

Quiz #3

Solve: $y'' + 2y' + 10y = 0$

$$\lambda^2 + 2\lambda + 10 = 0$$

$$\lambda = \frac{-2 \pm \sqrt{4 - 4(1)(10)}}{2(1)} = \frac{-2 \pm \sqrt{-36}}{2} = \frac{-2 \pm 6i}{2} = -1 \pm 3i$$

$$y = c_1 e^{-t} \cos(3t) + c_2 e^{-t} \sin(3t)$$