

$$\frac{\tan y}{(1 - e^x)^3} = c$$

$$\tan y = c(1 - e^x)^3$$

(g)  $y' = x^2 y$

الحل:

$$\frac{dy}{dx} y = x^2 y \Rightarrow \frac{1}{y} dy = x^2 dx$$

$$\int \frac{1}{y} dy = \int x^2 dx$$

$$\ln y = \frac{x^3}{3} + \ln c$$

$$\ln y - \ln e^{\frac{x^3}{3}} = \ln c$$

$$\Rightarrow \ln y - \ln e^{\frac{x^3}{3}} = \ln c$$

$$\Rightarrow \ln \frac{y}{e^{\frac{x^3}{3}}} = \ln c$$

$$\Rightarrow \frac{y}{e^{\frac{x^3}{3}}} = c \Rightarrow y = c e^{\frac{x^3}{3}}$$

(h)  $\frac{dy}{dx} = x^2 y^2 - 4x^2$

$$\frac{dy}{dx} = x^2 (y^2 - 4)$$