



Quant espai recorre un cotxe?

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Què sabem?



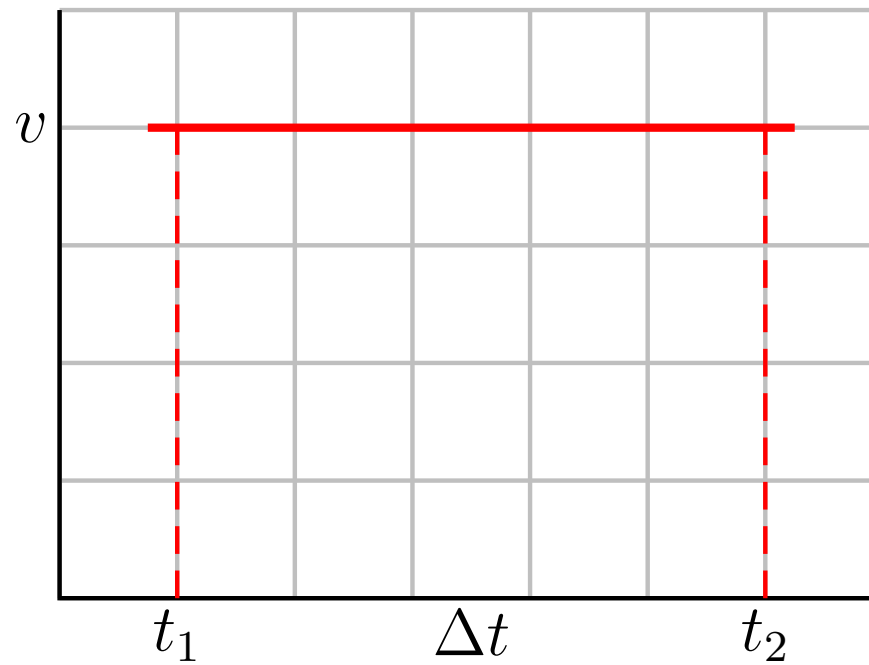
Cas 1



Suposem un moviment uniforme (v constant).

Aleshores $\Delta e = v \cdot \Delta t$

Cas 1



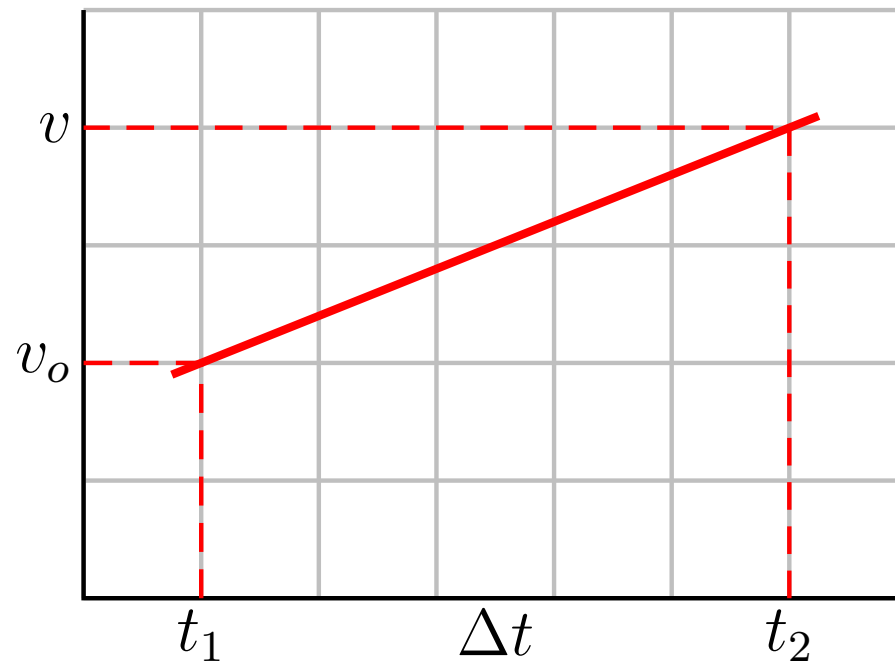
Cas 2



Suposem un moviment uniformement variat (a constant).

