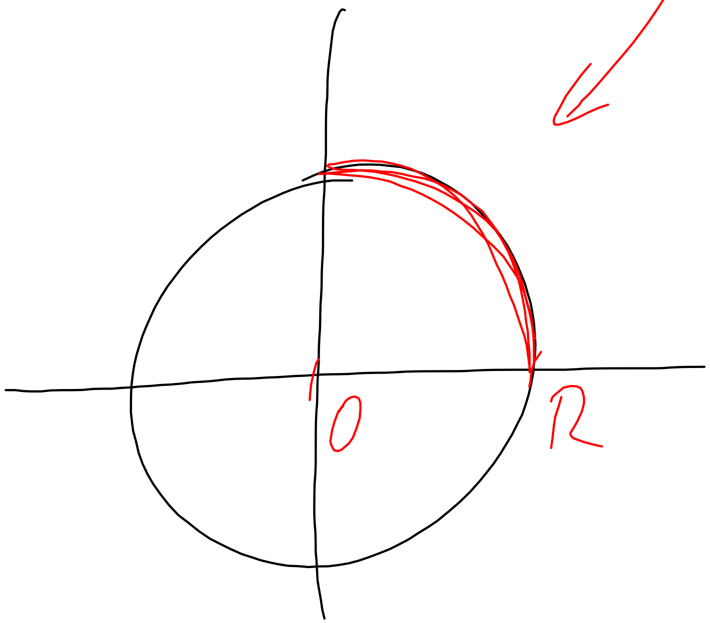
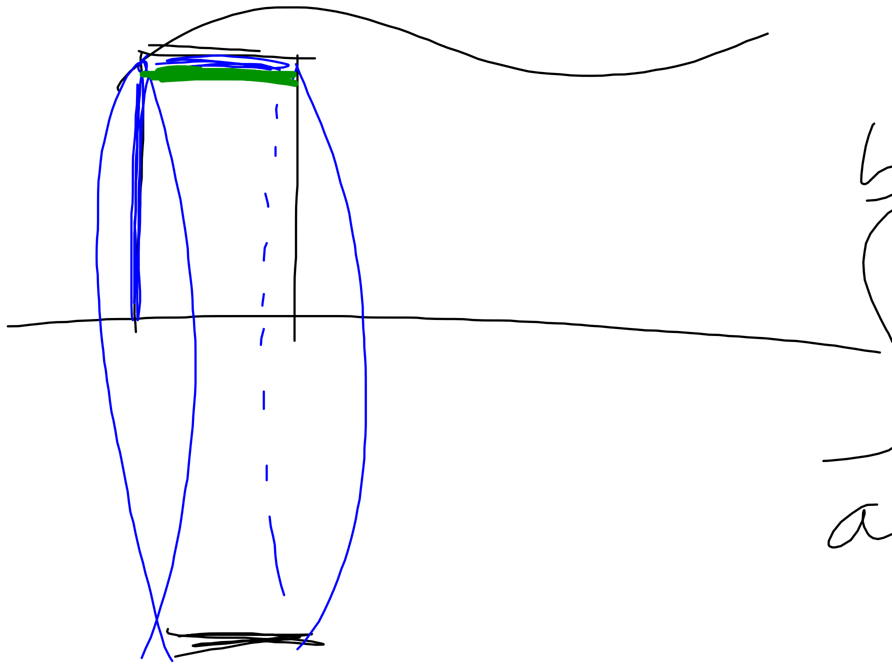
$$f'(c) = \frac{f(b) - f(a)}{b - a}$$

