$$\Delta y_1 + \cdots + \Delta y_n = \Delta y$$

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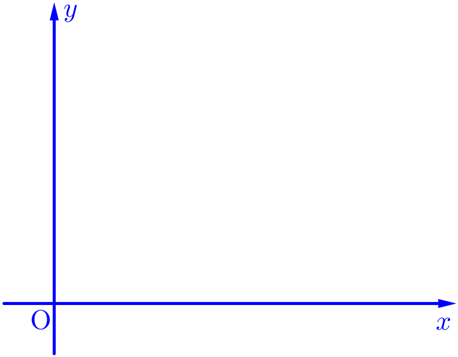
▸ Start ▸ End

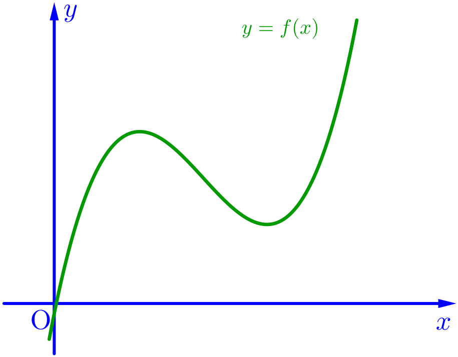
$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

Start End



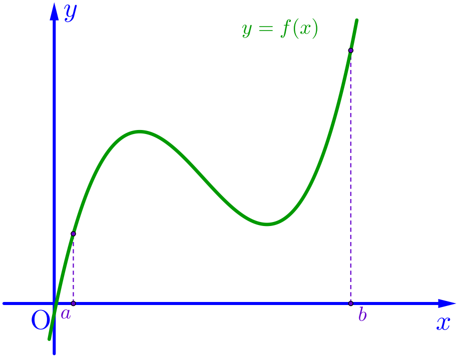
$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

▸ Start ▸ End



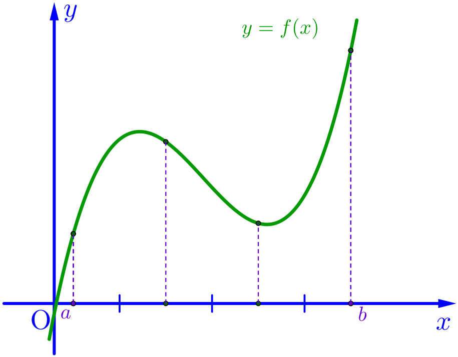
$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

Start End



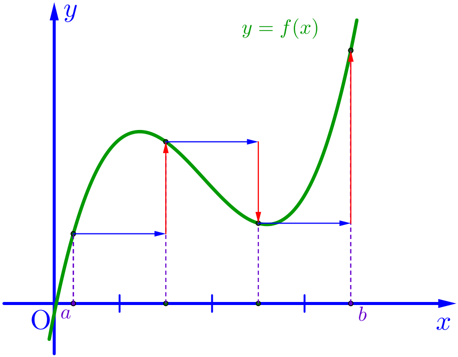
$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

▸ Start ▸ End



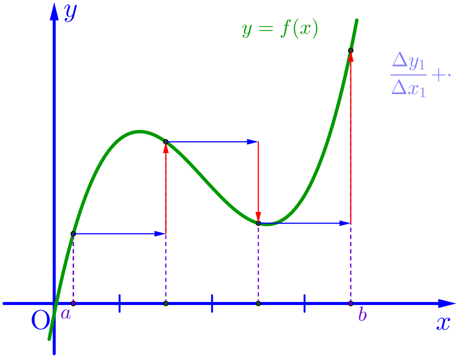
$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

▸ Start ▸ End



$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

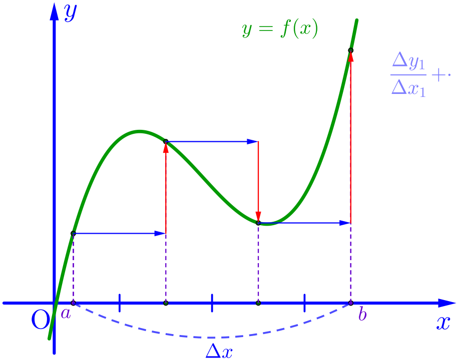
▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3}$$

