Station Pressure

From the user, a station elevation (h) and an altimeter setting (P_a) are given. Before calculating the station pressure, the station elevation must be converted to meters (m) using the formula below:

$$h_m = 3.2808 \times h_{ft}$$

Also, the altimeter setting must be converted to inches of mercury $(inHg)$. For information on how to convert pressure, use the link below:

http://www.wrh.noaa.gov/Saltlake/projects/wxcalc/formulas/pressureConversion.pdf

Then, the station pressure (P_{stn})can be calculated using the formula below:

$$P_{stn} = P_a \times \left(\frac{(288 - 0.0065 \times h_m)}{288} \right)^{5.2561}$$

Then, the station pressure can be converted to other pressure units, using the link above.