Περιεχόμενα

1 symbols

1.1 detixify

detixify is a tool that matches your drawings to latex symbols.

2 equations

2.1 integrals

$$\int_{-1}^{1} \sqrt{(1+r) * K} * \frac{3}{2} \cdot r^2 \, dr = \frac{3}{2} \cdot \sqrt{K} \int_{-1}^{1} \sqrt{(1+r)} \cdot r^2 \, dr =$$

2.2 sums

$$f(n) = \sum_{i=1}^{n} i^k = 1^k + 2^k + ... + n^k = O(\mathrm{N}^k) < O(2^{\mathrm{N}})$$

3 matrices

3.1 square matrix

$$\begin{bmatrix} 0,0 & 5,2 & 3,3 \\ 2,4 & 3,3 & 5,1 \end{bmatrix}$$

3.2 parenthesis matrix

$$\begin{pmatrix} 0,0 & 5,2 & 3,3 \\ 2,4 & 3,3 & 5,1 \end{pmatrix}$$

4 multi line equations

4.1 plain

$$\nabla L(x, y, z; \lambda_1, \lambda_2) = (0, 0) \Rightarrow (-\frac{1}{x+3} + \lambda_1 + \lambda_2, -\frac{1}{y+6} + 2\lambda_1 - \lambda_2) = (0, 0)$$

$$x = \frac{1}{\lambda_1} + \frac{1}{\lambda_2} - 3$$

$$y = \frac{1}{2\lambda_1} - \frac{1}{\lambda_2} - 6$$

$$D(\lambda) = -log(\frac{1}{\lambda_1} + \frac{1}{\lambda_2}) - log(\frac{1}{2\lambda_1} - \frac{1}{\lambda_2}) + \lambda_1(\frac{1}{\lambda_1} + \frac{1}{\lambda_2} - 3 + \frac{1}{\lambda_1} - \frac{2}{\lambda_2} - 6) =$$

4.2 with crossing

$$\begin{aligned}
x &= B_1(y) \\
y &= B_2(x) \\
x &= 1 + \frac{5y}{2} && \mathbf{1} \\
y &= \alpha x && \mathbf{2} \\
&\alpha \cdot \mathbf{1} + \mathbf{2} \Rightarrow \\
y + \cancel{\alpha x} &= \cancel{\alpha x} + \alpha + \frac{5y\alpha}{2} \Rightarrow \\
2y &= 2\alpha + 5y\alpha \\
(2 - 5\alpha)y &= 2\alpha \Rightarrow \\
y &= \frac{2\alpha}{2 - 5\alpha} \Rightarrow \\
x &= 1 + \frac{10\alpha}{4 - 10\alpha} \Rightarrow
\end{aligned}$$