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CONSIDER,

$$\int_0^1 x e^{-x^2}\,dx$$

$$t = \frac{2x}{-1} = -2x$$

$x \in [0, 1] \longrightarrow t \in [-1, 1]$

WILL COME BY SUBSTITUTING,

$$x \to t = \frac{(b-a)x + a\beta - b\alpha}{\beta - \alpha}$$

FROM HEATH

$$\begin{cases} \alpha, \beta = 0, 1 \\ a, b = -1, 1 \end{cases}$$

$$\int_0^1 x e^{-x^2}\,dx = \int_b f(x)\,dx \longrightarrow \int_{-1} g(t(x))\,dt$$

$$g(t) = f(t(x)) = \left[\left(\frac{(2)x + (0-1,0)}{-1}\right)\right]\left[e^{-(\ )^2}\right]$$

x ; e^{-x^2}

$$g(t) = -2x \cdot e^{-(2x)^2}$$

$$\int_0^1 x e^{-x^2}\,dx \longrightarrow -\int_{-1}^{1} 2x\, e^{-(-2x)^2}\,dx$$

TRANSFORMED INTEGRAL