One identity

Sasha says that

$$\int e^{\frac{i}{\hbar}g^{ij}\partial_i\partial_j}P(x) \sim \int e^{\frac{i}{\hbar}g_{ij}x^ix^j}P(x)dx$$
$$\int e^{-\frac{N}{2}x^2}x^{2k}dx$$