# 1819-108-C4-W10-HW.pdf

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## 1    Introduction

$t_saw = (-2) : 0.01 : 0;$
    k = (-2-0)/(-2-0)
    delay = 0;
    $y_saw = k * (t_saw - delay);$
    $plot(t_saw, y_saw,' k')$
    hold on
    $t_sin = (-2) : 0.01 : 2;$
    A0 = 0.5;
    A = 0.5;
    T = (3-(-3))/(1/3);
    f = 1/T;
    delay = 0;
    $y_sin = A0 + A * sin(2 * pi * f * (t_sin - delay));$
    $plot(t_sin, y_sin,' r')$
    $t_sin = (-2) : 0.01 : 2;$
    A0 = 0;
    A = 1;
    T = (2-(-2))/(1/2);
    f = 1/T;
    delay = 0;
    $y_sin = A0 + A * sin(2 * pi * f * (t_sin - delay));$
    $plot(t_sin, y_sin,' b')$
    $t_const1 = 0 : 0.01 : 1;$
    $y_const1 = 0 * ones(size(t_const1));$
    $t_const2 = 1 : 0.01 : 2;$
    $y_const2 = 1 * ones(size(t_const2));$
    $t_const = [t_const1, t_const2];$
    $y_const = [y_const1, y_const2];$
    $plot(t_const, y_const,' g')$
    $t_constr = (-2) : 0.01 : 0;$
    $y_constr = 0 * ones(size(t_constr));$
    $t_sawr = 0 : 0.01 : 2;$
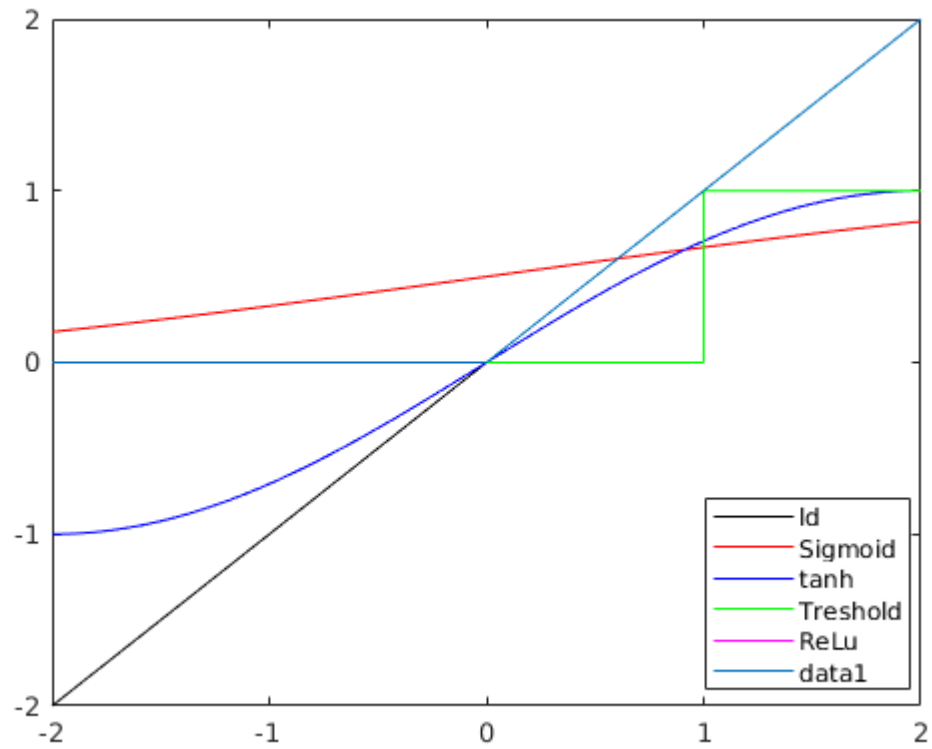
k = (0-2)/(0-2)
delay = 0;
$y_s awr = k * (t_s awr - delay)$;
$t_r elu = [t_c onstr, t_s awr]$;
$y_r elu = [y_c onstr, y_s awr]$;
$plot(t_r elu, y_r elu, 'm')$
axis([-2 2 -2 2])
legend('ld', 'Sigmoid', 'tanh', 'Treshold', 'ReLu')
$z=plot(t_r elu, y_r elu)$
za = get(z, 'Parent');
set(za, 'XTick', [-2 -1 0 1 2]);
set(za, 'YTick', [-2 -1 0 1 2]);