$$xy' - 2y = 9x^2 \quad \text{[divide by } x\text{]} \quad \Rightarrow \quad y' + \left(-\frac{2}{x}\right) y = 9x \quad (\star).$$

$$I(x) = e^{\int P(x)\, dx} = e^{\int (-2/x)\, dx} = e^{-2 \ln|x|} = e^{\ln|x|^{-2}} = e^{\ln(1/x^2)} = 1/x^2.$$

Multiplying the differential equation $(\star)$ by $I(x)$ gives

$$\frac{1}{x^2} y' - \frac{2}{x^3} y = \frac{9}{x} \quad \Rightarrow \quad \left(\frac{1}{x^2} y\right)' = \frac{9}{x} \quad \Rightarrow \quad \frac{1}{x^2} y = 9 \ln|x| + C \quad \Rightarrow$$

$$y = x^2(9 \ln|x| + C) = 9x^2 \ln|x| + Cx^2.$$