34.14

(a): ~~Partial~~ Partial

Linear

3

~~No~~ Yes, there no terms of x or not within y.

(b): $\frac{dy}{dx} = x e^y$

$\int \frac{dx}{e^y} = \int x\,dx$

~~$-e^{-y} = \frac{x^2}{2} + C$~~

$-e^{-y} = 11$

~~$-y = \frac{-x^2}{2} + C$~~

$y = \frac{x^2}{2} + C$; $y(0) = 0 \Rightarrow C = 0$

~~$\log(-e^{-y}) = \log\left(\frac{x^2}{2} + C\right)$~~

~~y~~

Nice job Ron.

$e^{-y} = -\left(\frac{x^2}{2} + C\right)$, for $x=0, y=0$, we have $C = -1$

$+y = -\log\left(-\frac{x^2}{2} + 1\right)$

~~Then since $y(0) = 0$,~~

~~$0 = -\log(C)$~~