Calculos - Motores

$F_{CPU} = 16MHz$; $f = \frac{16MHz}{8} = 2MHz$;
Prescala = 8;

$T = \frac{1}{2MHz}$; $T = 5 \times 10^{-7}s$;

Timer 1
$65535 * 5 \times 10^{-7}$;
$T = 32.76ms$

High = $\frac{2ms}{32.76ms}$, 6.1%

Low = $\frac{1ms}{32.76ms}$; 3.05%

Limites
(6.11%)(65,535) = 4000.92
(3.00%)(65,535) = 2000.46

y = duty
x = valor ADC

$P_1(0 - 2000.46)$; $P_2(1023 - 4000.96)$

$m = \frac{4000.96 - 2000.96}{1023 - 0}$; $m = 1.96$;

$y = 2000.46 = 1.96(x - 0)$;
$duty = 1.96x + 2000.46$

Timer 0 y 2
$F_{CPU} = 16MHz$
Prescla = 1024

$f = 15625$; $T = \frac{1}{15625}$; $T = 64 \times 10^{-6}$

Tiempo = $255 * 6.4 \times 10^{-3}$; Tiempo = 16.32ms
High = $\frac{2ms}{16.32ms}$; (12.25%)(255) = 31.24
Low = $\frac{1ms}{16.32ms}$; (6.129%)(255) = 15.62

$y = 0.0153x + 15.62$