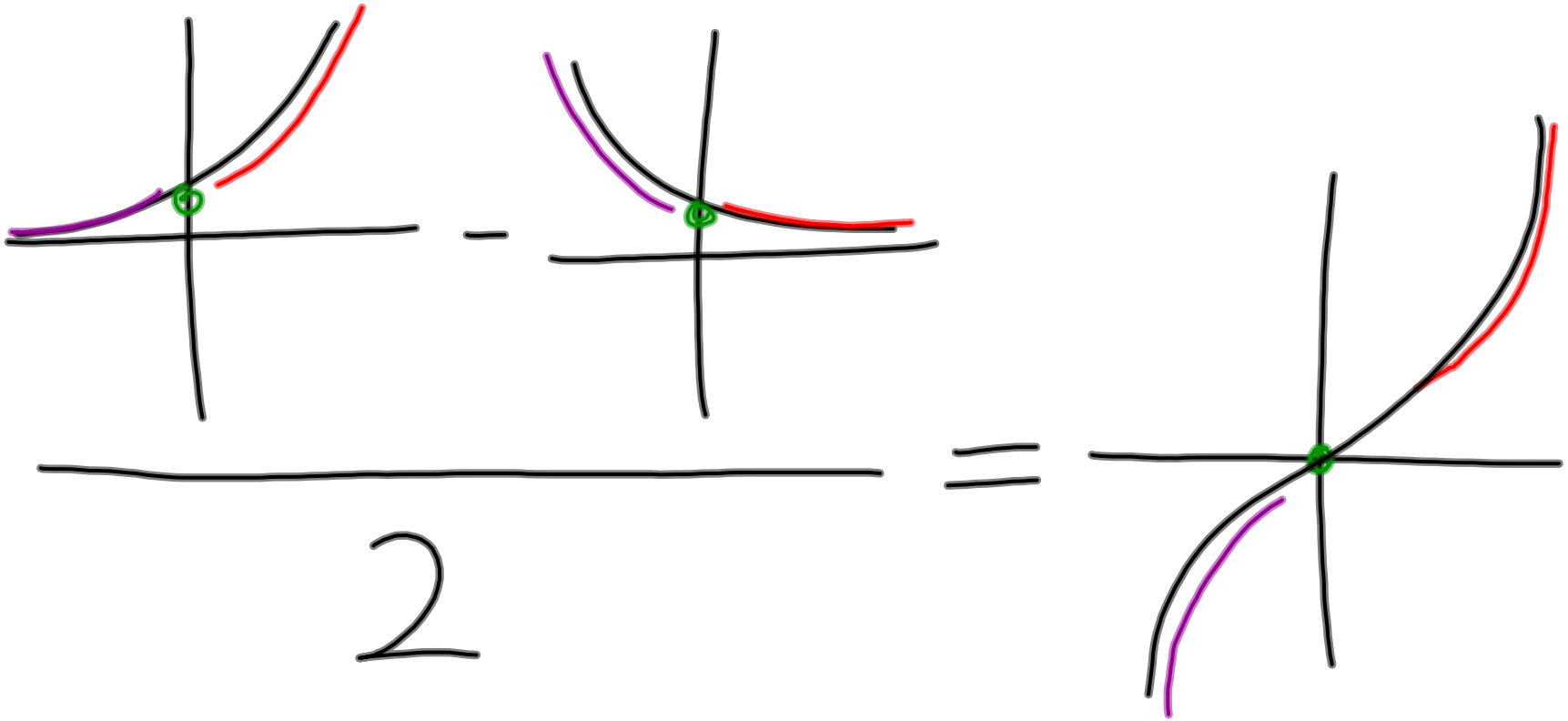
