \rho g h_1) \]
\[ \Delta P_{AB} = \rho g (h_c - h_1) \]
\[ \Delta P_{AB} = (900)(9.8)(10) = 4410 \text{ Pa} \]

\[ \Delta P_{AC} = \Delta P_{AB} = 4410 \text{ Pa} \]

SAME BECAUSE ZF ONLY DEPENDS ON DEPTH.