

See @eq:max.

$$\begin{aligned} \nabla \times \vec{B} - \frac{1}{c} \frac{\partial \vec{E}}{\partial t} &= \frac{4\pi}{c} \vec{j} \\ \nabla \cdot \vec{E} &= 4\pi\rho \\ \nabla \times \vec{E} + \frac{1}{c} \frac{\partial \vec{B}}{\partial t} &= \vec{0} \\ \nabla \cdot \vec{B} &= 0 \end{aligned}$$

where  $\vec{B}, \vec{E}, \vec{j}: \mathbb{R}^4 \rightarrow \mathbb{R}^3$  – vector functions of the form  $(t, x, y, z) \mapsto \vec{f}(t, x, y, z)$ ,  $\vec{f} = (f_x, f_y, f_z)$ .

See eq. 1.

$$\begin{aligned} \nabla \times \mathbf{B} - \frac{1}{c} \frac{\partial \mathbf{E}}{\partial t} &= \frac{4\pi}{c} \mathbf{j} \\ \nabla \cdot \mathbf{E} &= 4\pi\rho \\ \nabla \times \mathbf{E} + \frac{1}{c} \frac{\partial \mathbf{B}}{\partial t} &= 0 \\ \nabla \cdot \mathbf{B} &= 0 \end{aligned}, \quad (1)$$

where  $\mathbf{B}, \mathbf{E}, \mathbf{j}: \mathbb{R}^4 \rightarrow \mathbb{R}^3$  – vector functions of the form  $(t, x, y, z) \mapsto \mathbf{f}(t, x, y, z)$ ,  $\mathbf{f} = (f_x, f_y, f_z)$

$$\begin{aligned} \mathbf{A} &= \mathbf{B}^T \mathbf{C} \mathbf{B} \\ \begin{bmatrix} x_{11} & x_{12} & x_{13} & \dots & x_{1n} \\ x_{21} & x_{22} & x_{23} & \dots & x_{2n} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ x_{p1} & x_{p2} & x_{p3} & \dots & x_{pn} \end{bmatrix} \end{aligned}$$

$$\mathbf{A} = \mathbf{B}^T \mathbf{C} \mathbf{B}$$

$$\begin{bmatrix} x_{11} & x_{12} & x_{13} & \cdots & x_{1n} \\ x_{21} & x_{22} & x_{23} & \cdots & x_{2n} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ x_{p1} & x_{p2} & x_{p3} & \cdots & x_{pn} \end{bmatrix}$$

```

.. \def\B{
  [ ax_0 + by_1 |
    ax_1 + by_2 |
      \vdots |
    ax_{N-1} + by_{N-1} ] ,
}!
\B = a[\vec{x}] + b[\vec{y}] ..

```

$$\begin{bmatrix} ax_0 + by_1 \\ ax_1 + by_2 \\ \vdots \\ ax_{N-1} + by_{N-1} \end{bmatrix} = a\mathbf{x} + b\mathbf{y}$$

```

.. .|x|. = {∈ x. <if> x≥0 |
            -x. <if> x<0 } ..

.. 'boole'(x) = {∈ 1. <if> \x. is > [True] |
                0. <if> \x. is > [False] } ..

```

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

$$\text{boole}(x) = \begin{cases} 1 & \text{if } x \text{ is True} \\ 0 & \text{if } x \text{ is False} \end{cases}$$

$$\begin{array}{l} \text{,, } \text{`lim`}_x\rightarrow 0 \text{ } \text{`sin` } x_{>}/x = 1 \text{,,} \\ \text{,, } U_{\{\delta_1\rho_2\}}^{\{\beta_1a_2\}} \text{,,} \\ \text{,, } \sqrt{x} = 1 + \text{`x-1`}_{>}/^c\{2 + \text{`x-1`}_{>}/^c\{2 + \text{`x-1`}_{>}/^c\{2 + \cdots\}\}\} \text{,,} \\ \text{,, } \text{`sin`}^2 \text{ `x`''} + \text{`cos`}^2 \text{ `x`''} = 1 \text{,,} \end{array}$$

$$\lim_{x\rightarrow 0}\frac{\sin x}{x}=1$$

$$U_{\delta_1\rho_2}^{\beta_1\alpha_2}$$

$$\sqrt{x}=1+\frac{x-1}{2+\frac{x-1}{2+\frac{x-1}{2+\cdots}}}$$

$$\sin^2\ddot{x}+\cos^2\ddot{x}=1$$

$$\begin{array}{l} \text{,, } a_2^3/{^3\sqrt{\{\beta_2^2+\gamma_2^2\}}} \text{,,} \\ \text{,, } (x+y)^2=\sum_{k=0}^{\infty}(n!^ck)x^{n-k}y^k \text{,,} \\ \text{,, } (n!^ck)=\text{`n!`}_{>}^ck_{>},\text{`n!`}_{>}^ck_{>} \text{,,} \end{array}$$

$$\frac{\alpha_2^3}{\sqrt[3]{\beta_2^2+\gamma_2^2}}$$

$$(x+y)^2=\sum_{k=0}^\infty\binom{n}{k}x^{n-k}y^k$$

$$\binom{n}{k}=\binom{n}{k},\quad \left[n\atop k\right]$$

$\{x + \dots + x\}^{k \text{ times}}$   
 $\pi d^2/4 \cdot 1/(A+B)^2 =$   
 $\pi d^2/4 \cdot \{ (A)^2 \} \cdot 1/(A+B)^2$   
 $\sum_{0 \leq i \leq N} \sum_{0 \leq j \leq M} (ij)^2 +$   
 $\sum_{i \in A} \sum_{0 \leq j \leq M} (ij)^2$

$$\overbrace{x + \dots + x}^{k \text{ times}}$$
$$\frac{\pi d^2}{4} \frac{1}{(A+B)^2} = \frac{\pi d^2}{4} \frac{1}{(A+B)^2}$$
$$\sum_{\substack{0 \leq i \leq N \\ 0 \leq j \leq M}}^n (ij)^2 + \sum_{\substack{i \in A \\ 0 \leq j \leq M}}^n (ij)^2$$

$\operatorname{erf}(x) = 1/\sqrt{\pi} \int_{-x}^x e^{-t^2} dt$   
 $f^{(2)}(0) = f''(0) = \left. d^2 f/dx^2 \right|_{x=0}$   
Text  $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$ ... and some more text.

$$\operatorname{erf}(x) = \frac{1}{\sqrt{\pi}} \int_{-x}^x e^{-t^2} dt$$
$$f^{(2)}(0) = f''(0) = \left. \frac{d^2 f}{dx^2} \right|_{x=0}$$

Text  $\begin{pmatrix} a & b \\ c & d \end{pmatrix}$  and some more text.

prefix unary operator  $\rightarrow$ :

$f: x \rightarrow \{ \text{arrow map} \} \subseteq x^2$

$$f : x \xrightarrow[\textit{i}]{\textit{arrow map}} x^2$$

postfix unary operator  $\ulcorner$ :

```
.. f: x →  $\ulcorner$  $\langle$ arrow map $\rangle$   $\ulcorner$ i x2  $\ulcorner$  ..
```

$$f : x \xrightarrow[\textit{i}]{\textit{arrow map}} x^2$$

bug because styles also implemented as prefix unary operators (but by design styles should have priority!):

```
.. f: x → $\ulcorner$  $\langle$ arrow map $\rangle$   $\ulcorner$ i x2  $\ulcorner$  ..
```

$$f : x \xrightarrow[\textit{i}]{\langle \textit{arrow} \rangle \textit{map}} x^2$$