$$x^2+y^2=R^2 \Rightarrow y=\pm\sqrt{R^2-x^2}$$

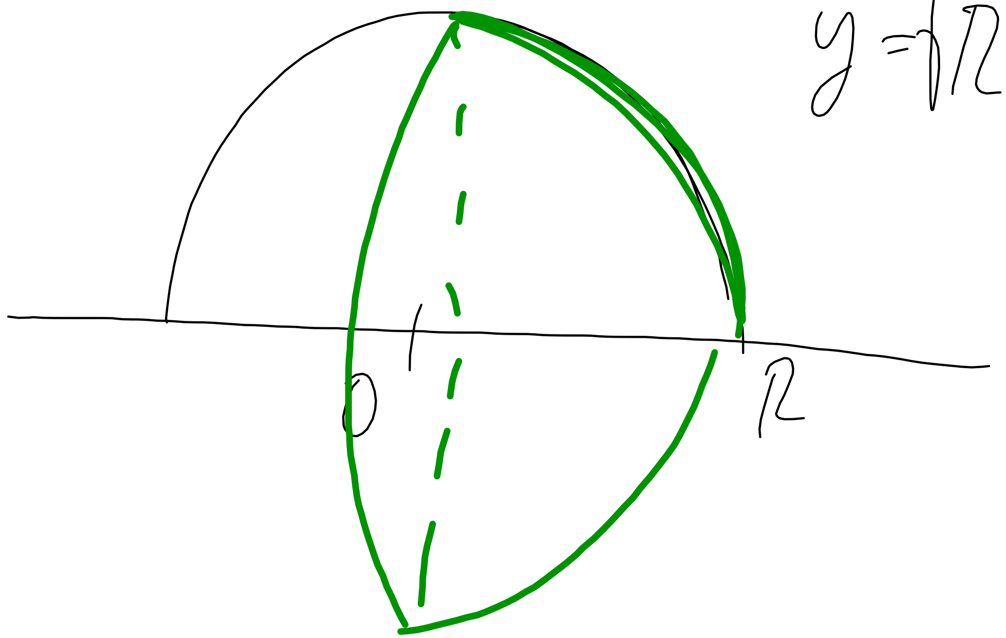


$$1 + \frac{x^2}{R^2 - x^2} = \frac{R^2 \cancel{- x^2} \cancel{+ x^2}}{R^2 - x^2}$$

