u, w - skalary
$\overline{V}$, $\overline{Z}$ - wektory (V_x ; V_y ; V_z), (Z_x ; Z_y ; Z_z)

OPERATORY:

nabla *vel* hamiltonian (wektor):

$$\overline{\nabla} = (\partial / \partial x \ ; \ \partial / \partial y \ ; \ \partial / \partial z)$$

$$\overline{\nabla} \, \mathrm{u} = \mathrm{grad\ u} = (\partial u / \partial x \ ; \ \partial u / \partial y \ ; \ \partial u / \partial z) = \overline{Z} \quad \text{(gradient)}$$

$$\overline{\nabla} \circ \overline{V} = \mathrm{div}\ \overline{V} = \partial V_x / \partial x + \partial V_y / \partial y + \partial V_z / \partial z = \mathrm{w} \ \text{(dywergencja)}$$

$$\overline{\nabla} \times \overline{V} = \mathrm{rot}\ \overline{V} = (\partial V_z / \partial y - \partial V_y / \partial z \ ; \ \partial V_x / \partial z - \partial V_z / \partial x \ ; \ \partial V_y / \partial x - \partial V_x / \partial y) = \overline{Z} \ \text{(rotacja)}$$

laplasjan (skalar):

$$\Delta = \overline{\nabla} \circ \overline{\nabla} = \partial^2 / \partial x^2 + \partial^2 / \partial y^2 + \partial^2 / \partial z^2$$

$$\Delta \mathrm{u} = \partial^2 u / \partial x^2 + \partial^2 u / \partial y^2 + \partial^2 u / \partial z^2 = \mathrm{w}$$

$$\begin{aligned} \Delta \overline{V} = (& \partial^2 V_x / \partial x^2 + \partial^2 V_x / \partial y^2 + \partial^2 V_x / \partial z^2 \ ; \\ & \partial^2 V_y / \partial x^2 + \partial^2 V_y / \partial y^2 + \partial^2 V_y / \partial z^2 \ ; \\ & \partial^2 V_z / \partial x^2 + \partial^2 V_z / \partial y^2 + \partial^2 V_z / \partial z^2) = \overline{Z} \end{aligned}$$