Aleshores $\Delta e = v \cdot \Delta t + \frac{1}{2}a\Delta t^2$

Cas 2



Cas 2



L'àrea sota la recta té forma de trapezi

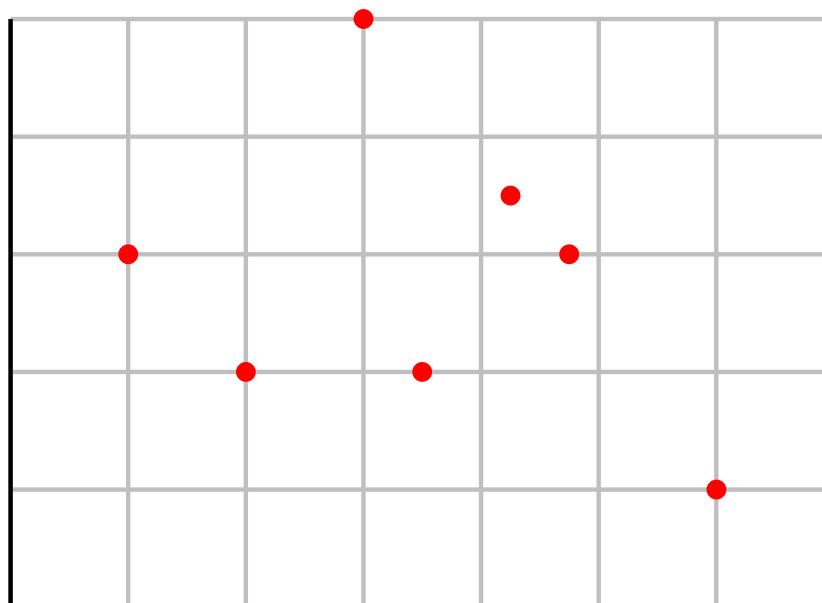
$$A = \frac{v_o + v}{2} \cdot \Delta t$$

$$A = \frac{v_o + v_o + a\Delta t}{2} \cdot \Delta t$$

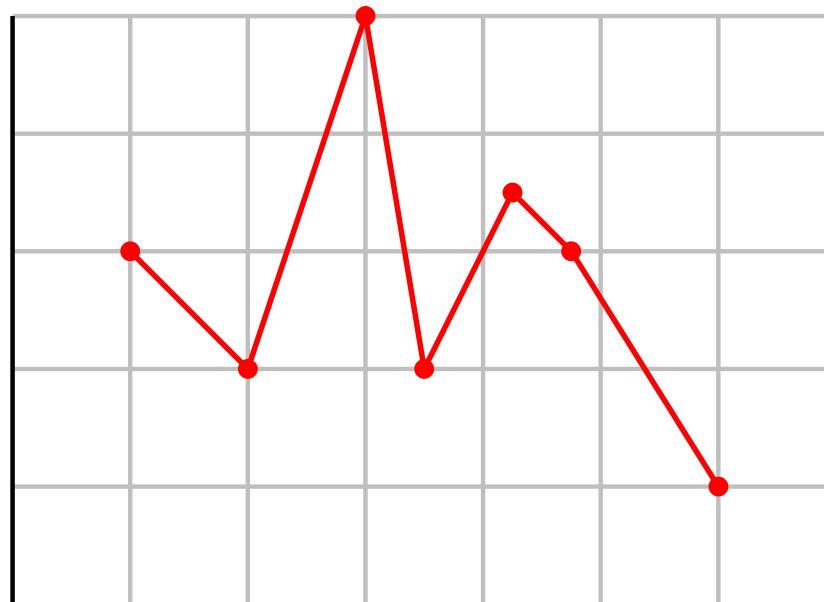
$$A = \frac{2v_o}{2} \Delta t + \frac{a\Delta t}{2} \cdot \Delta t$$