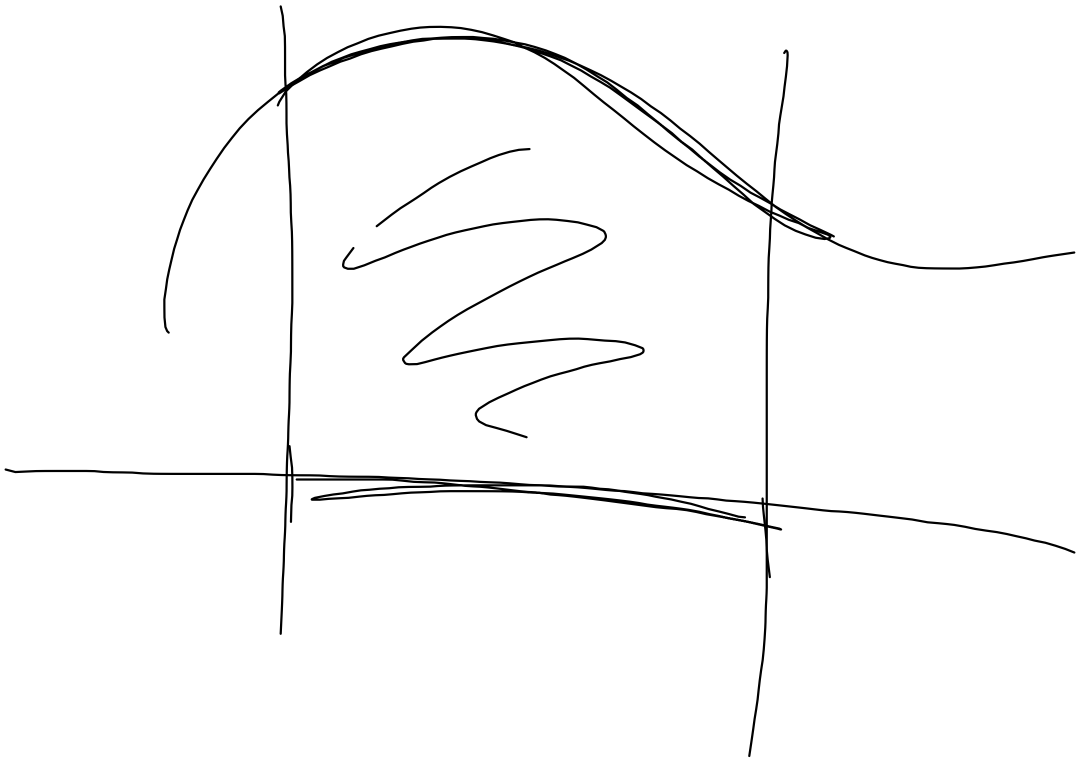


$\pi r^2 \cdot w$

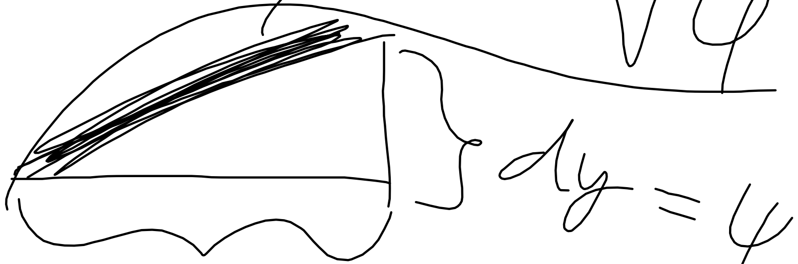
$$\int_a^b \pi \cdot f(x)^2 \cdot dx$$



$$y = \sqrt{r^2 - x^2}$$



