

$$y'' + 8y' + 25y = 0$$

Karakteristieke vgl.:  $\lambda^2 + 8\lambda + 25 = 0$

$$\text{CSolve}(\lambda^2 + 8\lambda + 25 = 0, \lambda) \Rightarrow \lambda_1 = -4 + 3i$$

$$\lambda_2 = -4 - 3i$$

$$\Rightarrow y = y_H = C_1 \cdot e^{-4x} \cdot \cos(3x) + C_2 \cdot e^{-4x} \cdot \sin(3x)$$