



$$\int_0^4 \int_{y/2}^2 e^{x^2} dx dy = \int_0^2 \int_0^{2x} e^{x^2} dy dx =$$

$$= \int_0^2 y e^{x^2} \Big|_0^{2x} dx =$$

$$= \int_0^2 2x e^{x^2} dx =$$

$$= e^4 - 1$$