

1. Solucion.

Parte 1

- 1) R: $y = e^{-2x}([c1 + c2]\cos(\sqrt{2}x) + [c1 - c2]isen(\sqrt{2}x))$
- 2) R: $y = c_1 e^{7x} + c_2 e^x$
- 3) R: $y = e^{-4x}(c_1 + c_2 x)$
- 4) R: $y = c_1 e^{4x} + c_2 e^{\frac{9}{4}x}$ 5) R: $y = c_1 e^{6x} + c_2 e^{17x}$
- 6) R: $y = c_1 e^{i3x} + c_2 e^{-i3x} = [c1 + c2]\cos(3x) + [c1 - c2]isen(3x)$
- 7) R: $y = c_1 e^{\frac{-1+\sqrt{5}}{2}x} + c_2 e^{\frac{-1-\sqrt{5}}{2}x}$
- 8) R: $y = e^{9x}(c_1 + c_2 x)$
- 9) R: $7 = \frac{i-1}{2}e^{1+i} + \frac{-i-1}{2}e^{1-i}$
- 10) R: $y = \frac{7}{3}e^{-4x} - \frac{4}{3}e^{\frac{2}{3}x}$
- 11) R: $y = -e^{(-1+i)x} + 2e^{(-1-i)x}$

parte2

- 1) R: D^3
- 2) R: $(D - 2)D^5$
- 3) R: $(D - 6)^4(D + 1)$
- 4) R: $(D^2 + 1)$
- 5) R: $(D^2 - 4D + 13)$
- 6) R: $(D^2 + 10D + 29)(D^2 - 6D + 10)^3 D$