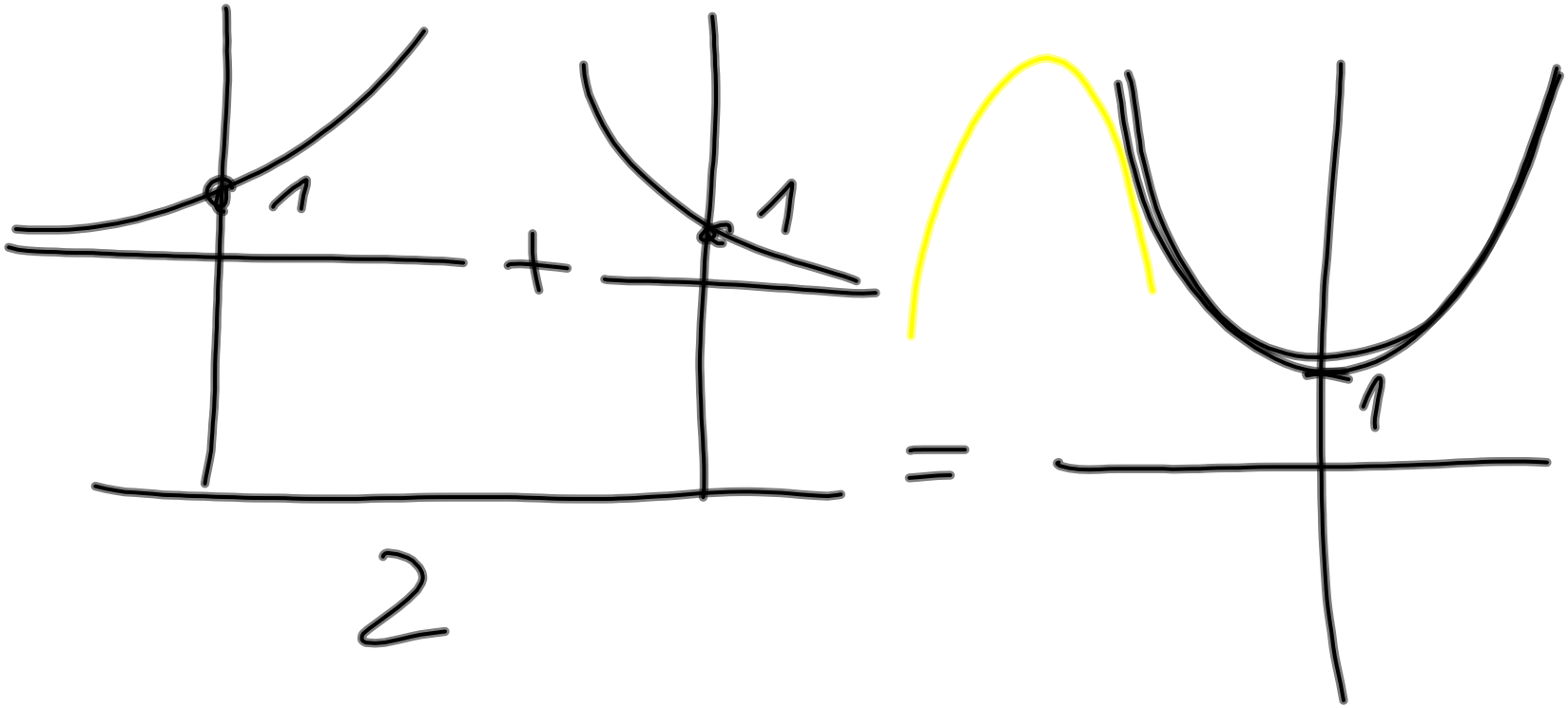



