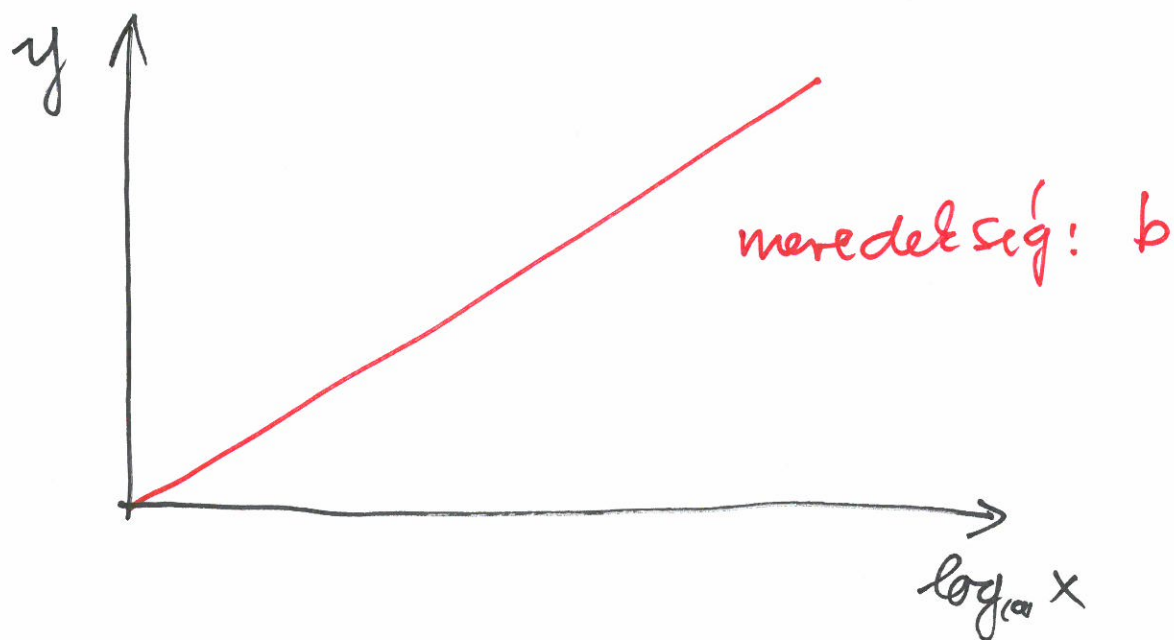
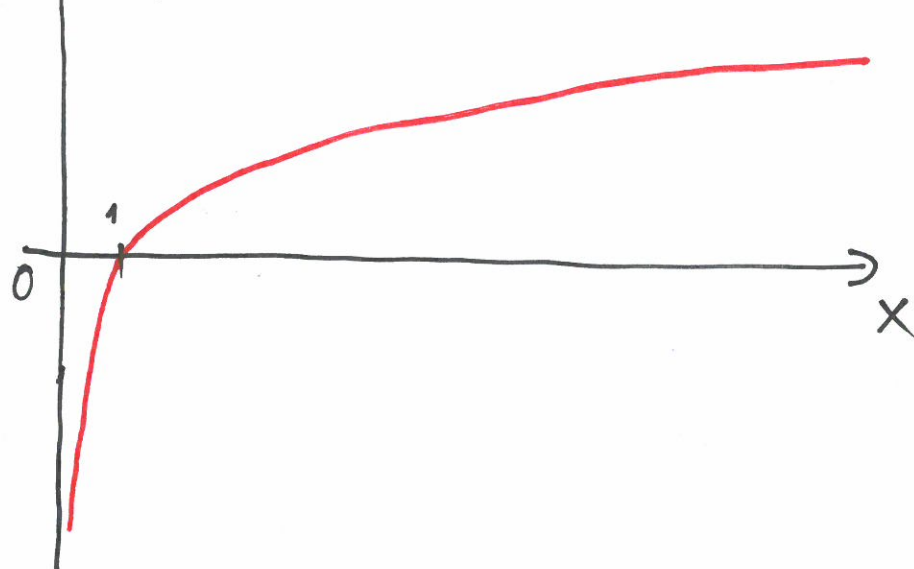


