

WRITE YOUR NAME:

MAC 2312 Quiz 8
Tuesday February 13th

Evaluate the integral.

$$\int x e^x dx$$

$$\int u dv = uv - \int v du$$

Try parts. $u = x$
 $dv = e^x dx$ } $\rightarrow \begin{cases} du = 1 dx = dx \\ v = e^x \end{cases}$

$$\int \underbrace{x}_{u} \underbrace{e^x dx}_{dv} = \underbrace{x}_{u} \cdot \underbrace{e^x}_{v} - \int \underbrace{e^x}_{v} \underbrace{dx}_{du}$$

$$= \boxed{x e^x - e^x + C}$$

$$\text{or } (x-1)e^x + C$$
