

$$[x - (\beta + i\gamma)] \cdot [x - (\beta - i\gamma)]$$

$$\frac{x+1}{x \cdot (x^2+2) \cdot (x^2+1)} = \frac{A}{x} + \frac{Bx+C}{x^2+2} + \frac{Dx+E}{x^2+1}$$

$$x+1 = A \cdot (x^2+2) \cdot (x^2+1) + (Bx+C) \cdot x \cdot (x^2+1) + (Dx+E)$$

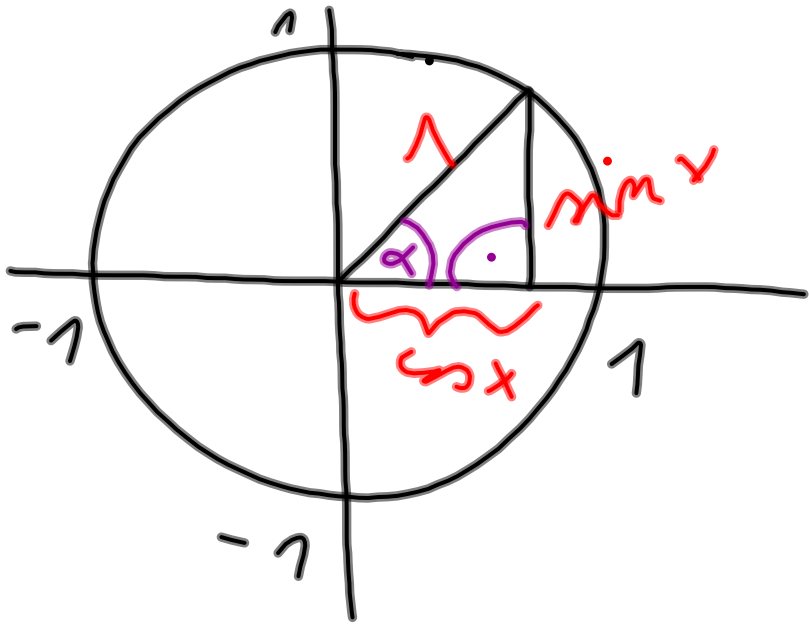
$$x=0 \Rightarrow 1 = 2A \Rightarrow \underline{\underline{A = \frac{1}{2}}} \cdot x \cdot (x^2+2)$$

$$\begin{array}{l} x^4: 0 = A + B + D \\ x^3: 0 = \dots\dots\dots \\ x^2: 0 = \dots\dots\dots \\ x^1: 1 = \dots\dots\dots \\ x^0: 1 = \dots\dots\dots \end{array} \left. \vphantom{\begin{array}{l} x^4 \\ x^3 \\ x^2 \\ x^1 \\ x^0 \end{array}} \right\}$$