$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

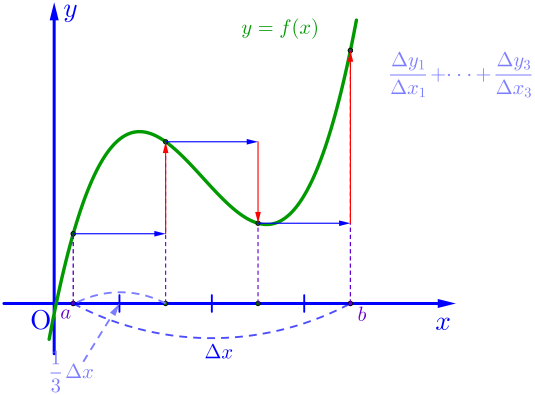
Start End



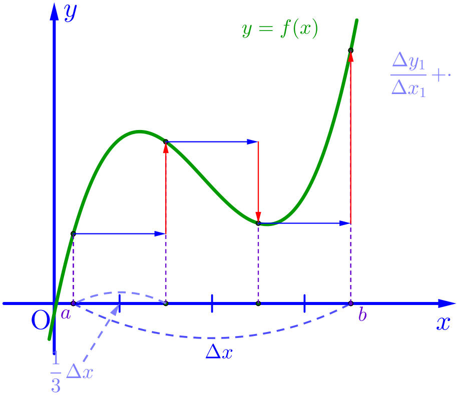
$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3}$$

$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

▸ Start ▸ End

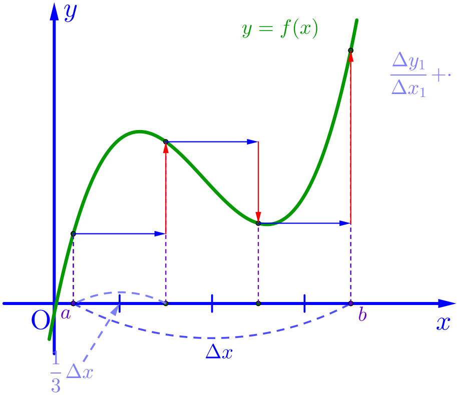


Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

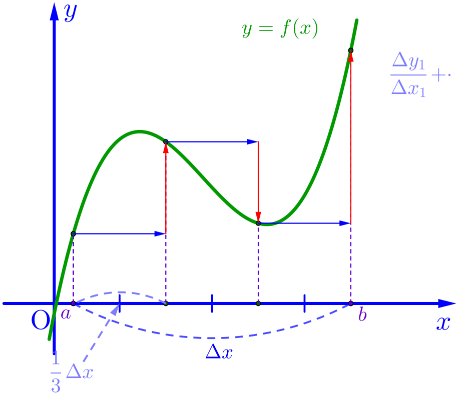
Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

$$= 3 \times \frac{\Delta y_1}{\Delta x} + \cdots + 3 \times \frac{\Delta y_3}{\Delta x}$$

▸ Start ▸ End

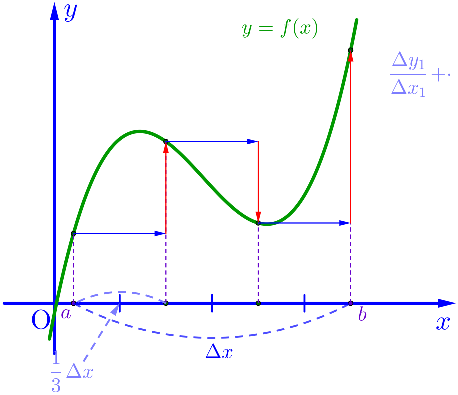


$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

$$= 3 \times \frac{\Delta y_1}{\Delta x} + \cdots + 3 \times \frac{\Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y_1 + \cdots + \Delta y_3}{\Delta x}$$

▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

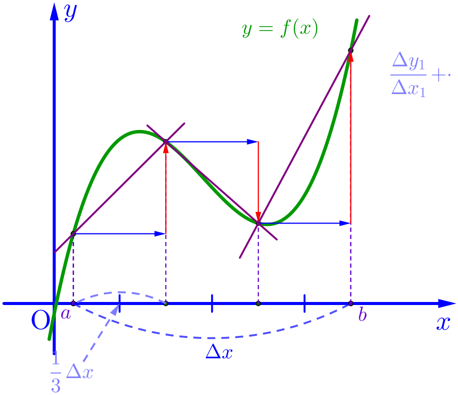
$$= 3 \times \frac{\Delta y_1}{\Delta x} + \cdots + 3 \times \frac{\Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y_1 + \cdots + \Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y}{\Delta x}$$

$\Delta y_1 + \cdots + \Delta y_n = \Delta y$

▸ Start ▸ End



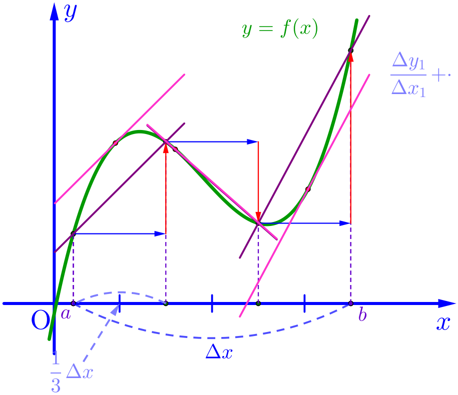
$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

$$= 3 \times \frac{\Delta y_1}{\Delta x} + \cdots + 3 \times \frac{\Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y_1 + \cdots + \Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y}{\Delta x}$$

▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_3}{\Delta x_3} = \frac{\Delta y_1}{\frac{1}{3}\Delta x} + \cdots + \frac{\Delta y_3}{\frac{1}{3}\Delta x}$$

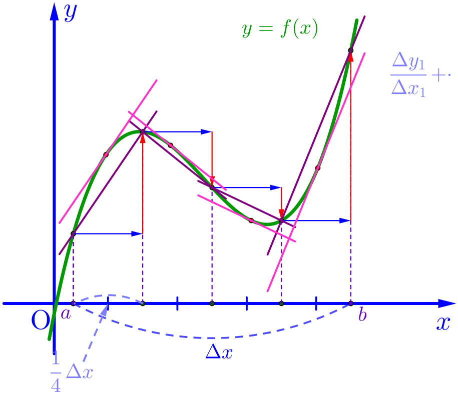
$$= 3 \times \frac{\Delta y_1}{\Delta x} + \cdots + 3 \times \frac{\Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y_1 + \cdots + \Delta y_3}{\Delta x}$$

$$= 3 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_3^* \in [a, b] \ \text{ s.t. } \ f'(x_1^*) + \cdots + f'(x_3^*) = 3 \times \frac{f(b) - f(a)}{b - a}$$

▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_4}{\Delta x_4} = \frac{\Delta y_1}{\frac{1}{4}\Delta x} + \cdots + \frac{\Delta y_4}{\frac{1}{4}\Delta x}$$

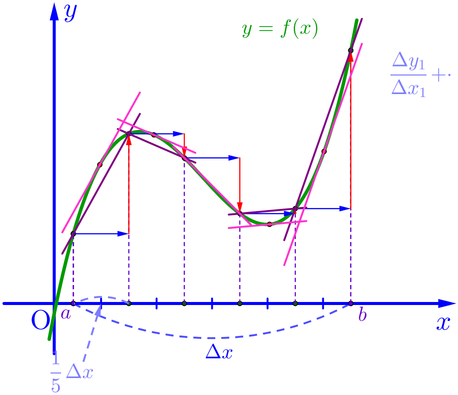
$$= 4 \times \frac{\Delta y_1}{\Delta x} + \cdots + 4 \times \frac{\Delta y_4}{\Delta x}$$

$$= 4 \times \frac{\Delta y_1 + \cdots + \Delta y_4}{\Delta x}$$

$$= 4 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_4^* \in [a, b] \text{ s.t. } f'(x_1^*) + \cdots + f'(x_4^*) = 4 \times \frac{f(b) - f(a)}{b - a}$$

▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_5}{\Delta x_5} = \frac{\Delta y_1}{\frac{1}{5}\Delta x} + \cdots + \frac{\Delta y_5}{\frac{1}{5}\Delta x}$$

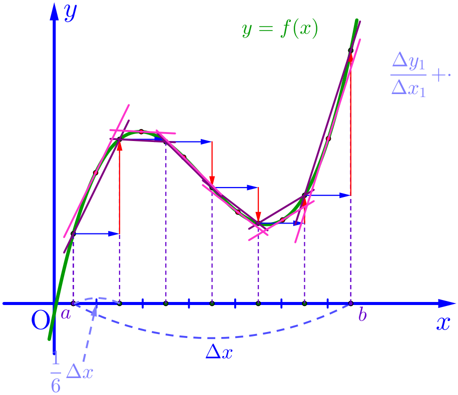
$$= 5 \times \frac{\Delta y_1}{\Delta x} + \cdots + 5 \times \frac{\Delta y_5}{\Delta x}$$

$$= 5 \times \frac{\Delta y_1 + \cdots + \Delta y_5}{\Delta x}$$

$$= 5 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_5^* \in [a, b] \ \text{ s.t. } \ f'(x_1^*) + \cdots + f'(x_5^*) = 5 \times \frac{f(b) - f(a)}{b - a}$$

Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_6}{\Delta x_6} = \frac{\Delta y_1}{\frac{1}{6}\Delta x} + \cdots + \frac{\Delta y_6}{\frac{1}{6}\Delta x}$$

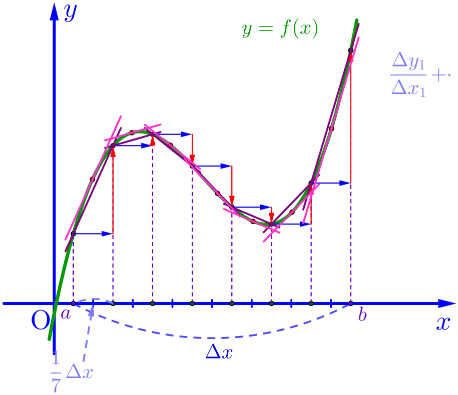
$$= 6 \times \frac{\Delta y_1}{\Delta x} + \cdots + 6 \times \frac{\Delta y_6}{\Delta x}$$

$$= 6 \times \frac{\Delta y_1 + \cdots + \Delta y_6}{\Delta x}$$

$$= 6 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_6^* \in [a, b] \ \text{ s.t. } \ f'(x_1^*) + \cdots + f'(x_6^*) = 6 \times \frac{f(b) - f(a)}{b - a}$$

Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_7}{\Delta x_7} = \frac{\Delta y_1}{\frac{1}{7}\Delta x} + \cdots + \frac{\Delta y_7}{\frac{1}{7}\Delta x}$$

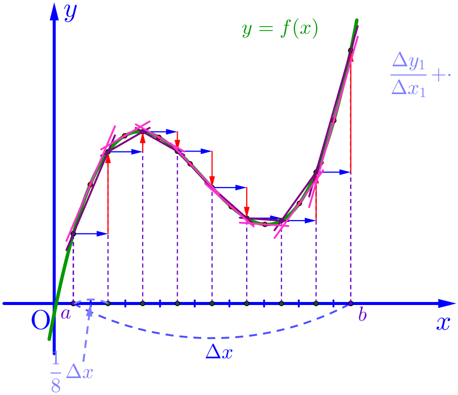
$$= 7 \times \frac{\Delta y_1}{\Delta x} + \cdots + 7 \times \frac{\Delta y_7}{\Delta x}$$

$$= 7 \times \frac{\Delta y_1 + \cdots + \Delta y_7}{\Delta x}$$

$$= 7 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_7^* \in [a, b] \text{ s.t. } f'(x_1^*) + \cdots + f'(x_7^*) = 7 \times \frac{f(b) - f(a)}{b - a}$$

Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_8}{\Delta x_8} = \frac{\Delta y_1}{\frac{1}{8}\Delta x} + \cdots + \frac{\Delta y_8}{\frac{1}{8}\Delta x}$$

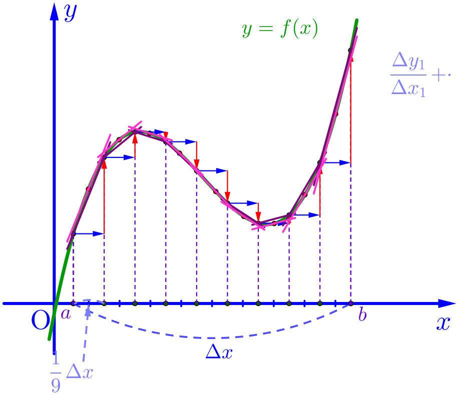
$$= 8 \times \frac{\Delta y_1}{\Delta x} + \cdots + 8 \times \frac{\Delta y_8}{\Delta x}$$

$$= 8 \times \frac{\Delta y_1 + \cdots + \Delta y_8}{\Delta x}$$

$$= 8 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_8^* \in [a, b] \ \text{ s.t. } \ f'(x_1^*) + \cdots + f'(x_8^*) = 8 \times \frac{f(b) - f(a)}{b - a}$$

▸ Start ▸ End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_9}{\Delta x_9} = \frac{\Delta y_1}{\frac{1}{9}\Delta x} + \cdots + \frac{\Delta y_9}{\frac{1}{9}\Delta x}$$

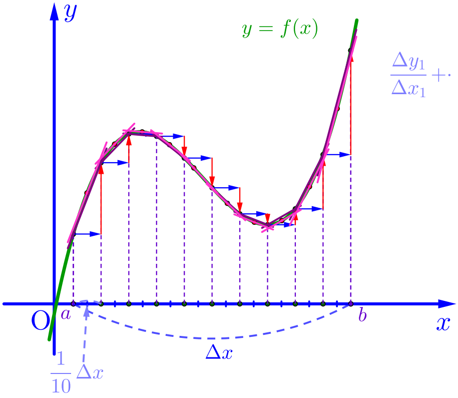
$$= 9 \times \frac{\Delta y_1}{\Delta x} + \cdots + 9 \times \frac{\Delta y_9}{\Delta x}$$

$$= 9 \times \frac{\Delta y_1 + \cdots + \Delta y_9}{\Delta x}$$

$$= 9 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_9^* \in [a, b] \ \text{ s.t. } \ f'(x_1^*) + \cdots + f'(x_9^*) = 9 \times \frac{f(b) - f(a)}{b - a}$$

Start End



$$\frac{\Delta y_1}{\Delta x_1} + \cdots + \frac{\Delta y_{10}}{\Delta x_{10}} = \frac{\Delta y_1}{\frac{1}{10}\Delta x} + \cdots + \frac{\Delta y_{10}}{\frac{1}{10}\Delta x}$$

$$= 10 \times \frac{\Delta y_1}{\Delta x} + \cdots + 10 \times \frac{\Delta y_{10}}{\Delta x}$$

$$= 10 \times \frac{\Delta y_1 + \cdots + \Delta y_{10}}{\Delta x}$$

$$= 10 \times \frac{\Delta y}{\Delta x}$$

$$\therefore \exists x_1^*, \ldots, \exists x_{10}^* \in [a, b] \quad \text{s.t.} \quad f'(x_1^*) + \cdots + f'(x_{10}^*) = 10 \times \frac{f(b) - f(a)}{b - a}$$

Github:
https://min7014.github.io/math20240504001.html

Click or paste URL into the URL search bar, and you can see a picture moving.