

$$\int_1^{\inf} x^{-2} dx = -x^{(-1)}$$

$$\int_{-}^{+} x e^{(-x^2)} dx = \frac{1}{2} \int_{-}^{+} -2x e^{(-x^2)} dx = \frac{1}{2} \int_{-}^{+} e^{(u)} du$$

$$u = (-x)^2$$

$$du = -2x dx$$

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$$\int_1^{+} (x) \ln(x) dx = 1 - \int_1^{+} u^{(-1)} du = 1 - \left(-\frac{1}{1}\right) \Big|_1^{+}$$

$$v' = 1/x$$

$$v = \ln(x) dx$$

$$u = x^2 / 2$$

$$u' = x dx$$

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$$\int_a^b f(x) dx = f(b) - \lim_{x \rightarrow a} f(x)$$

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$$\int_0^1 \ln(x) dx = (x)(\ln(x)) - \int_0^1 (1/x) dx$$

$$v = x, v' = dx$$

$$u = \ln(x), u' = (1/x) dx$$