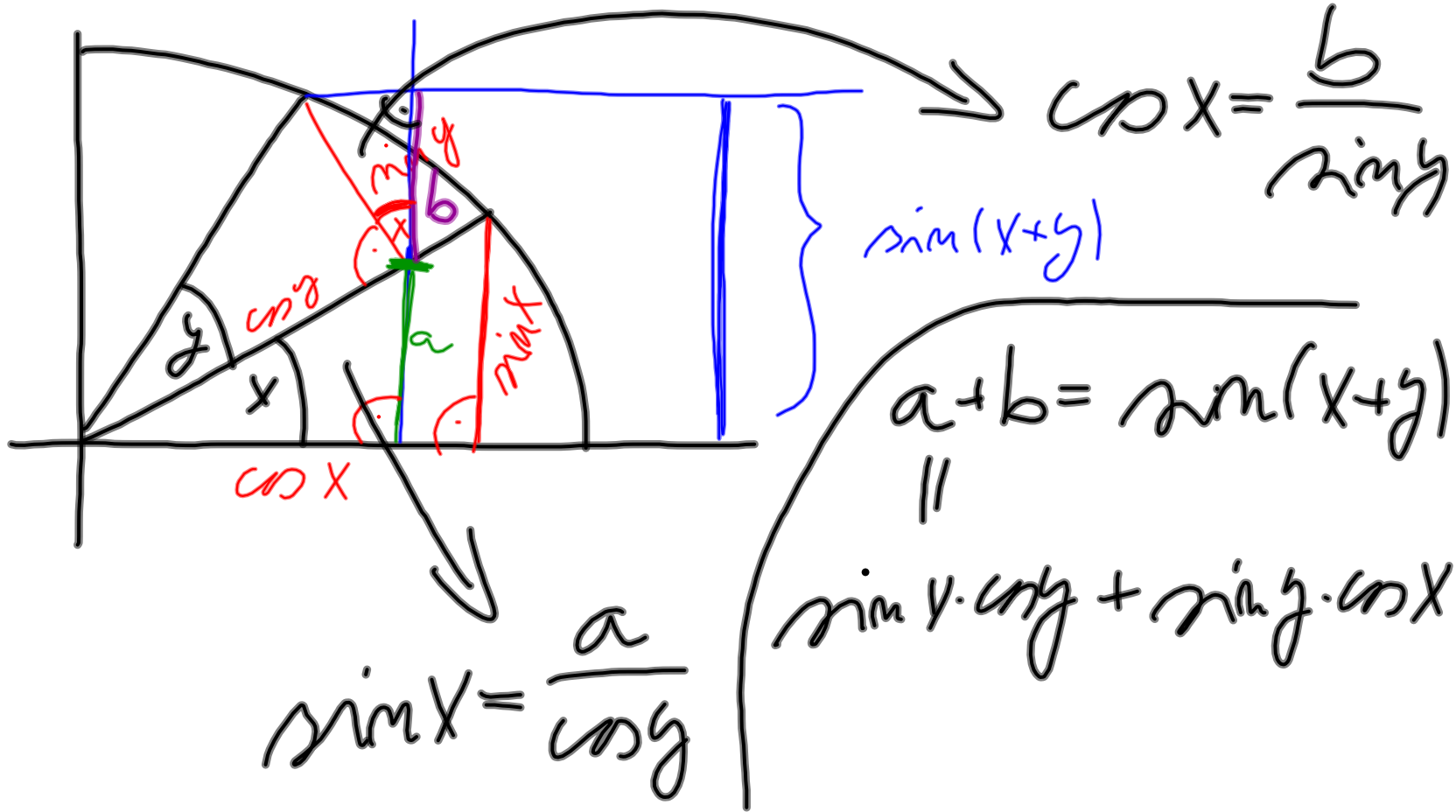
$$\frac{x^2 + 3x - 4}{(x-1)^3 \cdot (x+2) \cdot (x^2+x+1)^2} =$$

$$\left. \begin{array}{l} x=1 \\ x=-2 \end{array} \right| \begin{array}{l} x=\alpha+i\beta \\ \text{tr} \end{array}$$

$$= \frac{A}{(x-1)^3} + \frac{B}{(x-1)^2} + \frac{C}{(x-1)^1} + \frac{D}{x+2} + \frac{Ex+F}{(x^2+x+1)^2} + \frac{Gx+H}{x^2+x+1}$$



