$$\text{Jika: } Y(s) = (b_m s^m + b_{m-1} s^{m-1} + \cdots + b_1 s + b_0) X(s) \quad (2)$$

$$\text{maka: } U(s) = (a_n s^n + a_{n-1} s^{n-1} + \cdots + a_1 s + a_0) X(s) \quad (1)$$

$$\boxed{\frac{4}{b} = \frac{2}{3}} \Rightarrow \left[\begin{array}{l}\text{Jika } a = 2 \\ \text{maka } b = 3\end{array}\right] \quad \left[\begin{array}{l}\text{Jika } a = 4 \\ \text{maka } b = 6\end{array}\right] \text{ dst}$$

$$\text{Jika } Y(s) = b_m s^m X(s) + b_{m-1} s^{m-1} X(s) + \cdots + b_1 s X(s) + b_0 X(s) \quad (2)$$

maka:

$$(1) \quad U(s) = a_n s^n X(s) + a_{n-1} s^{n-1} X(s) + \cdots + a_1 s X(s) + a_0 X(s)$$

Transf. Laplace Inverse: (kondisi awal semua nol)

$$(1) \quad u(t) = a_n \frac{d^n x(t)}{dt^n} + a_{n-1} \frac{d^{n-1} x(t)}{dt^{n-1}} + \cdots + a_1 \frac{dx(t)}{dt} + a_0 x(t)$$

"State assignment": $u \triangleq u(t)$, $y \triangleq y(t)$, $x_1 \triangleq x(t)$

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