$$y = b \cdot \log_a(x)$$

$$pH = -1 \cdot \log_{10} [H^+/M]$$

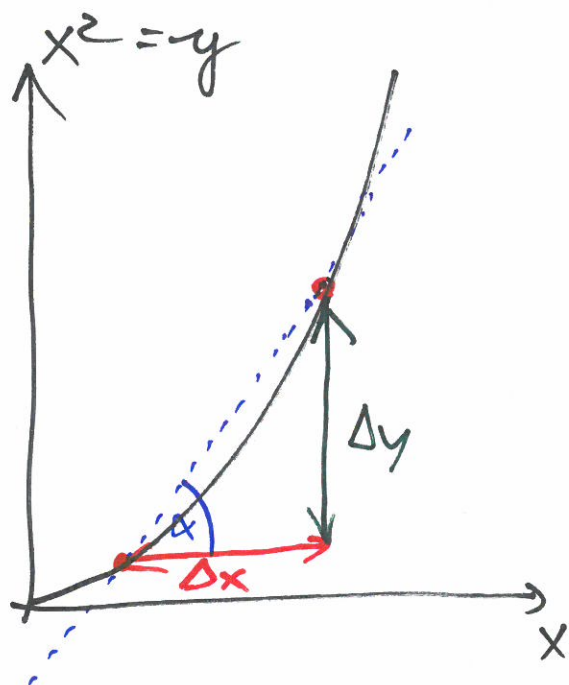
$$\log_{10}(x) \uparrow = y$$



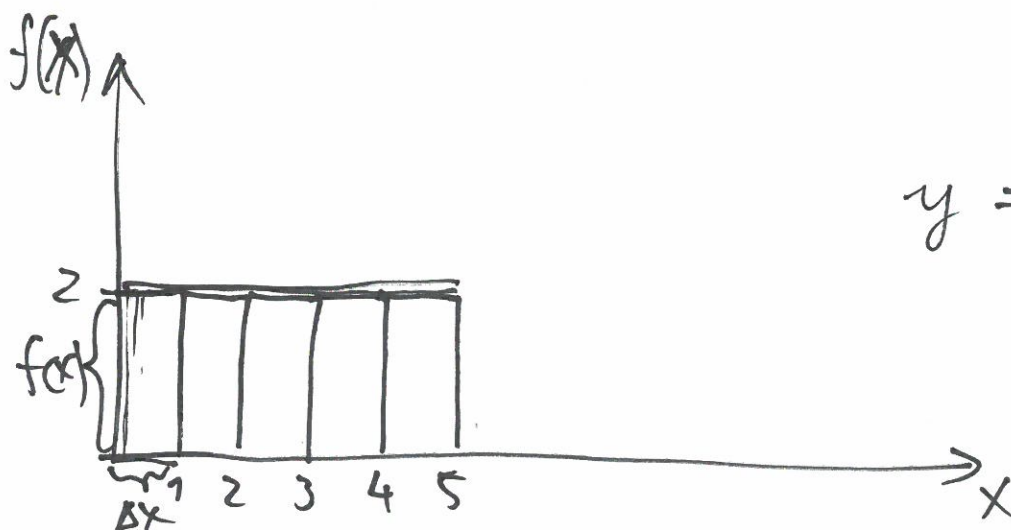
1^2	1	3	2
2^2	4	5	2
3^2	9	7	2
4^2	16	9	2
5^2	25	11	2
6^2	36	13	2
7^2	49	15	2
8^2	64	17	2
9^2	81	19	2
10^2	100		

↑ hatv. (2°)
 ↑ lin
 ↑ konst.

