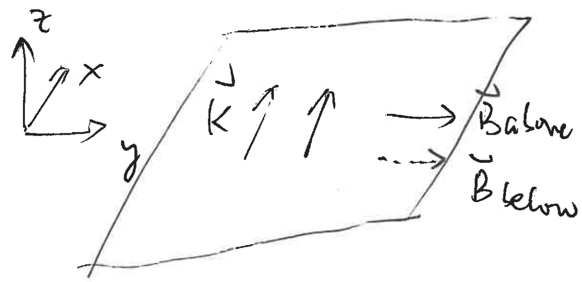
Due to the continuity $\vec{A}_{above} = \vec{A}_{below}$



which holds everywhere on the x-y plane

$$\vec{A}_{above}(x, y, z=0^+) = \vec{A}_{below}(x, y, z=0^-)$$

$$\Rightarrow \frac{\partial \vec{A}_{above}}{\partial x} = \frac{\partial \vec{A}_{below}}{\partial x}, \quad \frac{\partial \vec{A}_{above}}{\partial y} = \frac{\partial \vec{A}_{below}}{\partial y},$$ so now we examin $\frac{\partial \vec{A}}{\partial z}$

We know $\vec{B}_{above} - \vec{B}_{below} = \mu_0 (\vec{K} \times \hat{n}) = \mu_0 K (\hat{x} \times \hat{z}) = -\mu_0 K \hat{y}$

on the other hand $\vec{B} = \nabla \times \vec{A}$, so

$$\vec{B}_{above} - \vec{B}_{below} = \left(-\frac{\partial A_{y\,above}}{\partial z} + \frac{\partial A_{y\,below}}{\partial z}\right)\hat{x} + \left(\frac{\partial A_{x\,above}}{\partial z} - \frac{\partial A_{x\,below}}{\partial z}\right)\hat{y}$$

$$\Rightarrow \frac{\partial A_{y\,above}}{\partial z} = \frac{\partial A_{y\,below}}{\partial z}, \quad \frac{\partial A_{x\,above}}{\partial z} - \frac{\partial A_{x\,below}}{\partial z} = -\mu_0 K$$

Since $\vec{K} \parallel \hat{x}$, in summary $\frac{\partial \vec{A}_{above}}{\partial n} - \frac{\partial \vec{A}_{below}}{\partial n} = -\mu_0 \vec{K}$