

ENGR 326

ODE Lab Assignment 3

Solve the following ODEs.

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

2. $(y + \sqrt{x^2 + y^2}) dx - (x) dy = 0$

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

4. $(x \tan(y/x) + y) dx - (x) dy = 0$

5. $x \frac{dy}{dx} + (1 + 1/x) y = x^2$

6. $(x^2 + 1) \frac{dy}{dx} + 4xy = x \quad y(2) = 1$

7. $\frac{dy}{dx} - y/x = -y^2/x$

8. $x \frac{dy}{dx} + y = -2x^6 y^4$