**11J Separating the Variables**

1. Find a general solution to the differential equation:

$$\left(1+x^{2}\right)\frac{dy}{dx}=xtany$$

1. 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