$$\Rightarrow \sin^2 x + \cos^2 x = 1$$



$$\cos 2x = \cos^2 x - \sin^2 x$$

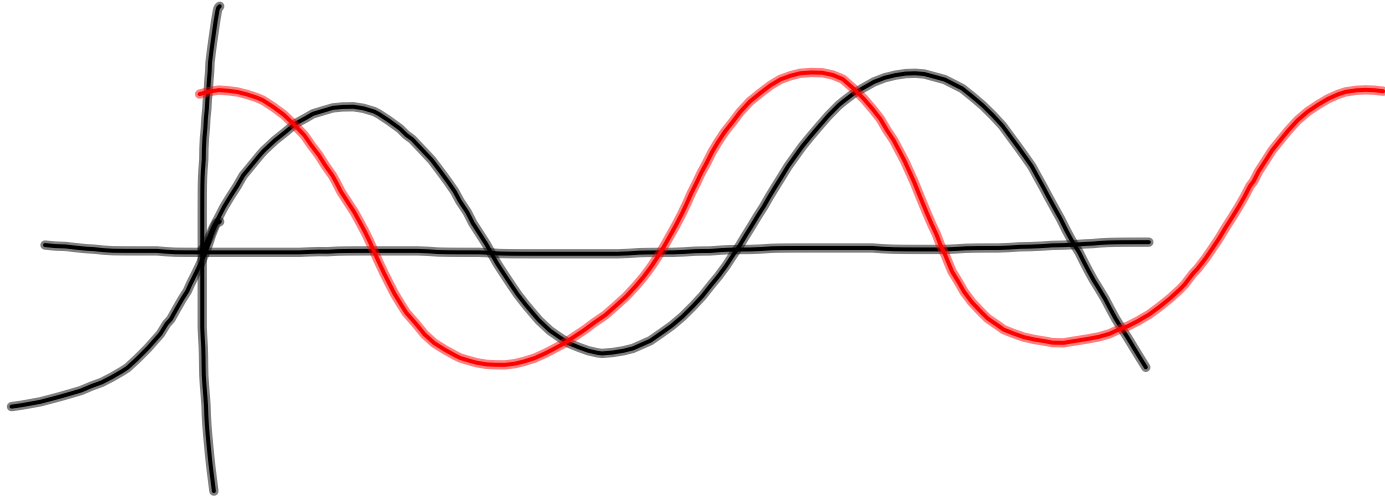
$$\underline{\cos x} = \cos^2 \frac{x}{2} - \sin^2 \frac{x}{2} =$$

$$= \cos^2 \frac{x}{2} - 1 + \cos^2 \frac{x}{2} = \underline{2 \cdot \cos^2 \frac{x}{2} - 1}$$