$$\tan(\alpha) = \frac{\Delta y}{\Delta x} \quad \text{differencia hányados}$$

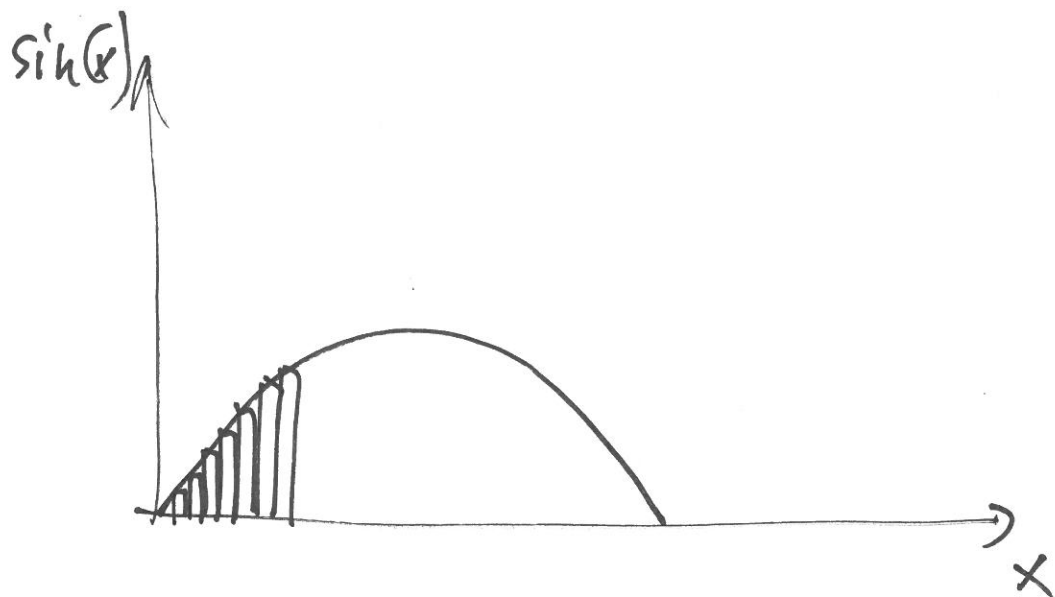


$\frac{dy}{dx}$ differenciál = derivált = pontbeli érintő meredeksége
 hányados



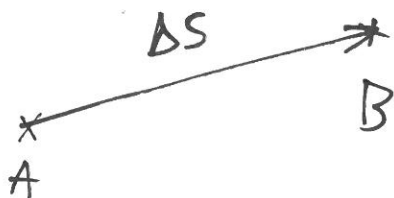
$$y = \sum f(x) \cdot \Delta x$$

$$\int f(x) dx$$



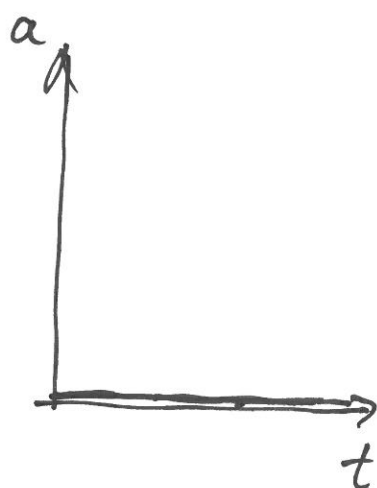
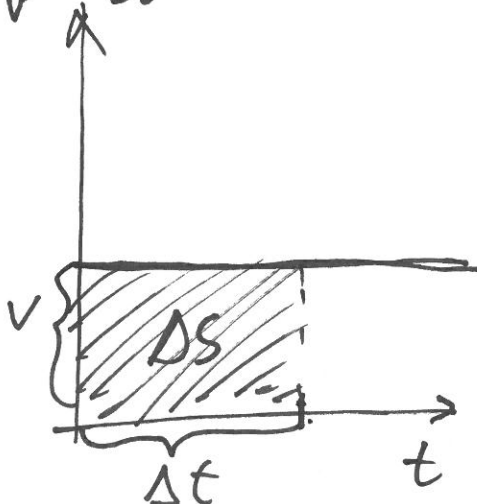
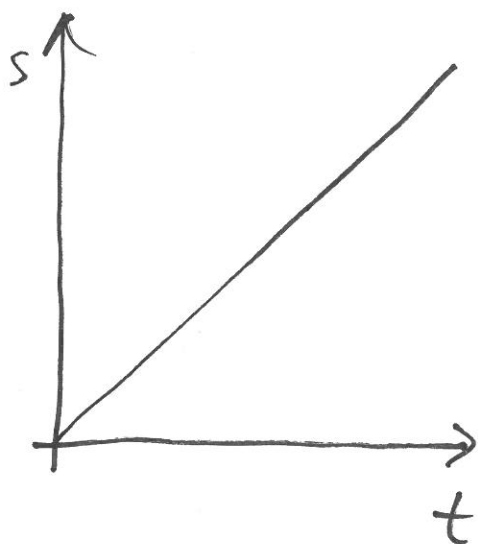
egyenest vonalú egyenletes mozgás

