

$$\frac{1}{(\sqrt{\pi})^n} \int_{\mathbb{R}^n} e^{-|\eta|^2} g(x - 2\sqrt{t}\eta) d\eta + \int_0^t \frac{1}{(\sqrt{\pi})^n} \int_{\mathbb{R}^n} e^{-|\eta|^2} f(x - 2\sqrt{t-\tau}\eta, \tau) d\eta d\tau$$

$$\frac{1}{2} \int_0^t \int_{x-(t-\tau)}^{x+(t-\tau)} f(\tau, \xi) d\xi d\tau + \frac{1}{2} (g(x+t) + g(x-t)) + \frac{1}{2} \int_{x-t}^{x+t} h(\xi) d\xi$$

$$\int_{\Omega} v \operatorname{div}(p \operatorname{grad}(u)) = - \int_{\Omega} p \operatorname{grad}(u) \cdot \operatorname{grad}(v) + \int_{\partial\Omega} p v \partial_{\nu} u \, d\sigma$$

$$\int_{\Omega} [v \operatorname{div}(p \operatorname{grad}(u)) - u \operatorname{div}(p \operatorname{grad}(v))] = \int_{\partial\Omega} p [v \partial_{\nu} u - u \partial_{\nu} v] \, d\sigma$$

$$\int_{-\infty}^{+\infty} e^{-ay^2} \cos(by) \, dy = \sqrt{\frac{\pi}{a}} e^{-\frac{b^2}{4a}}, \quad (a > 0, b \in \mathbb{R}).$$