

## 11J Separating the Variables

1. Find a general solution to the differential equation:

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

2. Find the **particular solution** of the differential equation:

$$\frac{dy}{dx} = \frac{-3(y-2)}{(2x+1)(x+2)}$$

given that  $x = 1$  when  $y = 4$