Heat Index

From the user, we are given an air temperature (T) and a relative humidity (rh).

If the air temperature is given in degrees Celsius $(°C)$, we must convert the temperature value to degrees Fahrenheit $(°F)$. To do this, check out the temperature conversion formula at:

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

Then, we can calculate the heat index with this complex formula:

$$\begin{aligned} Index_{heat} = & -42.379 + (2.04901523 \times T) + (10.14333127 \times rh) \\ & - (0.22475541 \times T \times rh) - (6.83783 \times 10^{-3} \times T^2) \\ & - (5.481717 \times 10^{-2} \times rh^2) + (1.22874 \times 10^{-3} \times T^2 \times rh) \\ & + (8.5282 \times 10^{-4} \times T \times rh^2) - (1.99 \times 10^{-6} \times T^2 \times rh^2) \end{aligned}$$