## FORMULA 3.461.5

$$\int_a^\infty e^{-\mu x^2} \frac{dx}{x^2} = \frac{1}{a} e^{-\mu a^2} - \sqrt{\pi\mu}\,[1 - \text{erf}(\sqrt{\mu}a)]$$

Integrate by parts to obtain

$$\int_a^\infty e^{-\mu x^2} \frac{dx}{x^2} = \frac{e^{-\mu a^2}}{a} - 2\mu \int_a^\infty e^{-\mu x^2}\, dx.$$

The change of variables $t = \sqrt{\mu}x$ and the definition

$$\text{erf}(b) = \frac{2}{\sqrt{\pi}} \int_0^b e^{-t^2}\, dt = 1 - \frac{2}{\sqrt{\pi}} \int_b^\infty e^{-t^2}\, dt$$

give the result.