1
1
1
2

$$y = \frac{e^x - e^{-x}}{2}$$

$$x = \frac{e^y - e^{-y}}{2}$$

$$2x = e^y - e^{-y} \quad / \cdot e^y$$

$$2xe^y = e^{2y} - 1$$

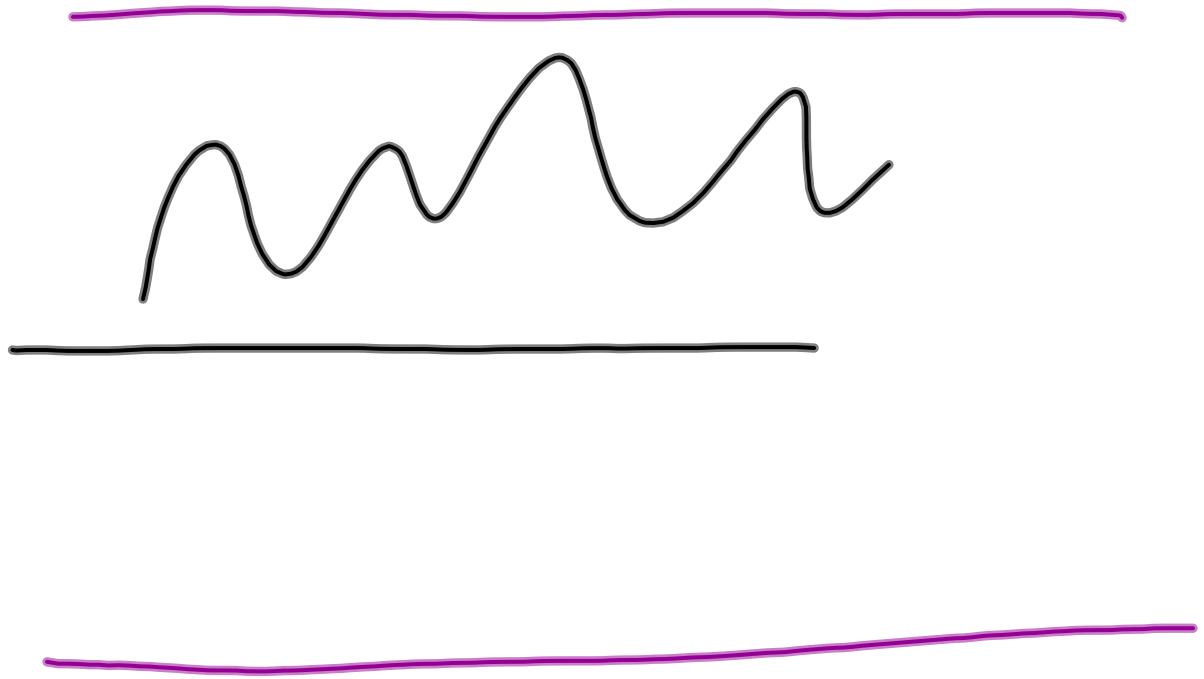
