

# TD 5 - Electromagnétisme

IPESUP - PC

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## 1 Rappels de cours

Equations de Maxwell statiques locales :

$$\operatorname{div}(\vec{E}) = \frac{\rho}{\varepsilon_0}$$

$$\operatorname{rot}(\vec{E}) = 0$$

$$\operatorname{div}(\vec{B}) = 0$$

$$\operatorname{rot}(\vec{B}) = \mu_0 \vec{j}$$

Equations de Maxwell statiques globales :

$$\oint_S \vec{E} \cdot d\vec{S} = \frac{Q_{int}}{\varepsilon_0}$$

$$\oint_S \vec{B} \cdot d\vec{S} = 0$$

$$\oint_\Gamma \vec{E} \cdot d\vec{l} = 0$$

$$\oint_\Gamma \vec{B} \cdot d\vec{l} = \mu_0 I_{int}$$

## 2 Exercice 1 :

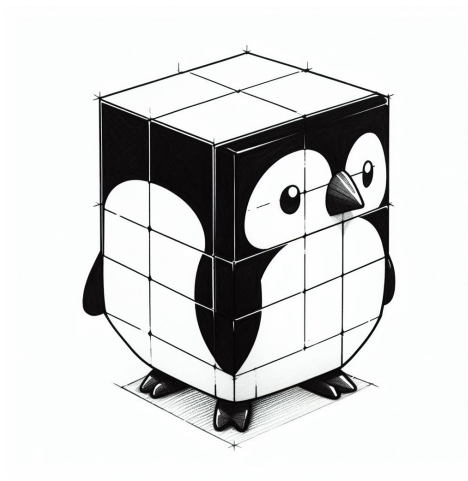


FIGURE 1 – MA FIGURE