

Find the general solution for $(xy^2 + y)dx + xdy = 0$. [103 虎尾車輛 1]

$$\text{[解]原式} \Rightarrow xy^2 dx + (ydx + xdy) = 0 \Rightarrow xy^2 dx + d(xy) = 0 \Rightarrow \frac{dx}{x} + \frac{d(xy)}{(xy)^2} = 0$$

$$\int \frac{dx}{x} + \int \frac{d(xy)}{(xy)^2} = C \Rightarrow \ln x - \frac{1}{xy} = C$$



南臺科技大學

Southern Taiwan University of Science and Technology