

Math 026L.04 Spring 2002

Separation of Variables

February 13, 2002

1. Solve $\frac{dy}{dx} = -\frac{x^2}{y}$.

2. Solve $\frac{dy}{dx} = -\frac{x^2}{y^3}$.

3. Solve $\frac{dy}{dx} = \frac{\sin x}{\cos y}$.

4. Solve $\frac{dy}{dx} = e^{x-y}$.

5. Solve $\frac{dy}{dx} = e^{x+y}$.

6. Solve $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$.

7. Solve $\frac{dy}{dx} = 2x - 2y - 4 + xy$.