$$\sqrt{\varphi'^2 dt^2 + \psi'^2 dt^2}$$



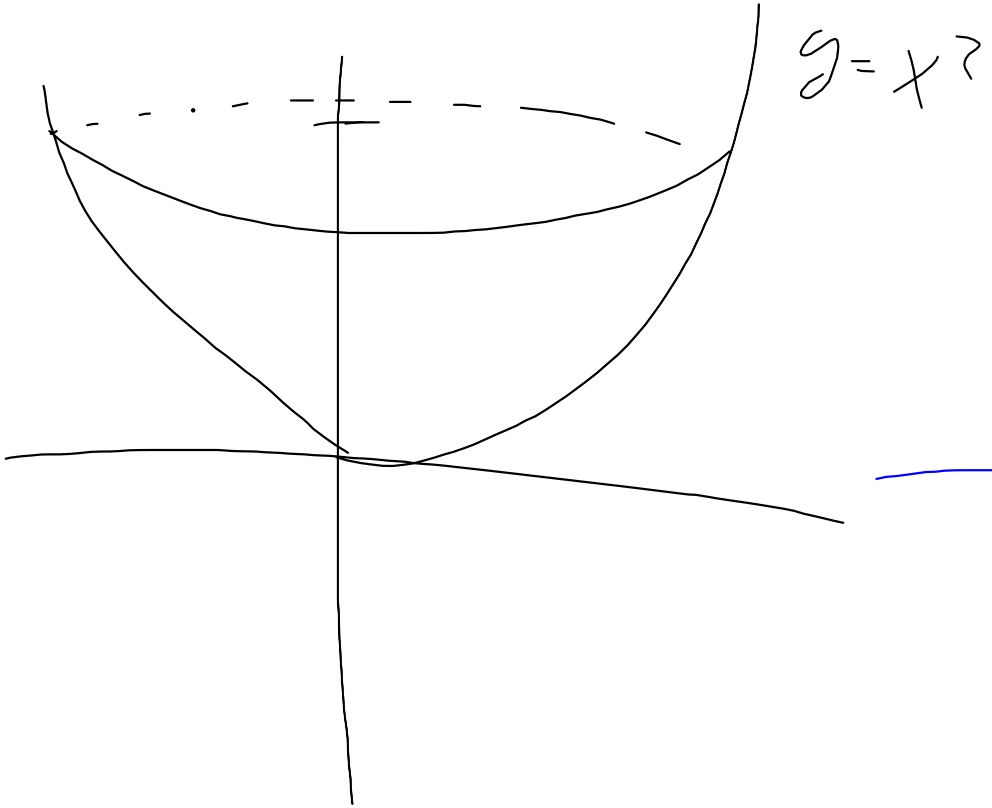
$$dy = \psi'(t)\,dt$$

$$dx = \varphi'(t)\,dt$$

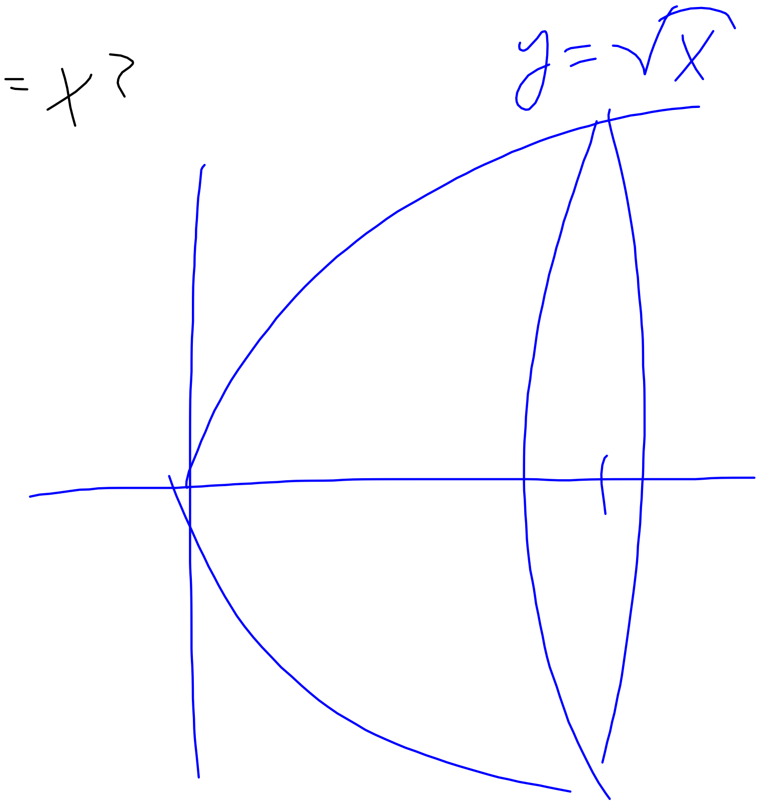
$y = f(x)$

$x = t$

