

$$\begin{aligned}
& \mu(t) = e^{at} \\
\Rightarrow & e^{at}y' - ae^{at}y = b \\
\equiv & [e^{at}y]' = b \\
\equiv & \int_{t_0}^t [e^{as}y]'ds = \int_{t_0}^t bds \\
\equiv & e^{at}y - e^{at_0}y_0 = bt - bt_0 \\
\equiv & y = e^{-at}(bt - bt_0 + e^{at_0}y_0)
\end{aligned}$$