$$v = \frac{\Delta s}{\Delta t} \Rightarrow \frac{ds}{dt}$$

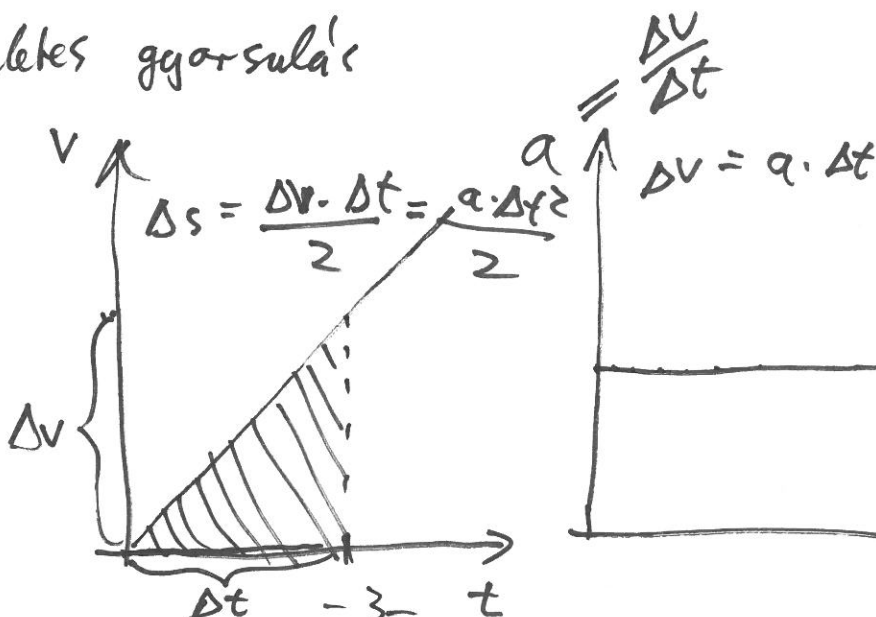
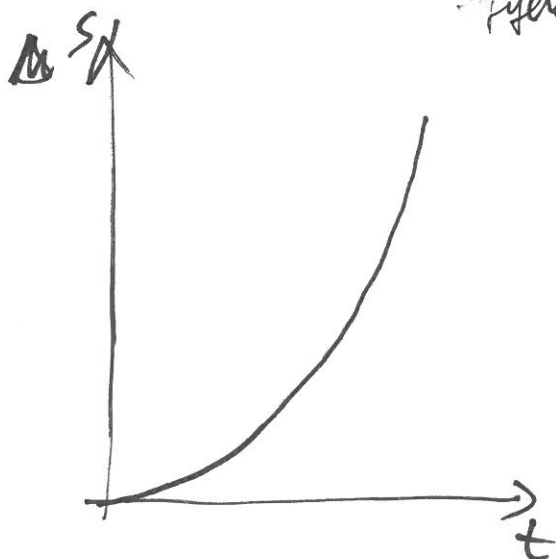


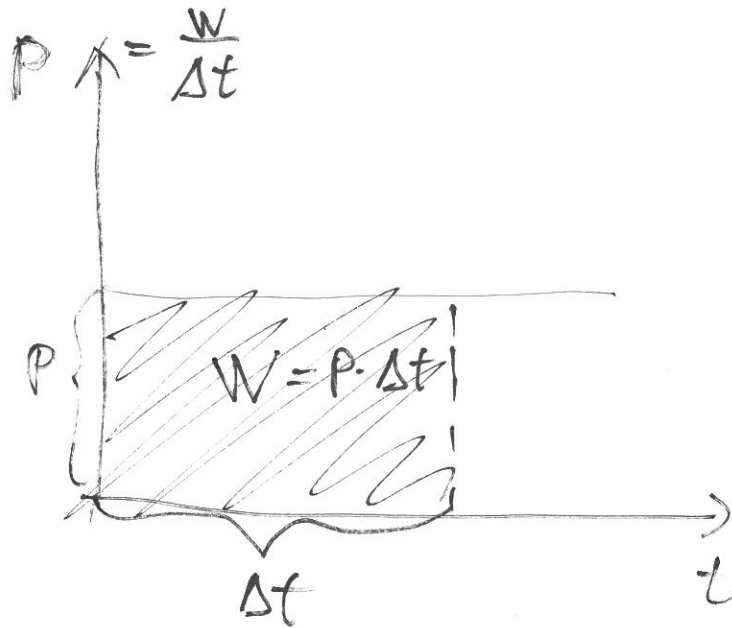
$$v = \frac{\Delta s}{\Delta t} \Rightarrow \frac{ds}{dt} = \text{konst}$$

$$a = \frac{dv}{dt}$$



egyenletes gyorsulás





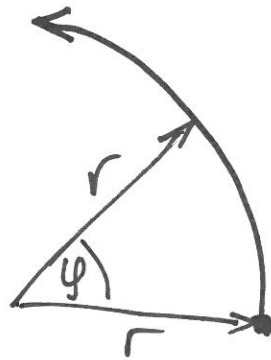
φ ϕ

Egyenletes körmozgás
elfordulás: $\Delta \varphi = \frac{\text{ív hossz}}{\text{sugár}}$

sögsebesség: $\frac{\Delta \varphi}{\Delta t} = \omega$

kerületi sebesség: $v = \frac{\text{ív hossz}}{\text{idő}} = \frac{\Delta \varphi \cdot r}{\Delta t}$

