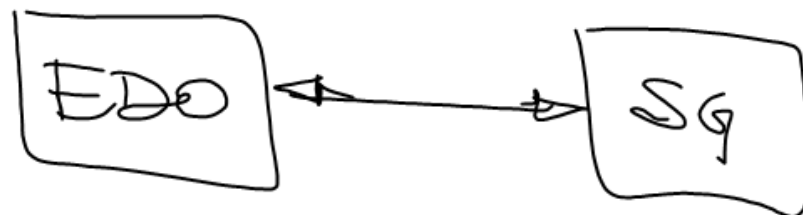
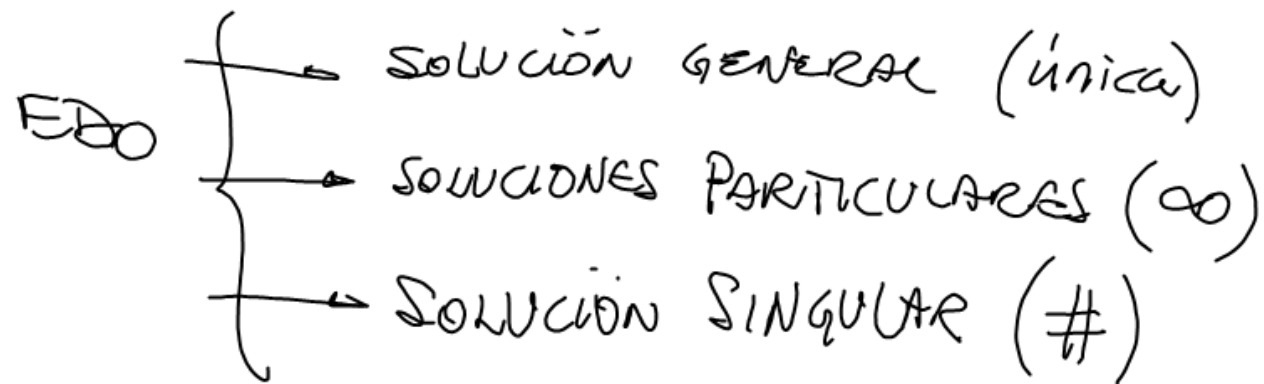


clasificación ED.

$$\left\{ \begin{array}{l} \frac{dy}{dx} \text{ ordinaria } y(x) \\ \frac{\partial y}{\partial x} \quad \frac{\partial y}{\partial t} \text{ parciales } y(x,t) \end{array} \right.$$

$$ED \left\{ \begin{array}{l} \text{Ecuaciones Diferenciales "ordinarias" Cap. I-IV} \\ \text{Ec. Dif. en "Derivadas Parciales" Cap V} \end{array} \right.$$

| | Temario | Inq. |
|-------|---------|------|
| EDO | 80% | 20% |
| EDenP | 20% | 80% |



$$y(x) = C_1 e^{2x} + C_2 e^{3x}$$

$$\frac{dy}{dx} = 2C_1 e^{2x} + 3C_2 e^{3x}$$

$$\frac{d^2y}{dx^2} = 4C_1 e^{2x} + 9C_2 e^{3x}$$

$$\begin{bmatrix} e^{2x} & e^{3x} \\ 2e^{2x} & 3e^{3x} \end{bmatrix} \begin{bmatrix} C_1 \\ C_2 \end{bmatrix} = \begin{bmatrix} y \\ \frac{dy}{dx} \end{bmatrix}$$

$$C_1 = \frac{\begin{vmatrix} y & e^{3x} \\ \frac{dy}{dx} & 3e^{3x} \end{vmatrix}}{\begin{vmatrix} e^{2x} & e^{3x} \\ 2e^{2x} & 3e^{3x} \end{vmatrix}} \Rightarrow \frac{3ye^{3x} - e^{3x}\frac{dy}{dx}}{e^{2x}e^{3x}} \Rightarrow (3y - \frac{dy}{dx})e^{-2x}$$

$$C_2 = \frac{\begin{vmatrix} e^{2x} & y \\ 2e^{2x} & \frac{dy}{dx} \end{vmatrix}}{e^{2x}e^{3x}} \Rightarrow \frac{e^{2x}\frac{dy}{dx} - 2e^{2x}y}{e^{2x}e^{3x}} \Rightarrow (\frac{dy}{dx} - 2y)e^{-3x}$$

$$\frac{d^2y}{dx^2} = 4 \left[(3y - \frac{dy}{dx})e^{-2x} \right] e^{2x} + 9 \left[(\frac{dy}{dx} - 2y)e^{-3x} \right] e^{3x}$$

$$\frac{d^2y}{dx^2} = 12y - 4\frac{dy}{dx} + 9\frac{dy}{dx} - 18y$$

$$\boxed{\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = 0} \quad \text{orden} = 2$$

$$y = C_1 e^{2x} + C_2 e^{3x}$$

$$\frac{d^4y}{dx^4} - 6\frac{d^2y}{dx^2} + 8y = 0 \Rightarrow \text{orden} = 4$$

$$y = C_1 y^{(1)} + C_2 y^{(2)} + C_3 y^{(3)} + C_4 y^{(4)}$$

$$y(0) = y'(0) = y''(0) = y'''(0)$$

$$3x + 4y = 2$$

$$5x - y = 3$$

$$\begin{bmatrix} 3 & 4 \\ 5 & -1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 2 \\ 3 \end{bmatrix}$$

$$x = \frac{\begin{vmatrix} 2 & 4 \\ 3 & -1 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ 5 & -1 \end{vmatrix}} \Rightarrow \frac{-2 - 12}{-3 - 20} \Rightarrow \frac{14}{23}$$

$$y = \frac{\begin{vmatrix} 3 & 2 \\ 5 & 3 \end{vmatrix}}{-23} \Rightarrow \frac{9 - 10}{-23} \Rightarrow \frac{1}{23}$$

$$A = B$$

$$A = B \Rightarrow C$$

$$\oplus \Rightarrow A = B \Rightarrow C$$

Israel
Japón