

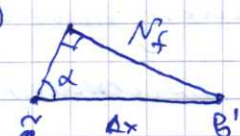
$$N_f = \frac{2S_B}{l_y}$$

$$l_y = |AB| = \sqrt{(b-a)^2 + (f(b)-f(a))^2}$$

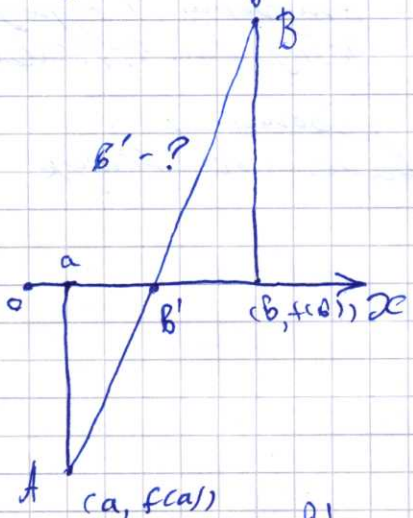
$$S_B = S_{\text{trapezoid}} - S_{\text{triangle}} = \int_a^b f(x) dx - \frac{(f(b)-f(a))(b-a)}{2}$$

$$N_f = \frac{2 \int_a^b f(x) dx - (f(b)-f(a))(b-a)}{\sqrt{(b-a)^2 + (f(b)-f(a))^2}}$$

$$\Delta x = \frac{N_f}{\sin \alpha} = \frac{2 \int_a^b f(x) dx - (f(b)-f(a))(b-a)}{\sqrt{(b-a)^2 + (f(b)-f(a))^2} \cdot \frac{f(b)-f(a)}{\sqrt{(b-a)^2 + (f(b)-f(a))^2}}}$$



$$\Delta x = \frac{2 \int_a^b f(x) dx}{f(b)-f(a)} - \frac{(f(b)-f(a))(b-a)}{f(b)-f(a)}$$



$$y_{AB} = (x-a)k_{AB} + f(a)$$

$$k_{AB} = \frac{f(b)-f(a)}{b-a}$$

$$y_{AB}(B') = 0$$

$$(B'-a)k_{AB} + f(a) = 0$$

$$B' = -f(a)/k_{AB} + a$$

$$B' = -\frac{f(a)(b-a)}{f(b)-f(a)} + a = \frac{af(b) - bf(a) - bf(a) + af(a)}{f(b)-f(a)} = \frac{af(b) - bf(a)}{f(b)-f(a)}$$

$$a' = B' - \Delta x = \frac{af(b) - bf(a)}{f(b)-f(a)} - \frac{2 \int_a^b f(x) dx}{f(b)-f(a)} + \frac{(f(b)-f(a))(b-a)}{f(b)-f(a)}$$

$$= \frac{af(b) - bf(a) + bf(b) - af(b) - 2bf(a) + af(a) + bf(b)}{f(b)-f(a)} - \frac{2 \int_a^b f(x) dx}{f(b)-f(a)}$$

$$B' = \frac{af(b) - bf(a)}{f(b) - f(a)}$$

$$a' = \max \left\{ a, \frac{-2bf(a) + af(a) + bf(b)}{f(b) - f(a)} - \frac{2 \int_a^b f(x) dx}{f(b) - f(a)} \right\}$$