$$\cos^2 \frac{x}{2} = \frac{1 + \cos x}{2}$$

$$\sin^2 \frac{x}{2} = 1 - \cos^2 \frac{x}{2}$$

$$\sin(\arcsin x)$$



$$\log_a x = y \Leftrightarrow a^y = x$$

$$\log_a 1 = 0 \Leftrightarrow a^0 = 1$$

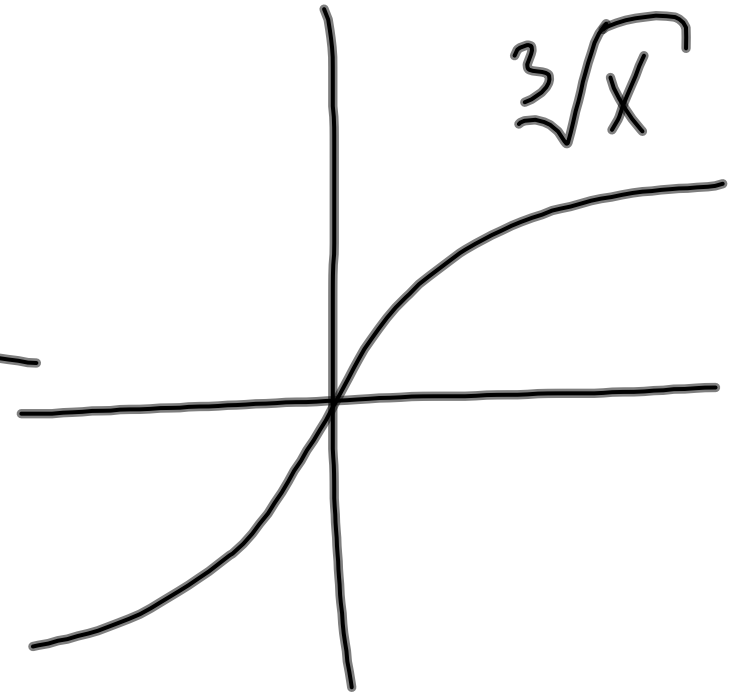
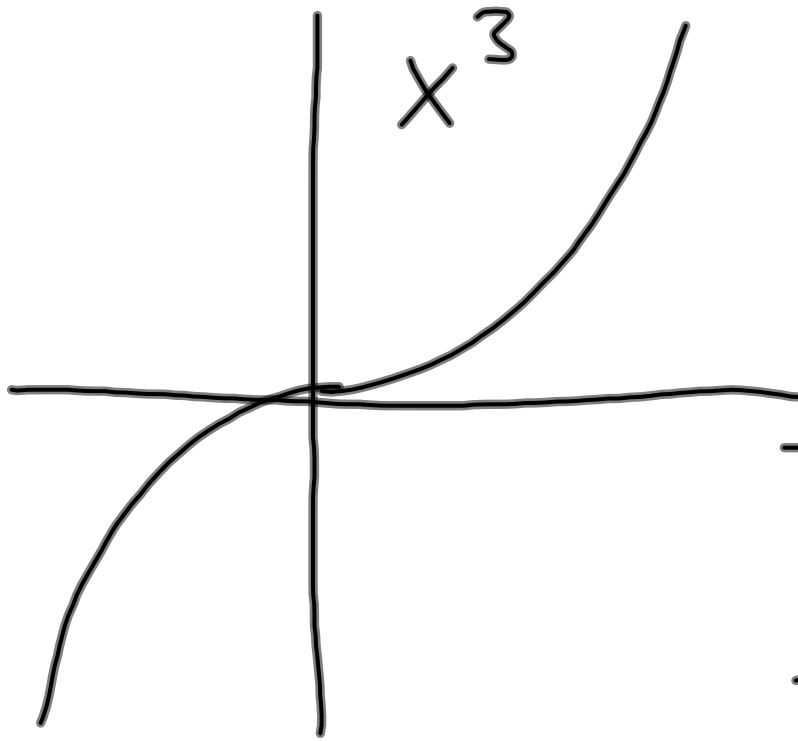
$$\log_a X = \frac{\log_b X}{\log_b a}$$

$$\log_b a \cdot \log_a X = \log_b X$$

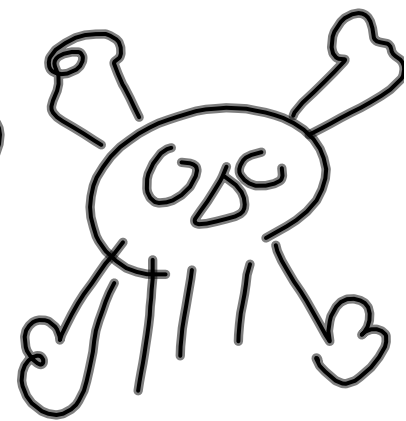
~~$\log_b a^{\log_a X} = \log_b X$~~ / $b^{(\cdot)}$ $\Rightarrow v = X \checkmark$

