

9.10.99

ВАРИАНТ 5

1. $(x^2 y + x^2) dx + (x^3 - 1)(y - 1) dy = 0$

2. $x y' - y = x \operatorname{tg} \frac{y}{x}$

3. $y'(1 + x^2) + 2xy = 2x$
 $y(1) = 0$

4. $x y' + y = x y^2 \ln x$

5. $(y - \frac{\sin^2 x}{y^2}) dy + (\frac{\ln 2x}{y} + x) dx = 0$

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

7. $y y'' = y'(y' + y)$
 $y(0) = y'(0) = e$

8. $y'' + 3y' + 2y = 0$
 $y(0) = 1, y'(0) = -1$

9. $y''' - 5y'' + 6y' = 0$

10. $y'' + 5y' + 4y = e^{-x} + x^2 + 3$

11. $y'' + 2y' = \cos 2x$

12. $y'' + 9y = \sin 3x$

13. $y'' - 4y' + 4y = x^3 e^{2x} + 5e^{2x} \sin x$

14. $y'' + 2y' + y = 15e^{-x} \sqrt{x+1}$

15. $y''' + y = x^3$