

U.S.

$$x^2 = a^2 - t^2$$



$$-2x dx = 2t dt$$

$$x dx = -t dt$$

$$a^2 + a^2 \cdot b^2 x = a^2 \left( 1 + \frac{\sin^2 x}{\cos^2 x} \right) =$$
$$= a^2 \cdot \frac{1}{\cos^2 x}$$

$$\int \frac{\sqrt{1-x^2}}{x} dx = \int \left. \begin{array}{l} 1-x^2 = t^2 \\ -2x dx = 2t dt \\ dx = -\frac{t dt}{x} \end{array} \right|$$

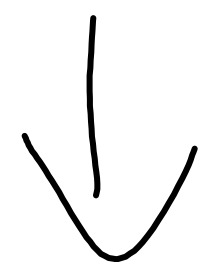
$$\int \frac{t}{x} \cdot \frac{-t dt}{x} =$$

$$\int \sqrt{1+x^2} dx = \left| \begin{array}{l} x = \tan t \\ dx = \frac{1}{\cos^2 t} dt \end{array} \right| = \int \sqrt{\frac{1}{\cos^2 t}} \cdot \frac{1}{\cos^2 t} dt$$

$$= \int \frac{1}{\cos^3 t} dt = \int \frac{\cos t}{\cos^4 t} dt = \left| \begin{array}{l} u = \sin t \\ 1 du = \cos t dt \end{array} \right|$$



