Speed of Sound

From the user, an air temperature (T) is given. Before calculating the speed of sound, the air temperature value must be converted to Kelvin (K). To convert the air temperature to Kelvin, see the link below:

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

Just a side note before calculating the speed of sound, the speed of sound is dependent on the density of the air. The density of the air is dependent on the temperature of the air.

Then, the speed of sound (v_{sound}) can be calculated using the formula below:

$$v_{sound} = 643.855 \times \left(\frac{T}{273.15} \right)^{0.5}$$

The answer is given in knots to convert knots to another speed unit, see the link below:

http://www.wrh.noaa.gov/slc/projects/wxcalc/formulas/windConversion.pdf