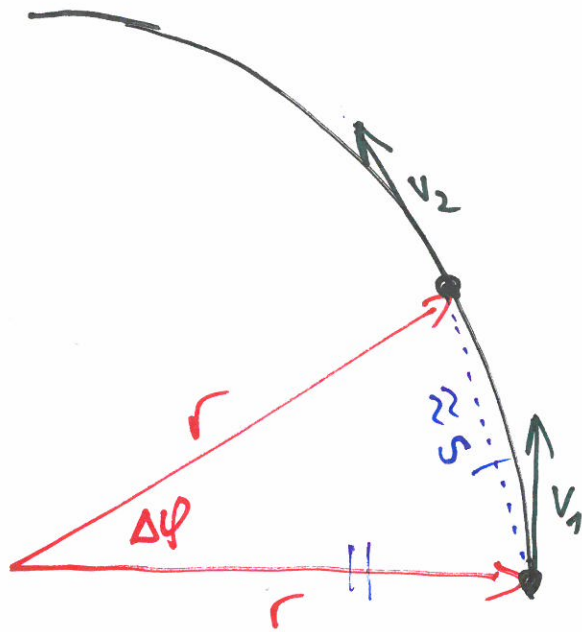
$$v = \omega \cdot r$$



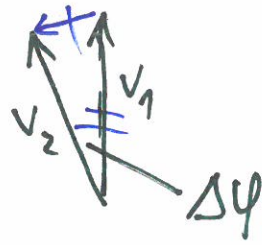
periódusidő: T

frekvencia: $f = \frac{1}{T}$

$$v = \frac{2\pi \cdot r}{T} = 2\pi \cdot r \cdot f$$



$$\Delta v = v_2 - v_1$$



(1) megtett út kb.:

$$s = v \cdot \Delta t$$

(2) hasonlóság:

$$\frac{s}{r} = \frac{\Delta v}{v_1}$$

(1) \rightarrow (2)

$$\frac{v \cdot \Delta t}{r} = \frac{\Delta v}{v}$$

$$\frac{v^2}{r} = \frac{\Delta v}{\Delta t} = a_{cp}$$

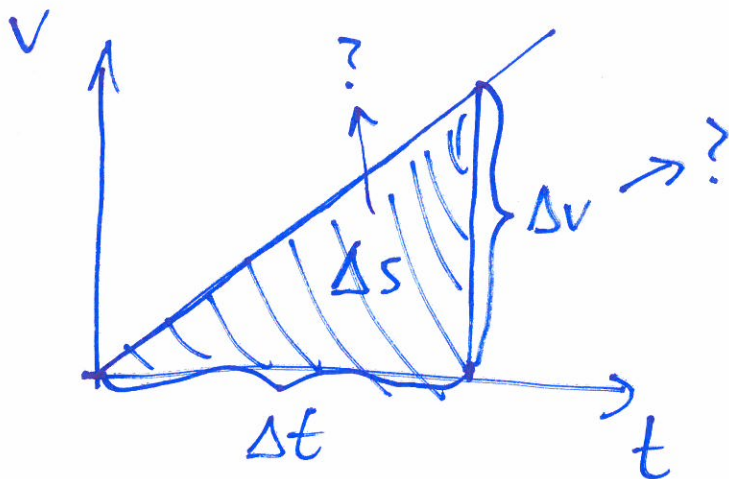
3/6. feladat

$$\Delta t = 0,8 \text{ s}$$

$$v = ?$$

$$\Delta s = ?$$

$$a = g = 9,81 \frac{\text{m}}{\text{s}^2}$$



$$\Delta s = \frac{\Delta v \cdot \Delta t}{2} = \frac{a \cdot \Delta t^2}{2} \rightarrow \underline{\underline{3.1392 \frac{\text{m}}{\text{s}^2} \cdot \text{s}^2}}$$

$$\Delta v = \frac{\Delta s \cdot 2}{\Delta t} = \frac{3.1392 \cdot 2}{0.8} = \underline{\underline{7.848 \cdot \frac{\text{m}}{\text{s}}}}$$

$$\Delta s = \frac{\Delta v \cdot \Delta t}{2}$$

$$\Delta s \cdot 2 = \Delta v \cdot \Delta t$$

$$\frac{\Delta s \cdot 2}{\Delta t} = \Delta v$$