22) $e^y y' = 1$; $y(x) = \ln(x+C)$, $y(0) = 0$

$0 = \ln(0+C)$

$0 = \ln(C)$

$e^0 = e^{\ln(C)}$

$1 = C$

$y(x) = \ln(x+1)$, $= y(x) = \ln(x+1)$

OK

(10) $\frac{dy}{dx} = xe^{-x}$

$w = -x$
$dw = -dx$
$-dw = dx$

$u = x$
$\frac{du}{dx} = 1$
$du = dx$

$v = \int e^{-x}\,dx$
$v = -\int e^{w}\,dw$
$v = -e^{w}$
$v = -e^{-x}$

$$\int u\,dv = x(-e^{-x}) + \int e^{-x}\,dx$$
$$= -xe^{-x} - e^{-x}$$
$$y = -e^{-x}(x+1) + C$$

$$1 = -e^{-0}(0+1) + C$$
$$1 = -(1) + C$$
$$1 + 1 = C$$
$$2 = C$$

$$y = -e^{-x}(x+1) + 2$$

$y = -e^{-x}(x+1) + 2$