$$\mu(t)' = \mu(t)p(t)$$

$$\equiv$$

$$\frac{\mu(t)'}{\mu(t)} = p(t)$$

$$\equiv$$

$$\int_{t_0}^{t} \frac{\mu(s)'}{\mu(s)} = \int_{t_0}^{t} p(t)$$

$$\equiv$$

$$\int_{t_0}^{t} [\ln(\mu(s))]' ds = \int_{t_0}^{t} p(s)$$

$$\equiv$$

$$\ln(\mu(t)) = \int_{t_0}^{t} p(s)$$

$$\equiv$$

$$\mu(t) = e^{\int_{t_0}^{t} p(s)ds}$$