

$$T(s) = \frac{s - \frac{R_2}{R_1 R_3 C_1} \omega_0}{s + \frac{1}{R_3 C_1} \omega_0}$$

$$\Omega_w = R_3$$

$$\Omega_w = \omega_0 = \frac{1}{R_3 C_1}$$

$$\$ = s \cdot \Omega_w = s \cdot \omega_0$$

$$T(\$) = \frac{\$ \cancel{\omega_0} - \frac{R_2}{R_1} \cancel{\omega_0}}{\$ \cancel{\omega_0} + \cancel{\omega_0}}$$

=

$$\boxed{\frac{\$ - \frac{R_2}{R_1}}{\$ + 1} = T(\$)}$$