$$(f_{1}, f_{2}, f_{3}) = V \longrightarrow f_{1} dy \wedge dz + f_{2} dz \wedge dx + f_{3} dx \wedge dy \in \Omega^{2}(\mathbb{R}^{3})$$

$$\downarrow^{\text{div}} \qquad \qquad \downarrow^{\text{d}}$$

$$\frac{\partial f_{1}}{\partial x} + \frac{\partial f_{2}}{\partial y} + \frac{\partial f_{3}}{\partial z} \longleftarrow \left(\frac{\partial f_{1}}{\partial x} + \frac{\partial f_{2}}{\partial y} + \frac{\partial f_{3}}{\partial z}\right) dx \wedge dy \wedge dz \in \Omega^{3}(\mathbb{R}^{3})$$