$$[t = e^y]$$

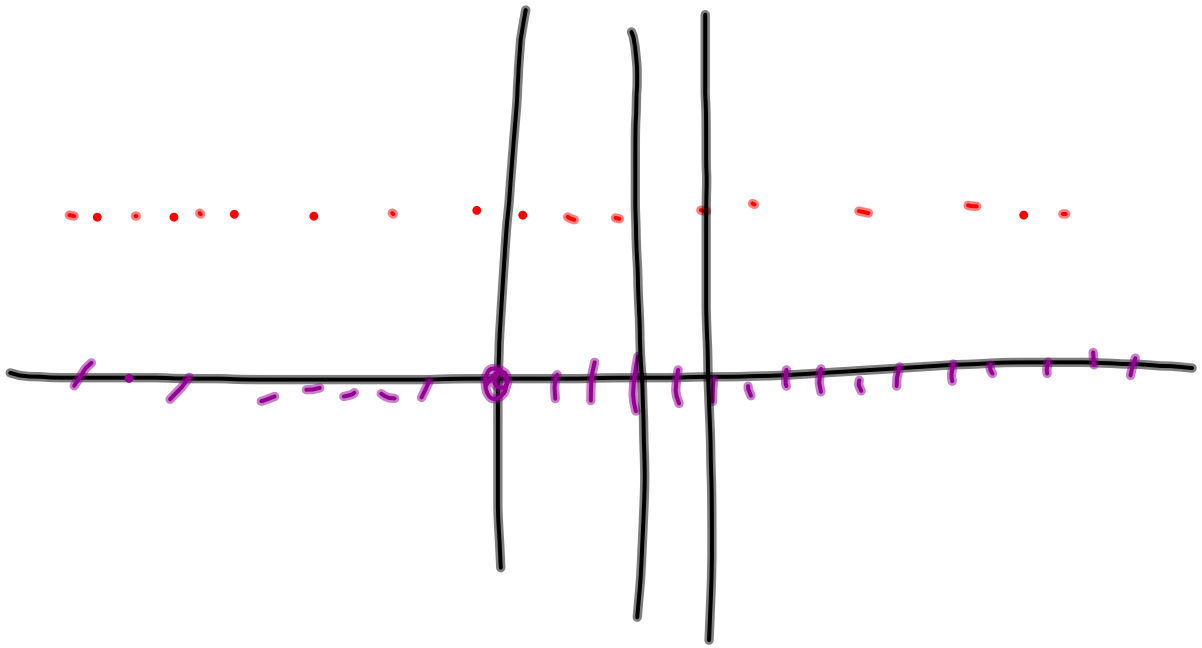
$$t^2 - 2xt - 1 = 0$$

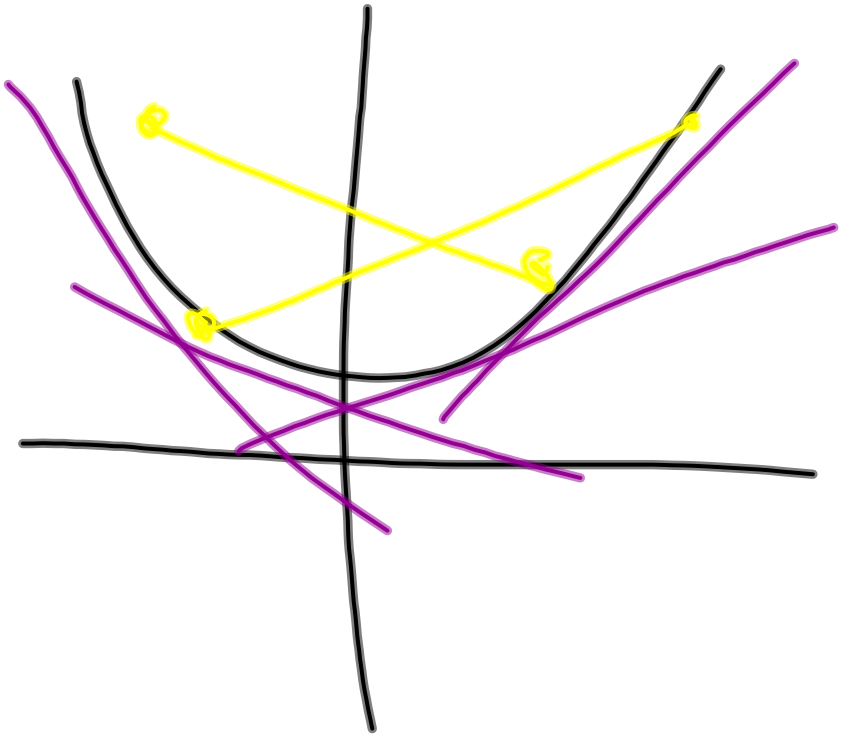
$$D = 4x^2 + 4 \qquad t_{1,2} = \frac{2x \pm \sqrt{D}}{2}$$