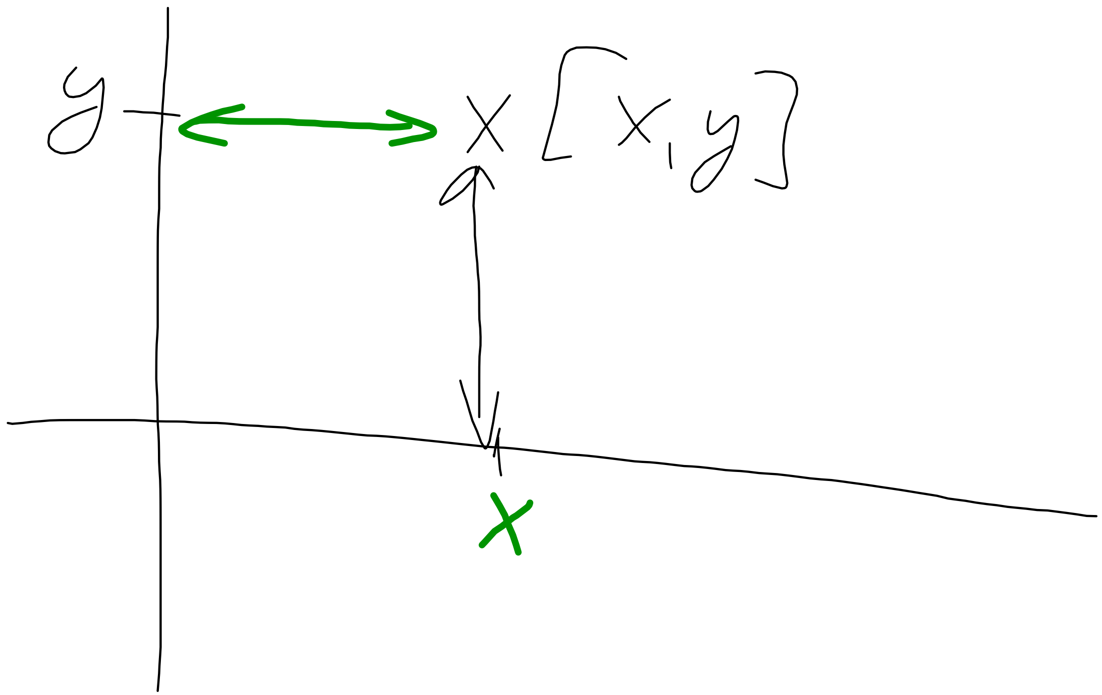
$y = f(t)$



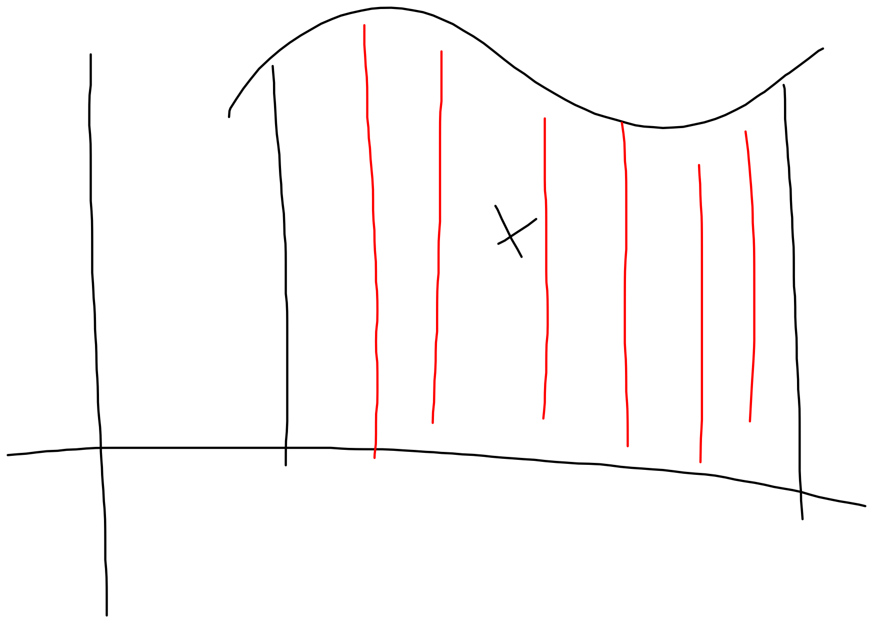
$y = x^2$

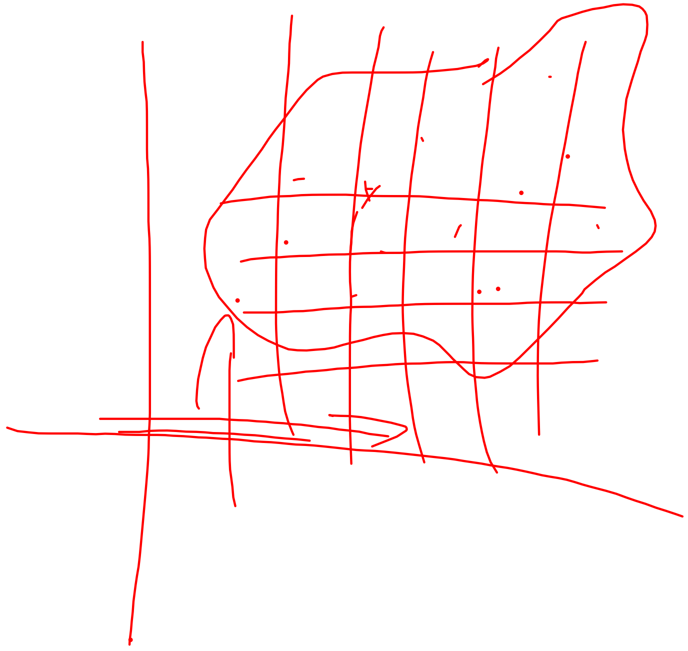


$y = \sqrt{x}$



y
X [x, y]
x