$$\int \frac{1}{\cos^4 t}$$



$$\frac{1}{(1 - \sin^2 t)^2}$$

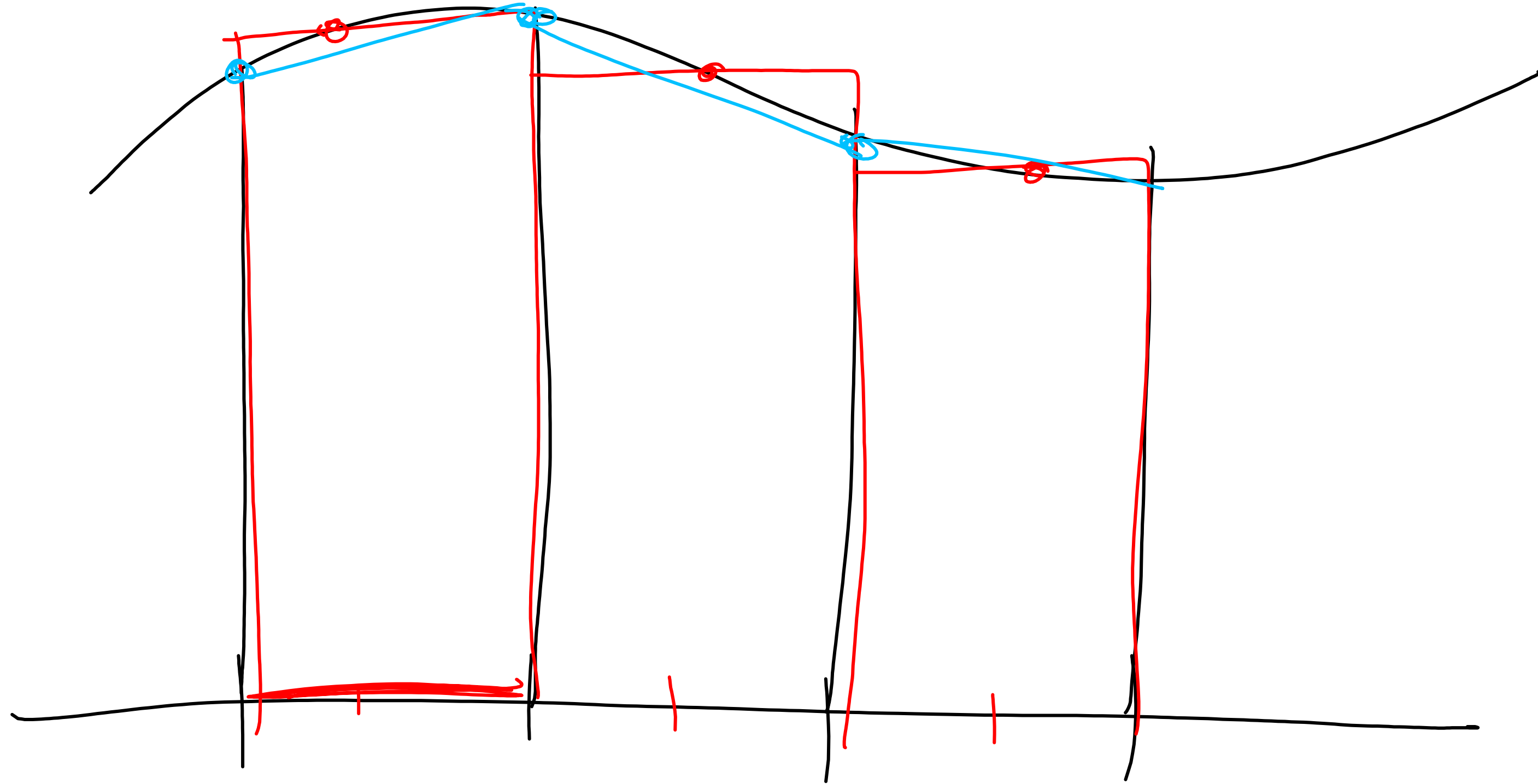
$$\sqrt{10x} + \sqrt{5x}$$

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