PROOF OF FORMULA 3.467

$$\int_0^\infty \left(e^{-x^2} - \frac{1}{1+x^2}\right) \frac{dx}{x} = -\frac{\gamma}{2}$$

Start with the representation

$$\gamma = -\int_0^\infty \left(e^{-u} - \frac{1}{1+u}\right) \frac{du}{u}$$

and make the change of variables $u = x^2$.