

解微分方程式  $e^y(1+x^3)dy - 3x^2dx = 0$ 。 [96 南大光電 1]

$$\begin{aligned} \text{[解]原式} &\Rightarrow e^y dy - \frac{3x^2 dx}{1+x^3} = 0 \Rightarrow \int e^y dy - \int \frac{3x^2 dx}{1+x^3} = C \Rightarrow \int e^y dy - \int \frac{d(1+x^3)}{1+x^3} = C \\ &e^y - \ln|1+x^3| = C \end{aligned}$$



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