

## 1 Differentiator

wazzzuuuup, shut up and take my derivative of this function:

$$f(x) = x^2 + x \cdot 3 + 2$$

obviously, the derivative of multiplication looks like this:

$$(x \cdot 3)' = 1 \cdot 3 + x \cdot 0$$

Znamenskaya forbade doing this, but:

$$(x^2)' = 2 \cdot x^{2-1} \cdot 1$$

the derivative of the sum can be represented as follows:

$$(x^2 + x \cdot 3)' = 2 \cdot x^{2-1} \cdot 1 + 1 \cdot 3 + x \cdot 0$$

the derivative of the sum can be represented as follows:

$$(x^2 + x \cdot 3 + 2)' = 2 \cdot x^{2-1} \cdot 1 + 1 \cdot 3 + x \cdot 0 + 0$$

with typical operations simplification

$$(x^2 + x \cdot 3 + 2)' = 2 \cdot x^{2-1} + 3$$

with all simplification

$$(x^2 + x \cdot 3 + 2)' = 2 \cdot x^1 + 3$$