

# Pierwszy dokument LaTeX

Ruslan Zhukotynskyi

22 Listopada 2022

$$\begin{cases} |z| = |z - 4i| \\ \frac{\pi}{4} \geq \text{Arg } z < \frac{\pi}{2} \end{cases}$$

$$\begin{cases} |z + 4| = |z + 2 - 2i| \\ |z| \geq 2 \end{cases}$$

$$\begin{cases} |z - 1 - i| < \sqrt{2} \\ \text{Arg}(z - 1 - i) < \frac{\pi}{2} \end{cases}$$

$$\begin{cases} x + 5y = 2 \\ -3x + 6y = 15 \end{cases}$$

$$\begin{cases} x - y - z = 1 \\ 3x + 4y - 2z = -1 \\ 3x - 2y - 2z = 1 \end{cases}$$

$$\begin{cases} y - 3z + 4v = 0 \\ x - 2z = 0 \\ 3x + 2y - 5v = 2 \\ 4x - 5z = 0 \end{cases}$$

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 3 & 0 \\ 0 & 0 & 1 \end{bmatrix} * \begin{bmatrix} 1 & 2 & 3 \\ 3 & 1 & 2 \\ 5 & 1 & 3 \end{bmatrix}$$

$$\begin{bmatrix} 0 & 1 & 0 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix} * \begin{bmatrix} 11 & -2 \\ 6 & -14 \\ -21 & 30 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{bmatrix} * \begin{bmatrix} 1 & 1 & 3 \\ 2 & 1 & 4 \\ 1 & 3 & 0 \end{bmatrix}$$

$$\begin{vmatrix} -3 & 2 \\ 8 & -5 \end{vmatrix}$$

$$\begin{vmatrix} \sin\alpha & \cos\alpha \\ \sin\beta & \cos\beta \end{vmatrix}$$

$$\begin{vmatrix} 1 & i & 1+i \\ -i & 1 & 0 \\ 1-i & 0 & 1 \end{vmatrix}$$

$$\left[ \begin{array}{c|c|c} 1 & 0 & 0 \\ \hline 0 & 2 & 2 \\ 0 & 2 & 2 \\ \hline 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{array} \middle| \begin{array}{c|c|c} 1 & 1 & 1 \\ \hline 1 & 2 & 3 \\ 4 & 5 & 6 \\ \hline 3 & 3 & 1 \\ 3 & 1 & 3 \\ 1 & 3 & 3 \end{array} \right]$$

$$\int_1^{\infty} \frac{dx}{(x+2)^2}$$

$$\int_{-\infty}^0 \frac{dx}{x^2+4}$$

$$\int_{-\infty}^{\infty} x^2exp^{-x^3}\,dx$$

$$\int_1^{\infty} \frac{dx}{\sqrt[3]{3x+5}}$$

$$\log_{\sqrt{5}}5\sqrt[3]{5}$$

$$\log_{\sqrt[3]{3}}27$$

$$\log_2 8\sqrt{2}$$

$$\lim_{x\rightarrow\infty}\left(\sqrt{n+6\sqrt{n}+1}-\sqrt{n}\right)$$

$$\lim_{x\rightarrow\infty}\frac{1+\frac{1}{2}+\frac{1}{2^2}+\dots+\frac{1}{2^n}}{1+\frac{1}{3}+\frac{1}{3^2}+\dots+\frac{1}{3^n}}$$

$$\sum_{n=1}^\infty (-1)^{n+1}(2n-1)$$

$$\sum_{n=1}^\infty sin\frac{2\pi}{3^n}cos\frac{4\pi}{3^n}$$

$$\begin{bmatrix}1&2&3\\0&-6&7\end{bmatrix}^T=\begin{bmatrix}1&0\\2&-6\\3&7\end{bmatrix}$$

$$U_{AB}=\frac{W_{A\rightarrow B}}{q}=\int_A^B\vec{E}\ast\vec{dl}$$