This is a closed books and notes test. Be organized. Total points: 20

1. $\S 10.4$ Evaluation of Line Integrals by Green's Theorem. Using Green's Theorem, evaluate $\oint_{C} \mathbf{F}(\mathbf{r}) \cdot d \mathbf{r}$ counterclockwise around the boundary curve $C$ of the region $R$, where $\mathbf{F}=\left[x^{2} e^{y}, y^{2} e^{x}\right], R$ the rectangle with vertices $(0,0),(2,0),(2,3),(0,3)$ 20 points
