

## 11.5 Differential Equations

Differential Equations –

Separation of Equations –

Family of Solutions –

Find the solution to the differential equation  $(x^2 - 1)dy = \frac{xdx}{\cos y}$

### Specific Solutions –

Find the curve  $y = F(x)$  that passes through  $(-1, 0)$  and satisfies  $\frac{dy}{dx} = 6x^2 + 6x$

Solve the differential equation by separating the variables.

$$\frac{dy}{dx} - \frac{6x}{y} = 0, \quad y(1) = -2$$