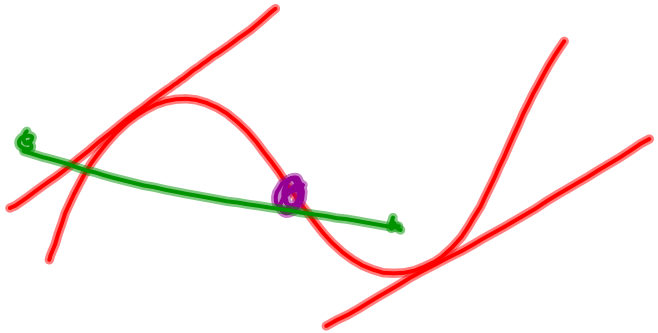
$$t_{1,2} = \frac{2x \pm 2\cdot\sqrt{x^2+1}}{2} = x \pm \sqrt{x^2+1} \quad := e^y$$

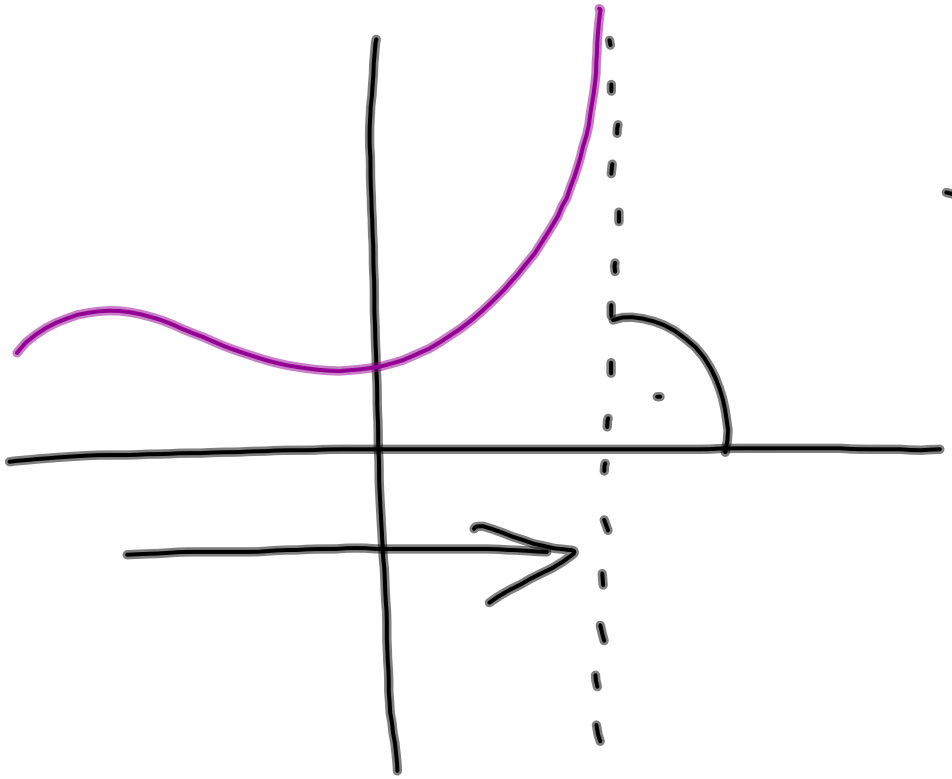
$$y = \ln\left(x + \sqrt{x^2+1}\right) = \operatorname{argsinh} x \quad \ln(\cdot)$$