$$\sqrt{7x} - \sqrt{16x}$$

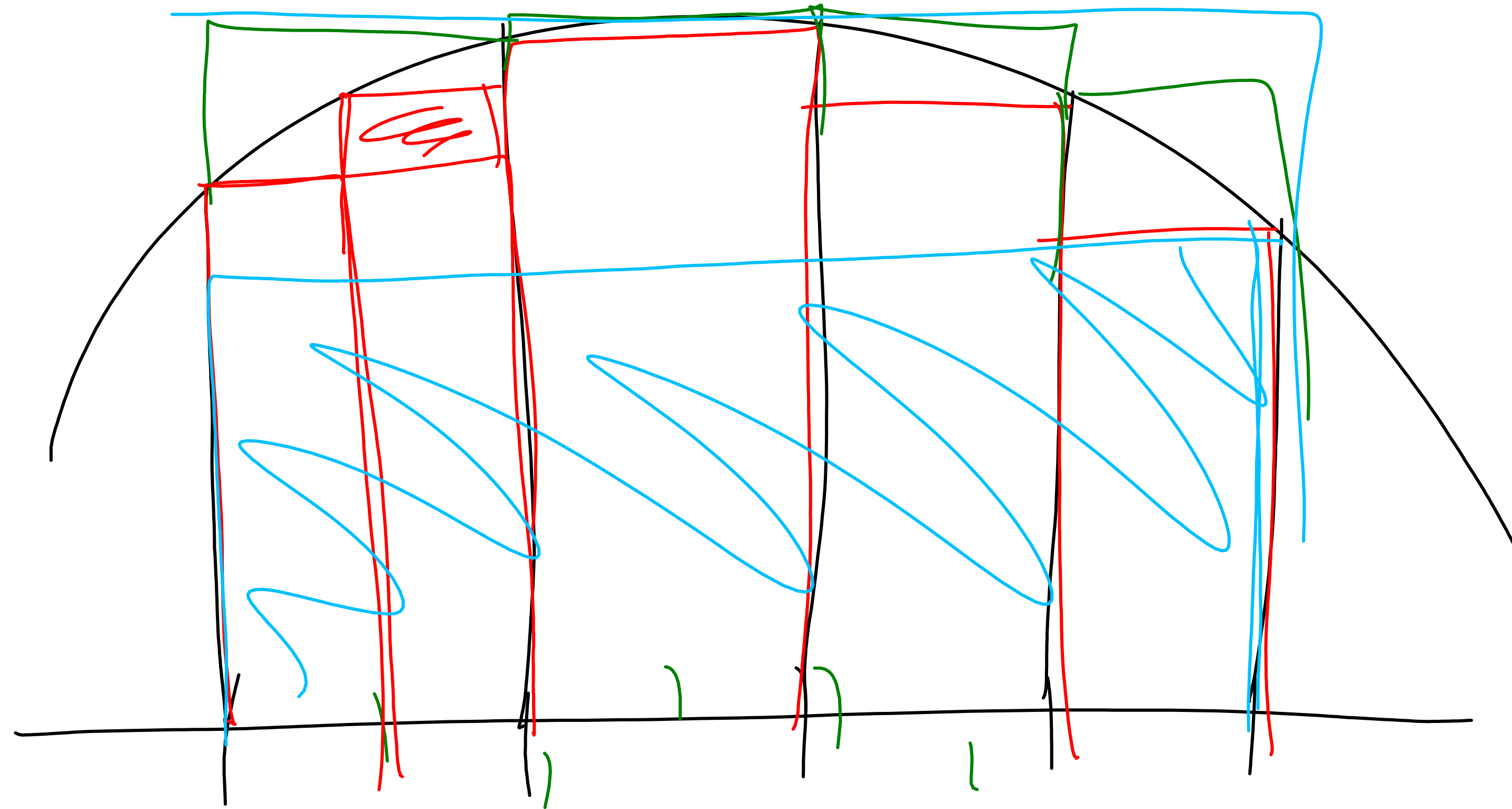


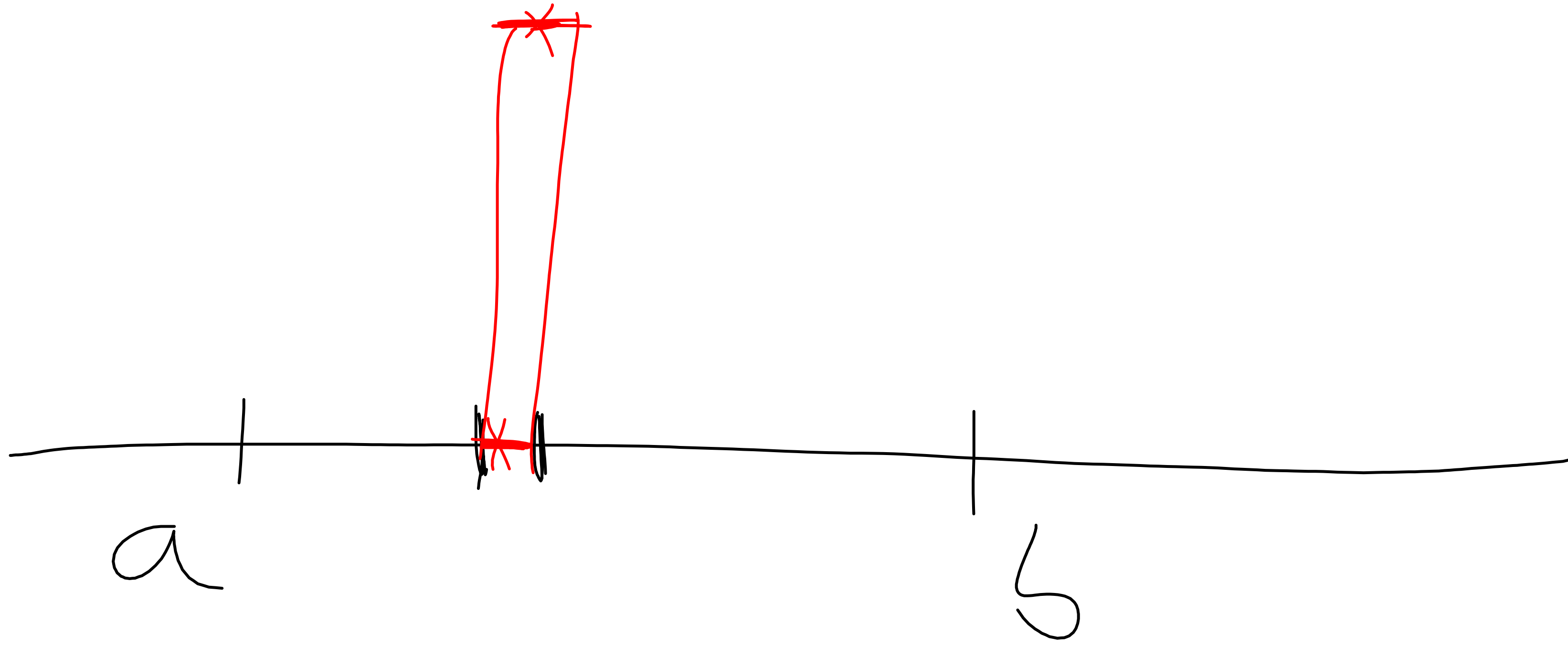
$$p + \frac{m+1}{m} = \frac{1}{4} - \frac{1}{4} = 0 \in \mathbb{Z}$$

