In[1]:=
$$\int_0^{+\infty} x^k * E^{-a*x^2-b*x}\, dl\, x$$

$$\int_0^{+\infty} x^k * E^{-a*x^2-b*x}\, dl\, x - \text{Gamma}[k+1] * E^{\frac{b^2}{8*a}} * (2*a)^{-\frac{k+1}{2}} * \text{ParabolicCylinderD}\left[-k-1, \frac{b}{\sqrt{2*a}}\right] // \text{FullSimplify}$$

Out[1]=
$$\frac{1}{2}\, a^{-1-\frac{k}{2}} \left(-b\, \text{Gamma}\left[1+\frac{k}{2}\right] \text{Hypergeometric1F1}\left[1+\frac{k}{2}, \frac{3}{2}, \frac{b^2}{4\,a}\right] + \sqrt{a}\, \text{Gamma}\left[\frac{1+k}{2}\right] \text{Hypergeometric1F1}\left[\frac{1+k}{2}, \frac{1}{2}, \frac{b^2}{4\,a}\right]\right) \quad \text{if} \quad \text{Re}[a] > 0 \;\&\&\; \text{Re}[k] > -1$$

Out[2]=
$$0 \quad \text{if} \quad \text{Re}[a] > 0 \;\&\&\; \text{Re}[k] > -1$$