

$$y'' + 4y = 2\sin 2t$$

$$r^2 + 4r = 0$$

$$r(r+4) \quad r=0 \quad r=-4$$

$$y = C_1 + C_2 e^{-4t}$$

iki tane var tekrar olmaması lazım

$$2\sin 2t \rightarrow \cos 2t \rightarrow \sin 2t$$

$A\sin 2t + B\cos 2t$ \rightarrow tilye lapmaya
genel yek
benzer term
yok

$$y_p = A\sin 2t + B\cos 2t$$

$$y_p' = 2A\cos 2t - 2B\sin 2t$$

$$y_p'' = -4A\sin 2t + 4B\cos 2t \rightarrow \text{gerine koy}$$

$$-4A\sin 2t + 4B\cos 2t = 2\sin 2t$$

$$A = -1/2 \quad B = 0$$

$$y = y_p + y_c \rightarrow -\frac{\sin 2t}{2} + C_1 + C_2 e^{-4t}$$