

## 4. Uvod u diferencijalne jednadžbe, 3. dio - Rješenja

1.  $y = -\frac{1}{2} \frac{\cos 2x}{\cos x} + \frac{c}{\cos x}.$
2.  $xy = ce^{\sin y} - 2a(\sin y + 1).$
3.  $y = \sin x - 1 + ce^{-\sin x}, c = e, y = \sin x - 1 + e^{1-\sin x}.$
4.  $y = (x + c)e^x.$
5.  $y = \frac{x^3 + 3x + c}{(x^2 + 1)^2}.$
6.  $y = 2 + c(1 - x^2), c = -3, y = 2 - 3(1 - x^2).$
7.  $xy = (x^3 + c)e^{-x}.$
8.  $y = cx + x \sin x.$
9.  $y = \frac{1}{\sqrt{1 + x^2 + ce^{x^2}}}.$
10.  $c = \frac{1}{\sqrt[3]{c \cos^3 x - 3 \sin x \cos^2 x}}.$
11.  $\frac{1}{y^2} = e^{-x^2}(2x + c).$
12.  $\frac{1}{x} = 2 - y^2 + ce^{-\frac{y^2}{2}}.$
13.  $y = \frac{1}{x \sqrt[3]{3 \ln \frac{c}{x}}}.$
14.  $y = \frac{1}{2(\ln x + 1) + cx}, c = -1, y = \frac{1}{2(\ln x + 1) - x}.$
- 15.
- 16.
17.  $y_1 \approx 2.092, y_2 \approx 2.8515, y_3 \approx 3.5373, y_4 \approx 4.2637.$
18.  $y_2 \approx 0.25, y_5 \approx 0.415.$

$$19. \ y \approx 1.05484$$

$$20. \ y \approx 4.28982$$