4. Uvod u diferencijalne jednadžbe, 4. dio - Rješenja

1. $y = 2x^{\frac{3}{2}} + 2.$
2. $y = (x+2)e^{-x} + x - 1.$
3. $y = \dfrac{1}{3}\sin^3 x + c_1 x + c_2.$
4. $y = -x - \dfrac{\sin(2x)}{2} + c_1 \sin x + c_2.$
5. $y = c_1 \ln(x+1) + c_2.$
6. $(x + c_2)(y - 1) = c_1.$
7. $3x = y^3 + c_1 y + c_2.$
8. $y = c_1 e^{6x} + c_2 e^{-x}.$
9. $y = c_1 e^{x} + c_2 e^{-\frac{1}{2}x}.$
10. $y = e^x(c_1 + c_2 x)$, $y = e^x(4 - 2x).$
11. $y = e^{-2x}(c_1 \cos(3x) + c_2 \sin(3x)).$
12. $y = e^{-3x}(c_1 \cos(2x) + c_2 \sin(2x)).$
13. $y = e^{-x}(c_1 \cos(2x) + c_2 \sin(2x))$, $y = \frac{1}{2}e^{-x}\sin(2x).$
14. $y = e^x(c_1 \cos x + c_2 \sin x) + \dfrac{1}{2}(x+1)^2.$
15. $y = c_1 + c_2 e^{2x} - \dfrac{x^3}{6}.$
16. $y = \dfrac{1}{2}x(x+2)e^{4x}.$
17. $y = c_1 e^x + c_2 x e^x + e^{2x}.$
18. $y = c_1 \cos x + c_2 \sin x - \dfrac{5}{3}\sin(2x).$

19. $y = (c_1 \cos(3x) + c_2 \sin(3x))e^x + \cos(3x) - 6\sin(3x)$.

20. $y = c_1 + c_2 e^{-x} + (2x^2 - 6x + 7)e^x$.

21. $y = c_1 e^x + c_2 e^{-\frac{1}{2}x} + \left(\frac{4}{5}x - \frac{28}{25}\right) e^{2x}$.

22. $y = c_1 e^{-x} \cos x + c_2 e^{-x} \sin x + \frac{e^x}{8}(-\cos x + \sin x)$.