Equations and Constants

$1\ knot = 1.15\ mph$

$^{\circ}F = \frac{9}{5}^{\circ}C + 32$

$1\ \mu m = 1x10^{-6}\ m$

$1\ mm = 1x10^{-3}\ m$

$\rho_l = 1000 \frac{kg}{m^3}$

$\frac{dr_1}{dt} = \frac{v_1 W_l E_c}{4\rho_l}$

$r\frac{dr}{dt} = G_l S$

$S = \frac{e-e_s}{e_s} = \frac{e}{e_s} - 1$

$\theta = T\left(\frac{p_o}{p}\right)^{\frac{R}{c_p}}$

$Z_2 - Z_1 = -\left(\frac{R_d}{g_o}\right)\int_{p_1}^{p_2} T_v \frac{dp}{p}$

$\frac{R}{c_p} = 0.286$

Have a safe and happy summer!