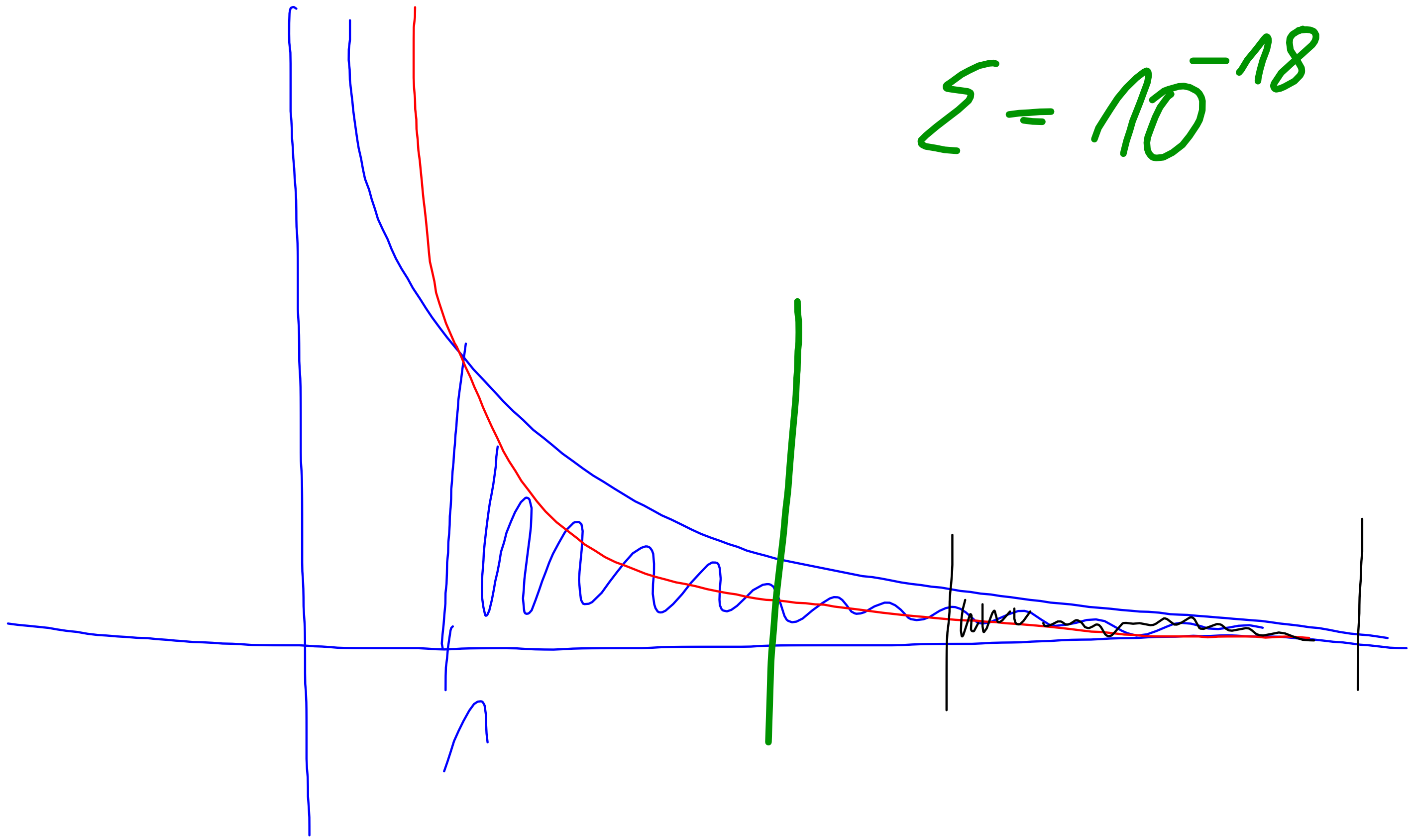


$$\int_{-\infty}^{\infty} = \lim_{[a,b]\to[-\infty,\infty]} \int_a^b$$

$$\int_0^\infty \frac{1}{1+x^2}\,dx = \left[\operatorname{arctg} x\right]_0^\infty =$$

