

Equations for calculating Wind Chill Factors, etc.

$$\text{Wind Chill: } W_C = 0.045 * (5.27 * \sqrt{W_S} + 10.45 - 0.28 * W_S) * (T - 33) + 33$$

$$\text{Temperature: } T = 33 + ((W_C - 33) / (0.045 * (5.27 * \sqrt{W_S} + 10.45 - 0.28 * W_S)))$$

$$\text{Wind Speed: } W_S = \left[\frac{-5.27 + \sqrt{27.7729 - 1.12K}}{-0.56} \right]^2$$

$$\text{Constant for Wind Speed: } K = \left[\frac{(W_C - 33)}{0.045 * (T - 33)} \right] - 10.45$$

Where,

WC Wind Chill Factor

WS Wind Speed

T Temperature

K Constant, used in Wind Speed calculation