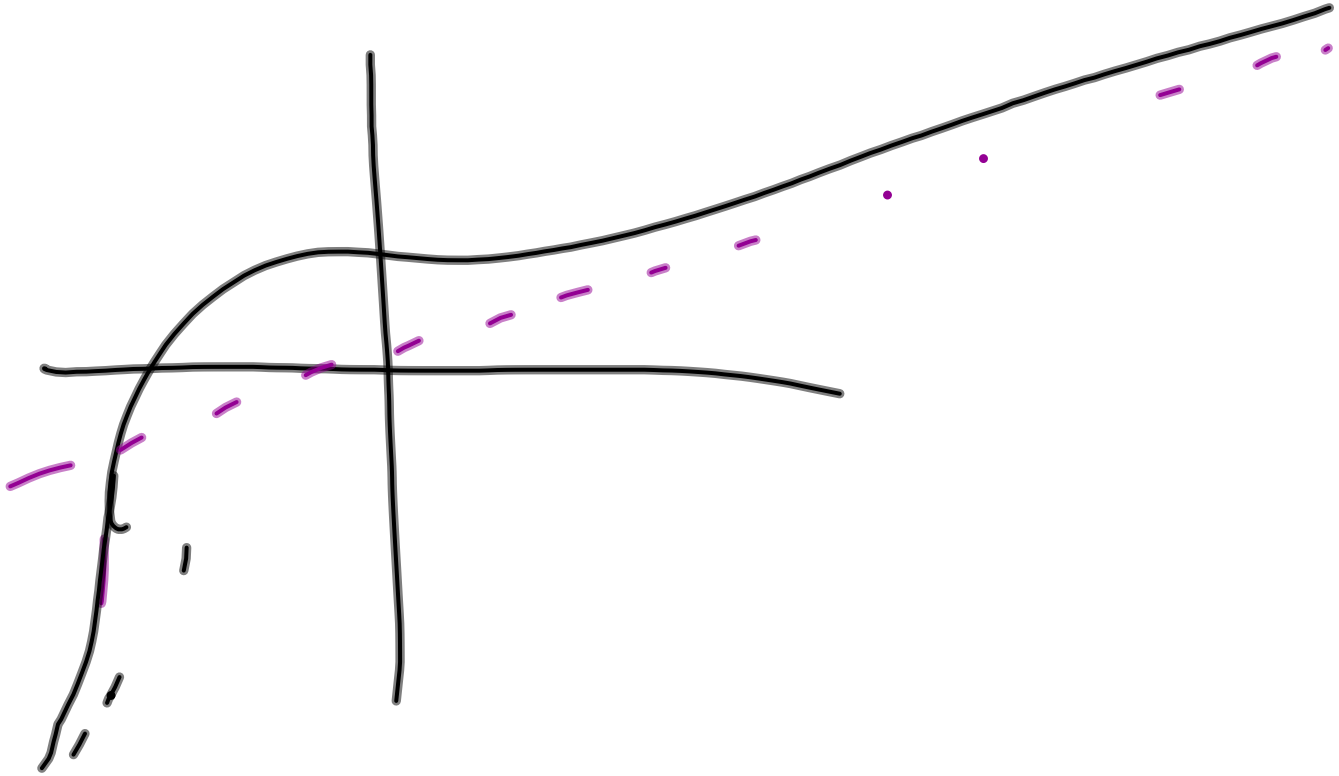








$y = @x + b$



$y = \sin(5x)$

$y = 2 \cdot \sin x$

$y = \frac{4 \cdot \arcsin(x-2)}{3}$

x7

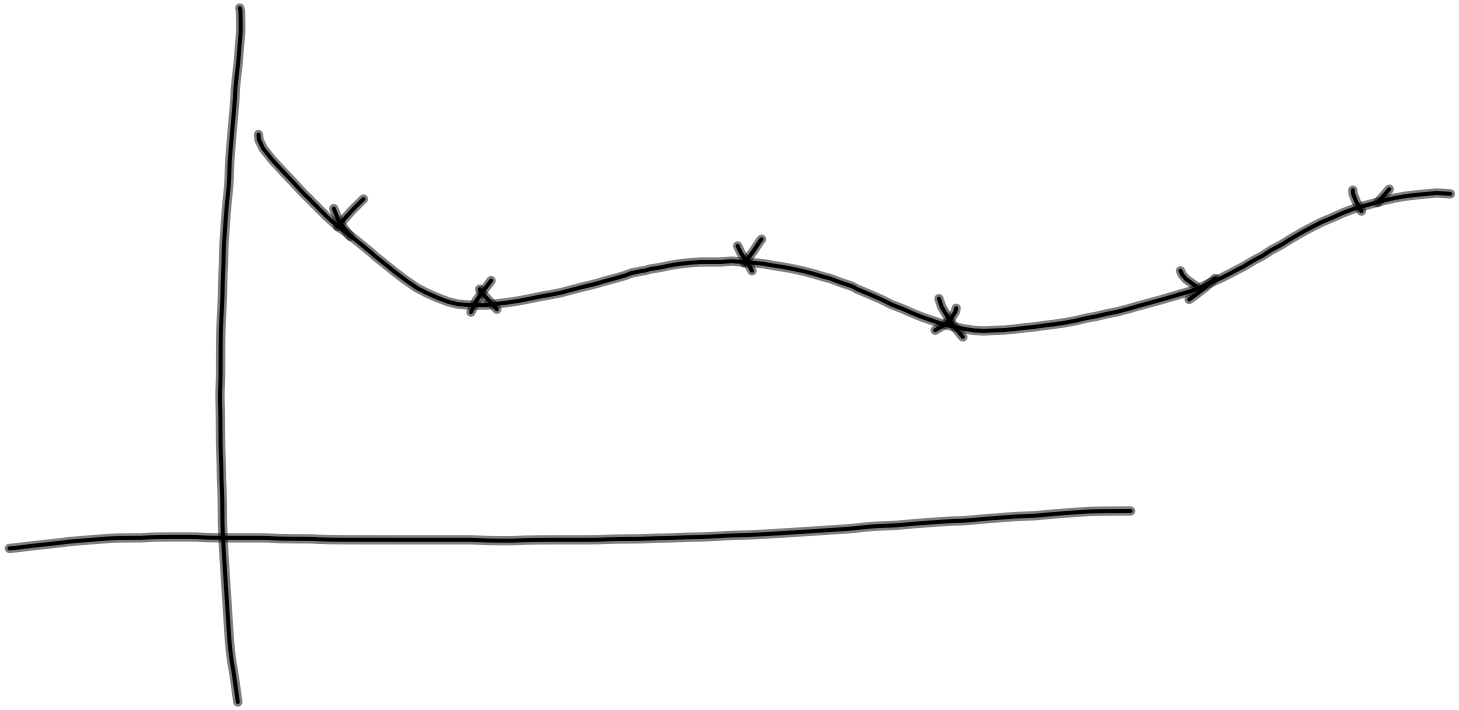
$\sin(x^2)$ vs. $\sin^2 x$

$\sin^2 x = (\sin x)^2$

$[1, \infty)$

$<$

	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
$\sin x$	$\frac{\sqrt{0}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{4}}{2}$
$\cos x$	$\frac{\sqrt{4}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{0}}{2}$
$\operatorname{tg} x$	$\frac{\sin x}{\cos x}$				



