

$$y_1' = a_{11}y_1 + a_{12}y_2 + \dots + a_{1n}y_n + b_1(x)$$

$$\vdots$$
$$\vdots$$
$$\vdots$$

$$y_n' = a_{n1}y_1 + a_{n2}y_2 + \dots + a_{nn}y_n + b_n(x)$$

non-homogeneous