$$\underline{v}\cdot\nabla\underline{v} = \begin{pmatrix} v_1 \dfrac{\partial v_1}{\partial x_1} \\ 0 \\ 0 \end{pmatrix}$$

for an incompressible fluid, the continuity equation is

$$\nabla\cdot\underline{v} = 0 = \frac{\partial v_1}{\partial x_1} + \overset{0}{\cancel{\frac{\partial v_2}{\partial x_2}}} + \underset{0}{\cancel{\frac{\partial v_3}{\partial x_3}}}$$

$$\Rightarrow \frac{\partial v_1}{\partial x_1} = 0$$

$\therefore$ $\underline{v}\cdot\nabla\underline{v} = 0$ for unidir flow of any incompressible fluid.

(94)

//