$$x^2 \cdot x^3 = x \cdot x \cdot x x x = x^5$$

$$(x^3)^2 = xxx\ xxx = x^6$$

$$x^2+1=0 \quad \Leftarrow \quad x^2=-1$$

$$x^2=0 \qquad x=\pm i$$

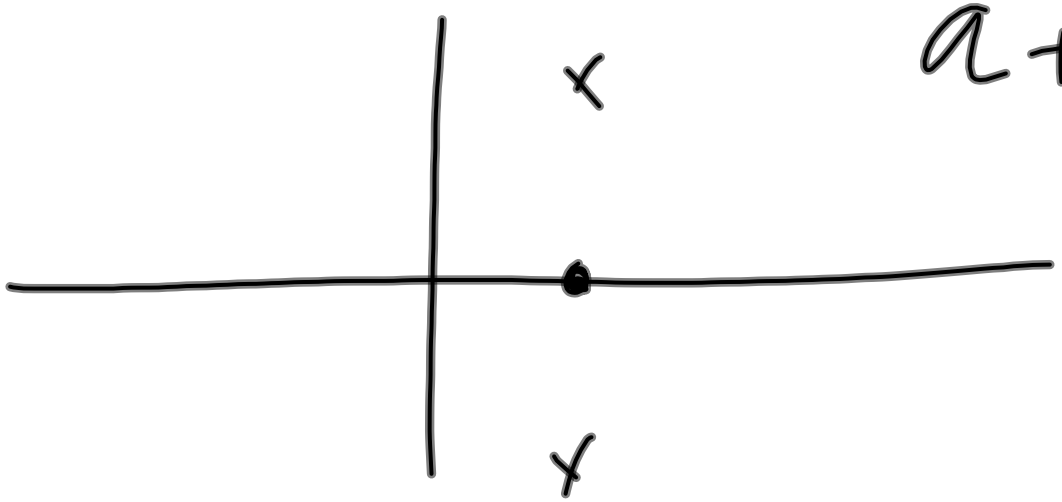
$$x_1=x_2=0$$

$$x^2 - \alpha^2 = (x - \alpha) \cdot (x + \alpha)$$

$$x^3 - \alpha^3 = (x - \alpha) \cdot (x^2 + x\alpha + \alpha^2)$$

$$\vdots$$

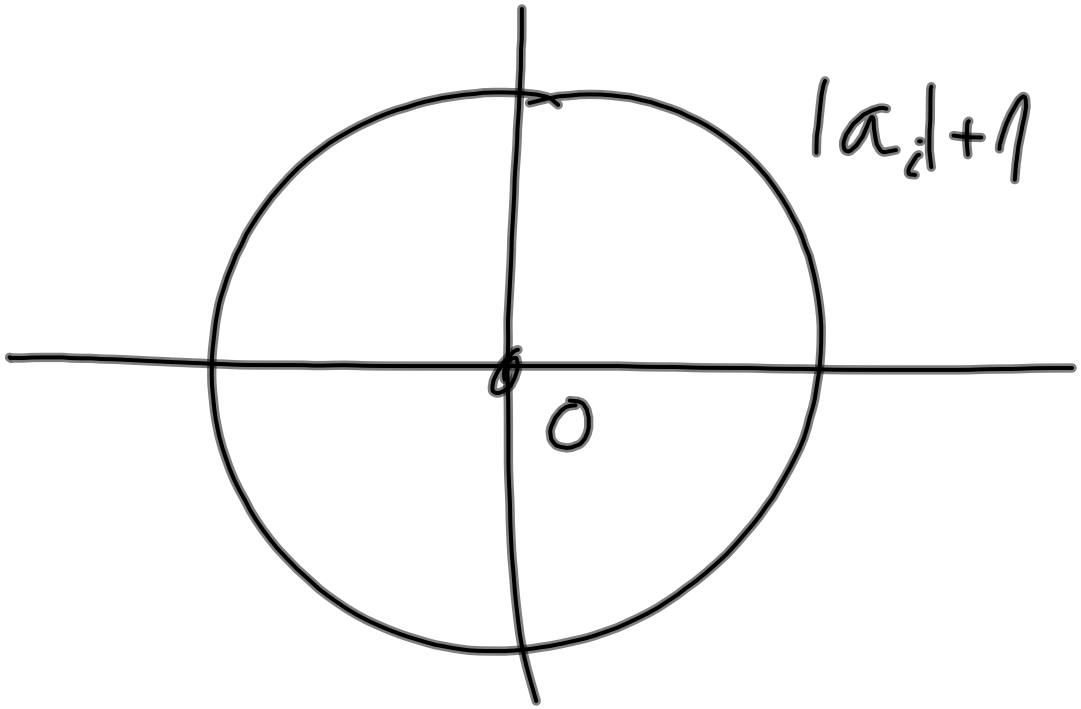
$$(x-\alpha)\cdot(x^2+x\alpha+\alpha^2) = x^3 + x^2\alpha + x\alpha^2$$
$$- \alpha x^2 - \alpha^2 x - \alpha^3$$



$$\overline{a+ib} = a-ib$$

$$[x-(a+ib)]\cdot[x-(a-ib)]=$$

$$=[x-a-ib]\cdot[x-a+ib]$$


$|a_i|+1$
0