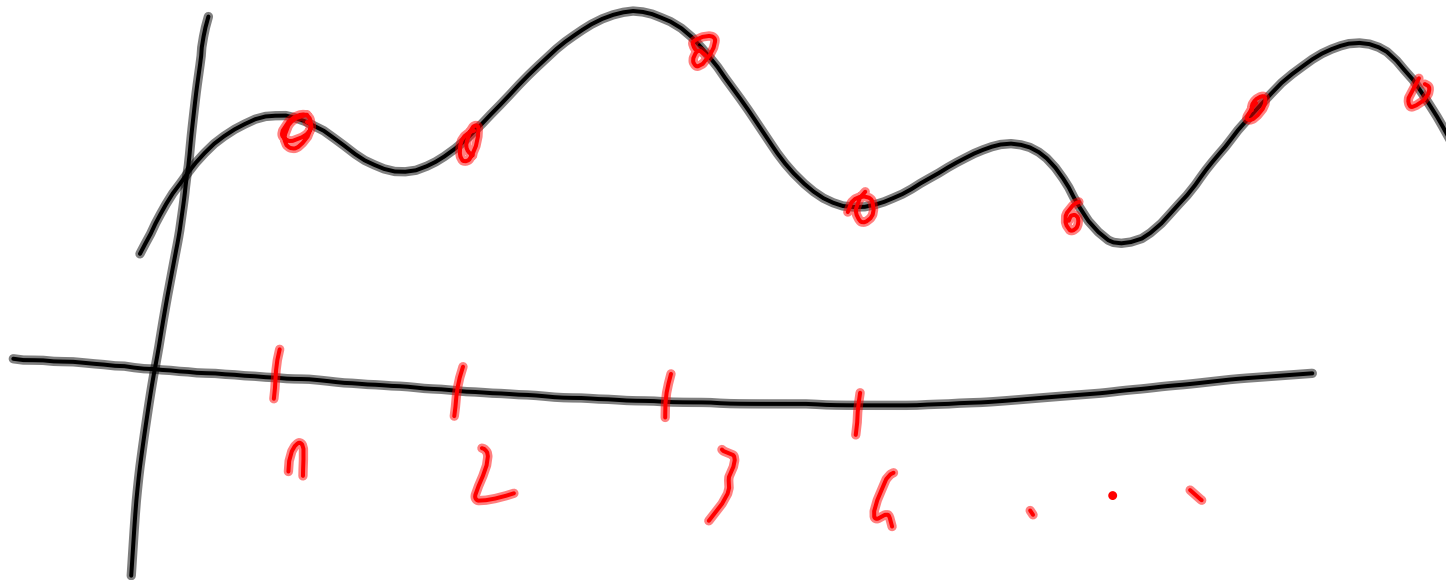
$$\lg_a x^y = y \cdot \lg_a x \quad / a^{(\cdot)}$$

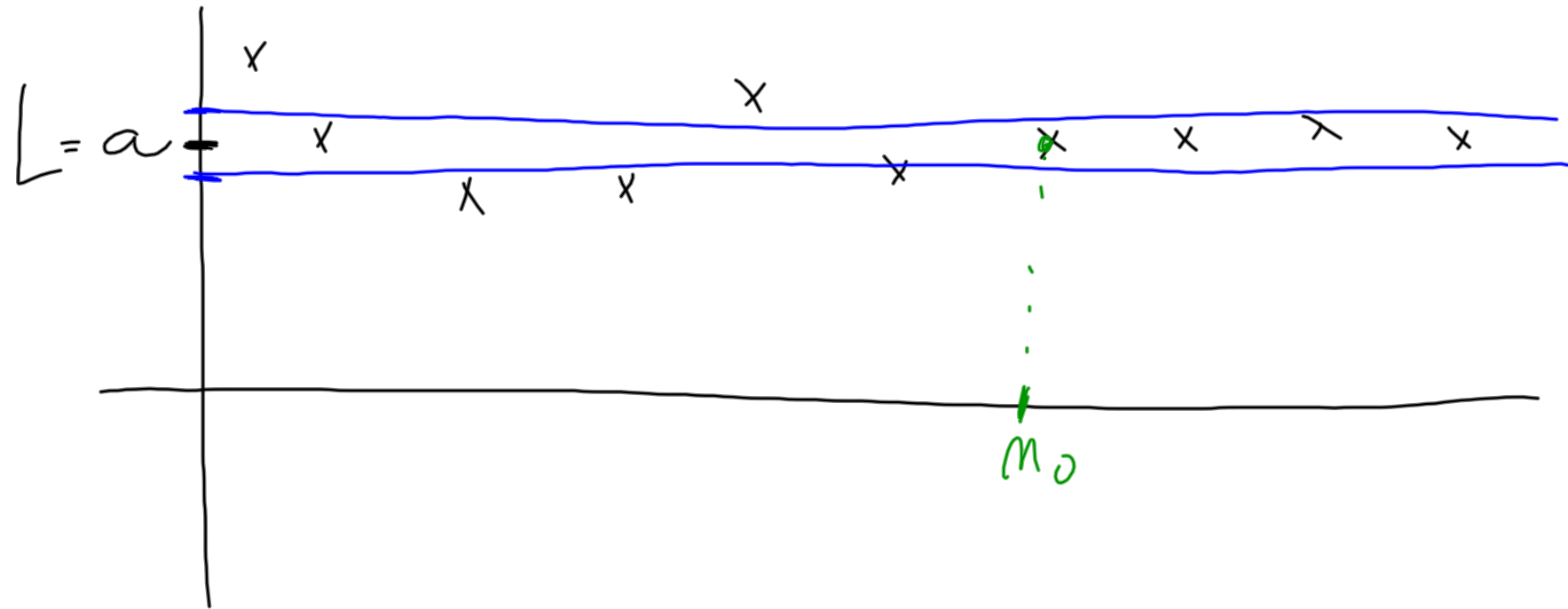
$$x^y = a^{y \cdot \lg_a x} = \left(\cancel{a^{\lg_a x}} \right)^y = x^y \quad \checkmark$$



