

Вариант 19.

1. $y' = 3\sqrt[3]{y^2}$

2. $xy' + x = y + \frac{y^2}{x}, y(1) = 3$

3. $xy' + (x + 1)y = 3x^2e^{-x}$

4. $2y' - \frac{x}{y} = \frac{xy}{x^2 - 1}$

5. $y(1 + xy)dx - xdy = 0 \left(\mu = \frac{1}{y^2} \right)$

6. $(x + 1)y'' + x(y')^2 = y', y(1) = -2, y'(1) = 4$

7. $y''y + (y')^2 = 0$

8. $4y'' + 4y' + y = 0, y(0) = 1, y'(0) = 0$

9. $y^{(IV)} - 2y''' + 2y'' = 0$

10. $y'' + 2y' = 1 + e^{-2x}$

11. $y'' - y = 5 \sin x$

12. $y'' + y = 3 \cos x$

13. $y'' + y' - 2y = (x^2 + 2)e^x + 8 \sin 2x$

14. $y'' + 4y = \operatorname{tg} 2x$

15. $y^{(IV)} - 2y'' + y = -x^2$