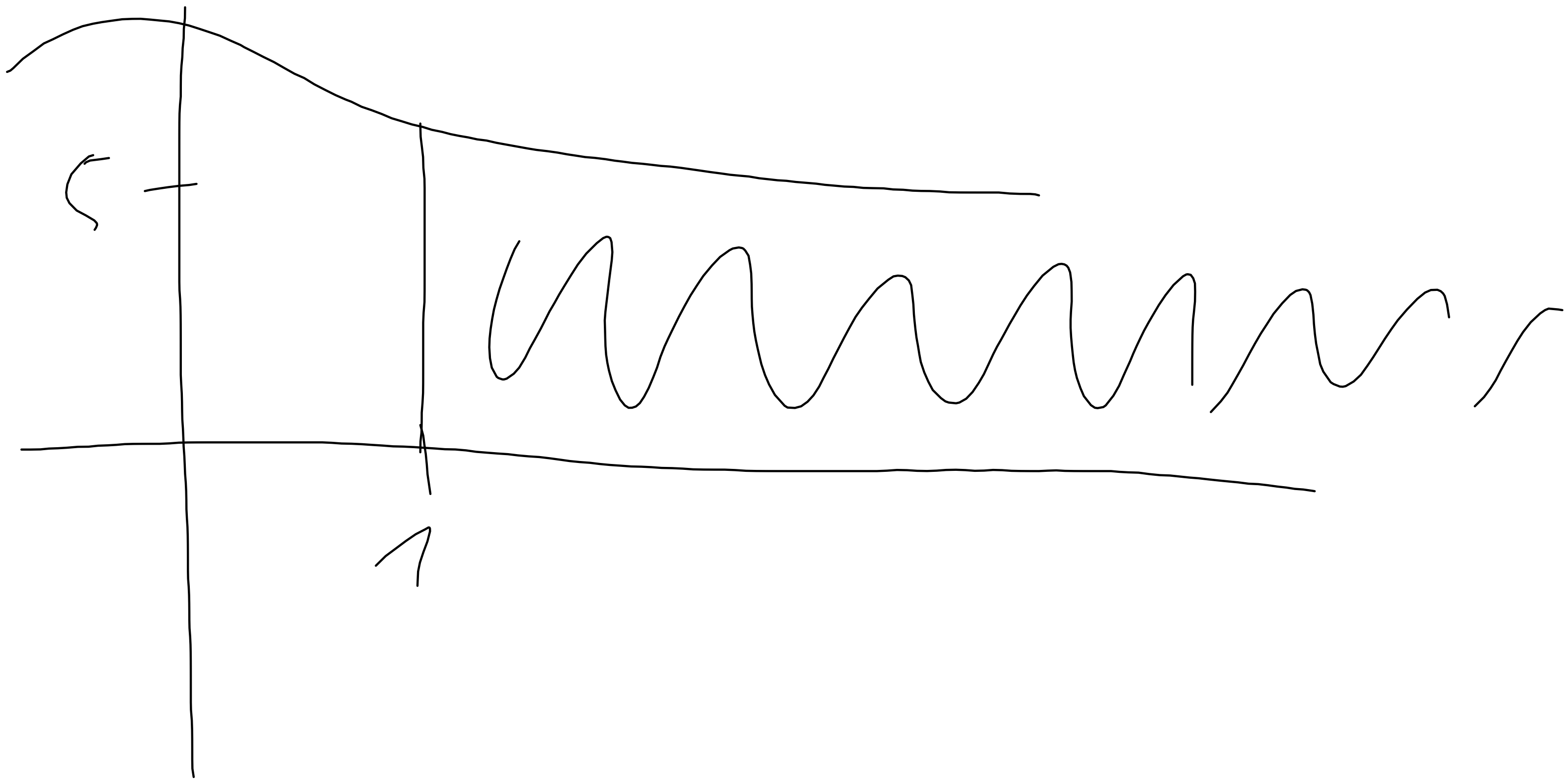
$$= \left(\lim_{x\to\infty} \operatorname{arctg} x\right) - \left(\operatorname{arctg} 0\right) = \ldots$$

$$\frac{t^{-\alpha+1}}{-\alpha+1}$$


$\varepsilon = 10^{-18}$

$$\frac{\infty}{\infty} = 5$$

$$\frac{\int}{\frac{1}{x^{\alpha}}}$$



1
5
8