$$A = v_o \cdot \Delta t + \frac{1}{2} \cdot a \cdot \Delta t^2$$

Cas 3



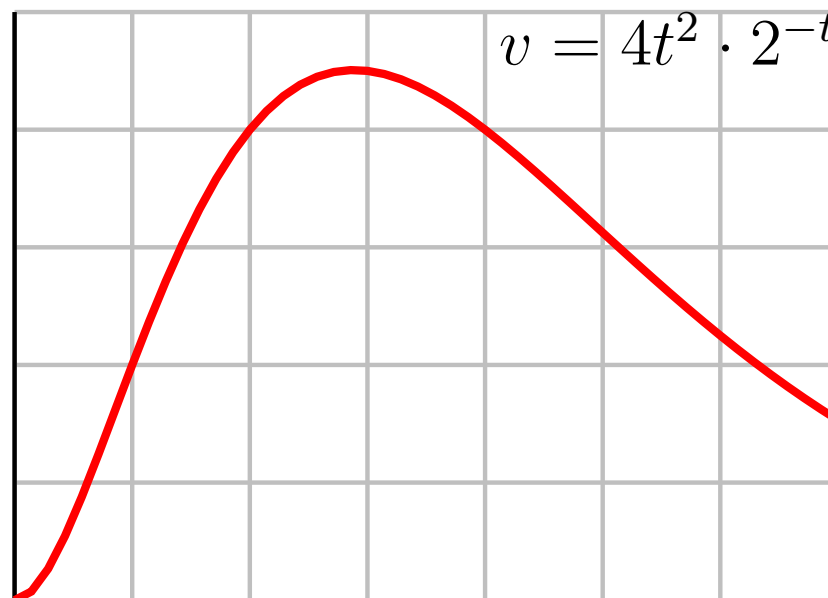
Cas 3



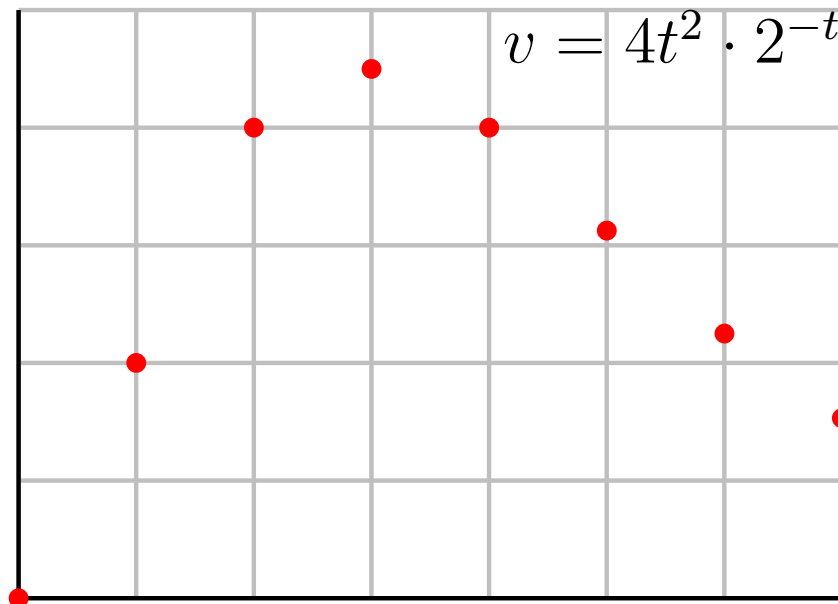
Cas 3



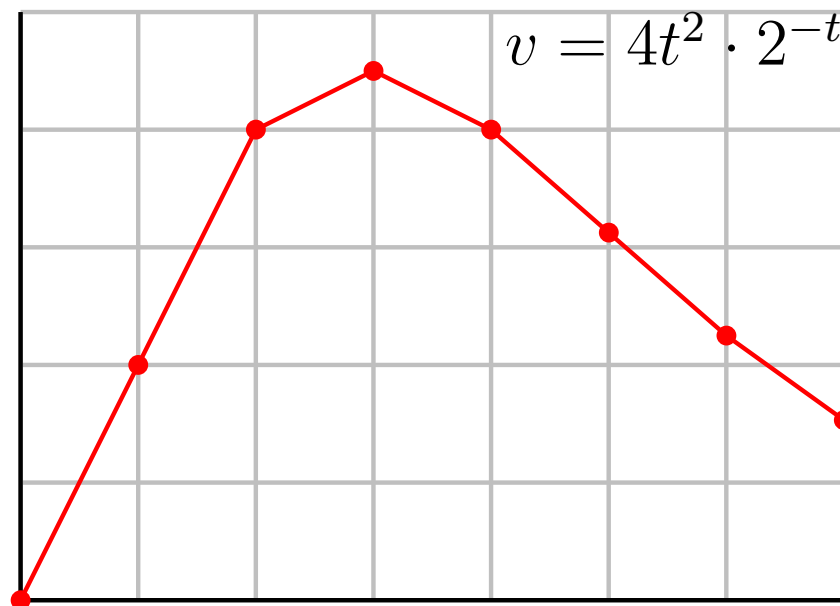
Cas 4



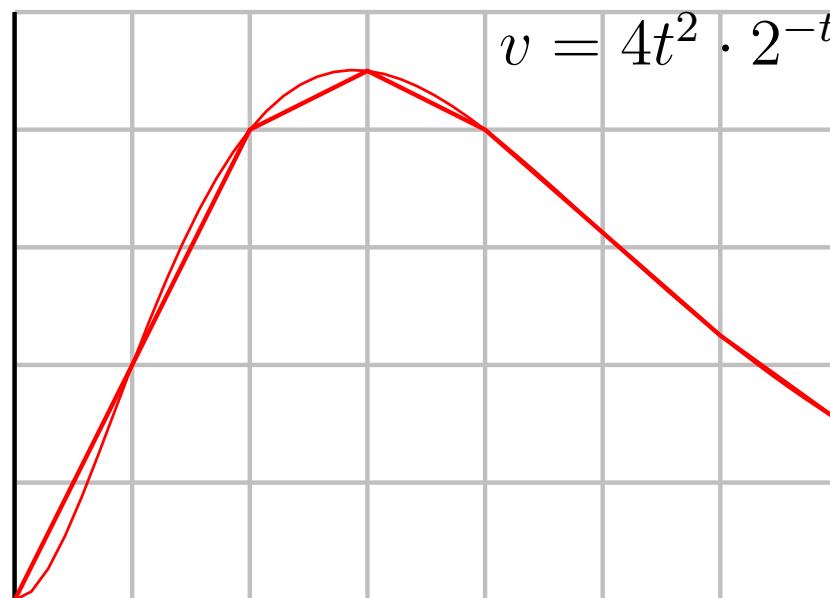
Cas 4



Cas 4



Cas 4





Veure applet GeoGebra



$$A = \lim_{n \rightarrow \infty} \sum_{i=0}^{n-1} f(x_i)(x_{i+1} - x_i) = \lim_{n \rightarrow \infty} \sum_{i=1}^n f(x_i)(x_i - x_{i-1})$$

