

Day 03

The Bright Side of Mathematics



Advent of Mathematical Symbols

Nabla symbol: $\nabla := \begin{pmatrix} \frac{\partial}{\partial x_1} \\ \frac{\partial}{\partial x_2} \\ \frac{\partial}{\partial x_3} \end{pmatrix}$ or $\begin{pmatrix} \frac{\partial}{\partial x_1} \\ \vdots \\ \frac{\partial}{\partial x_n} \end{pmatrix}$

Example: $f(x_1, x_2) = x_1^3$, $\nabla f(x_1, x_2) = \begin{pmatrix} 3x_1^2 \\ 0 \end{pmatrix}$