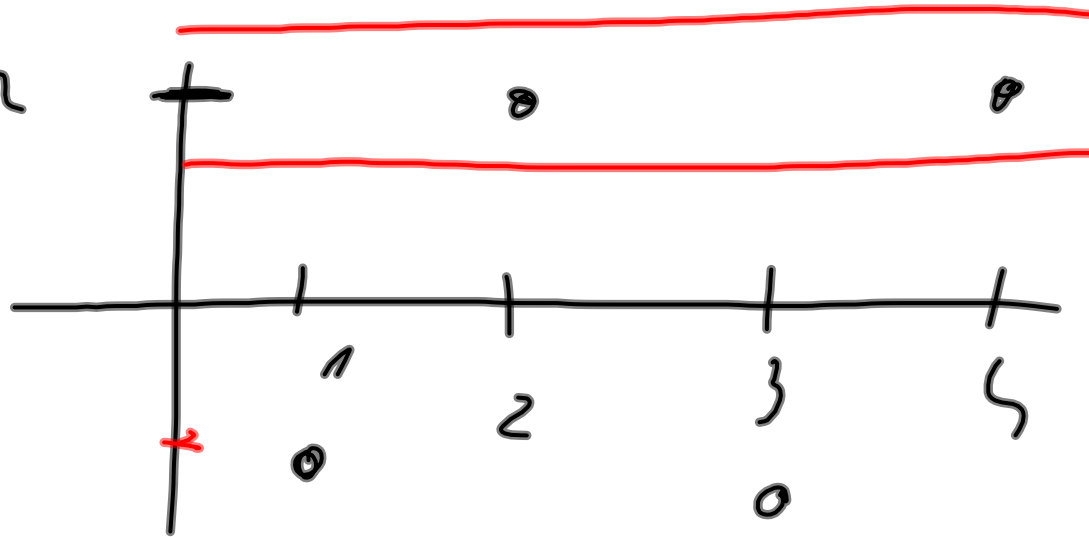
$$\frac{15}{0} = \pm \infty ? ?$$







$$(-1)^n$$



(1) (1)

$$\Sigma = \frac{1}{10} \Rightarrow n > 10$$

↓

$$\frac{1}{10^{10}} \Rightarrow n > 10^{10}$$

$$L\left[\frac{1}{s}\right] = 1 \quad [3, 14] = 3$$

$$\boxed{[3, 14] = 4} \quad [-3, 14] = -4$$