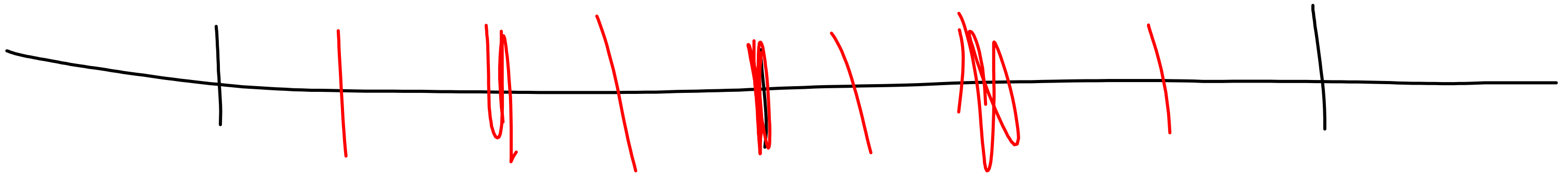


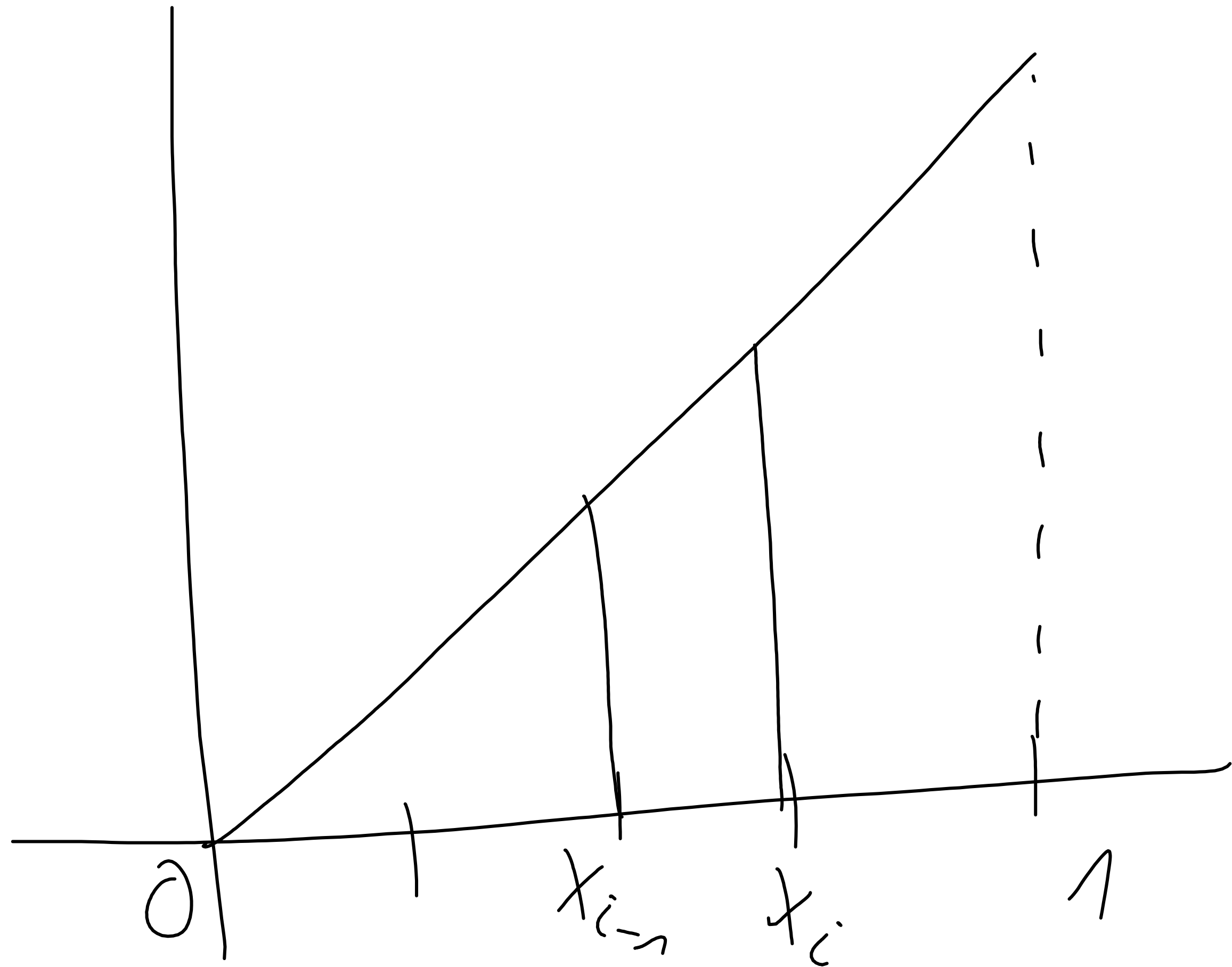
$$\sum_{n=1}^3 f(x_n) \cdot \Delta x_n$$

$$\int_a^b f(x) dx$$









$$1 + 2 + \dots + 100$$

