

Abb. 6.34

$$\alpha = 8 \text{ m/s}^2 \text{ (konstant)} \quad (\text{Erzölzuvu})$$

$$S = \frac{1}{2} \alpha t^2$$

$$S' = \frac{1}{2} \alpha (t-2)^2$$

$$S - S' = 64 \Rightarrow \frac{1}{2} \alpha t^2 - \frac{1}{2} \alpha (t-2)^2 = 64 \Rightarrow$$

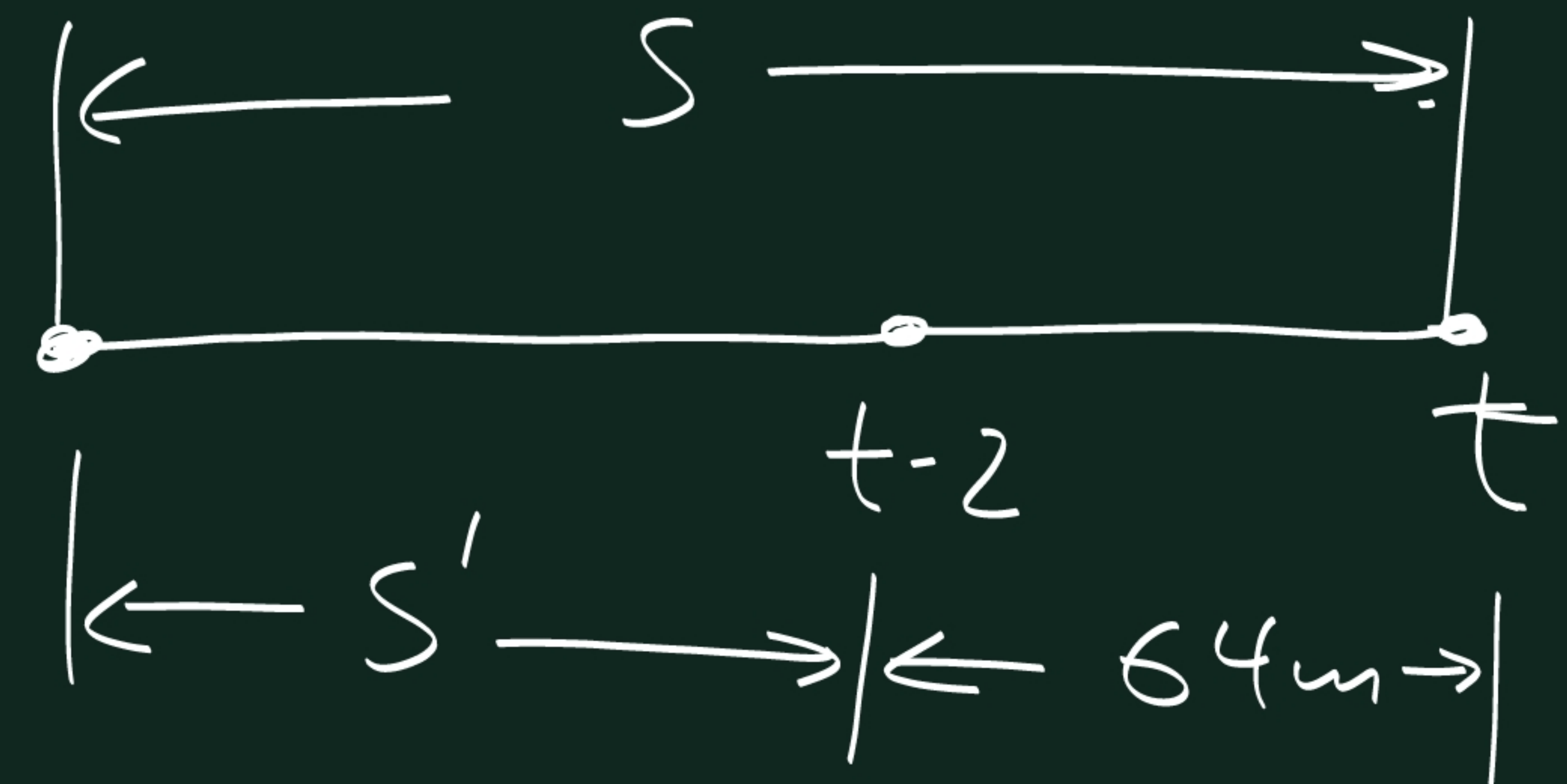
$$4t^2 - 4(t-2)^2 = 64 \Rightarrow$$

$$t^2 - (t-2)^2 = 16 \Rightarrow t^2 - t^2 + 4t - 4 = 16 \Rightarrow$$

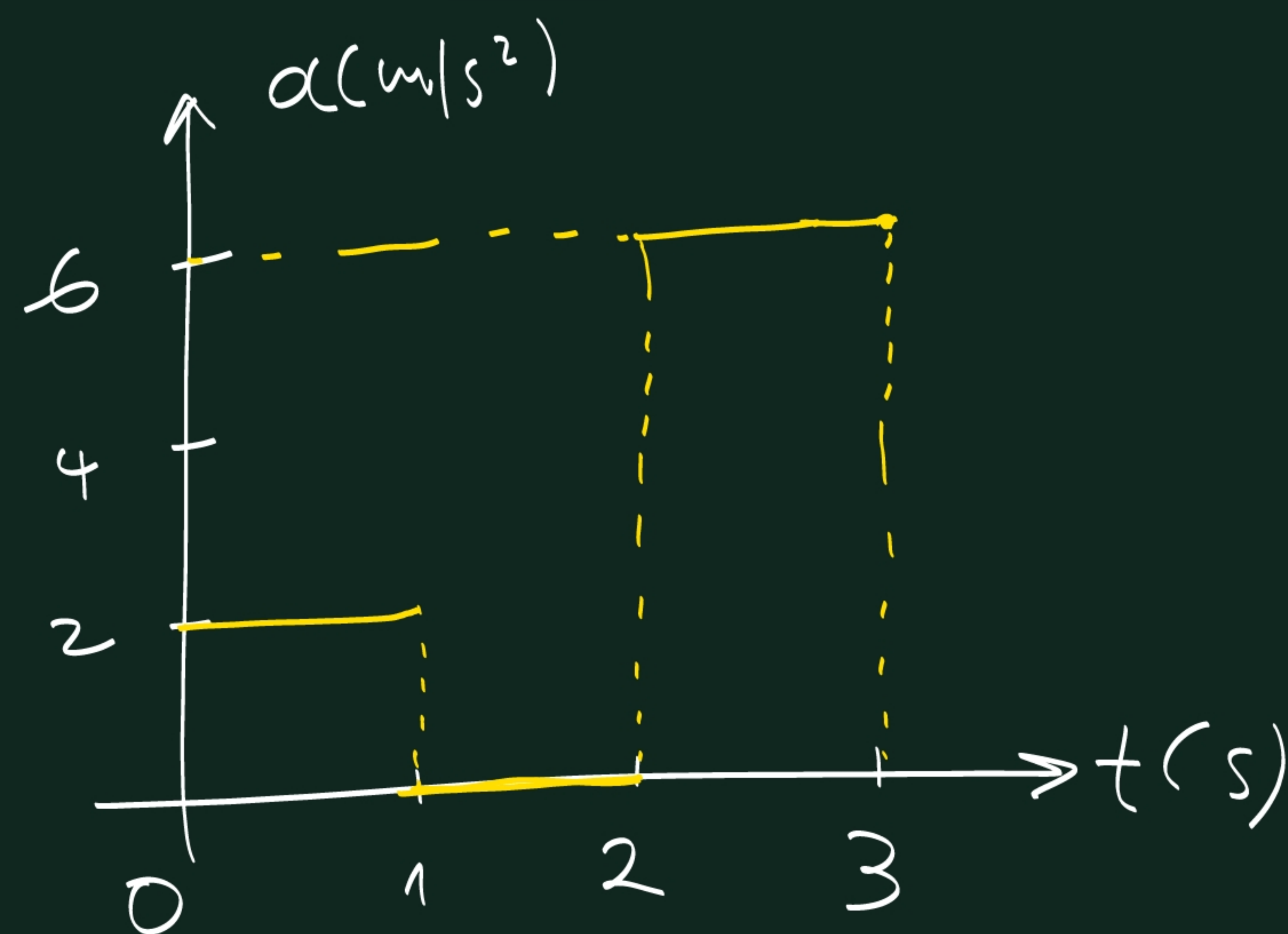
$$4t = 20 \Rightarrow t = 5 \text{ sec.}$$

$$\text{Ap } \alpha: S = \frac{1}{2} \alpha t^2 = \frac{1}{2} \cdot 8 \cdot 5^2 \Rightarrow$$

$S = 100 \text{ m.}$



Αβυ. 6.27



$$X_0 = 0 \text{ m}$$

$$V_0 = 0 \text{ m/s}$$

Από $0 \rightarrow 1 \text{ sec}$ έχουμε:

$$\Delta v = 1 \cdot 2 \Rightarrow v(1) - v(0) = 2 \Rightarrow$$

$$v(1) - 0 = 2 \Rightarrow v(1) = 2 \text{ m/s}$$

Από $1 \rightarrow 2 \text{ sec}$ έχουμε:

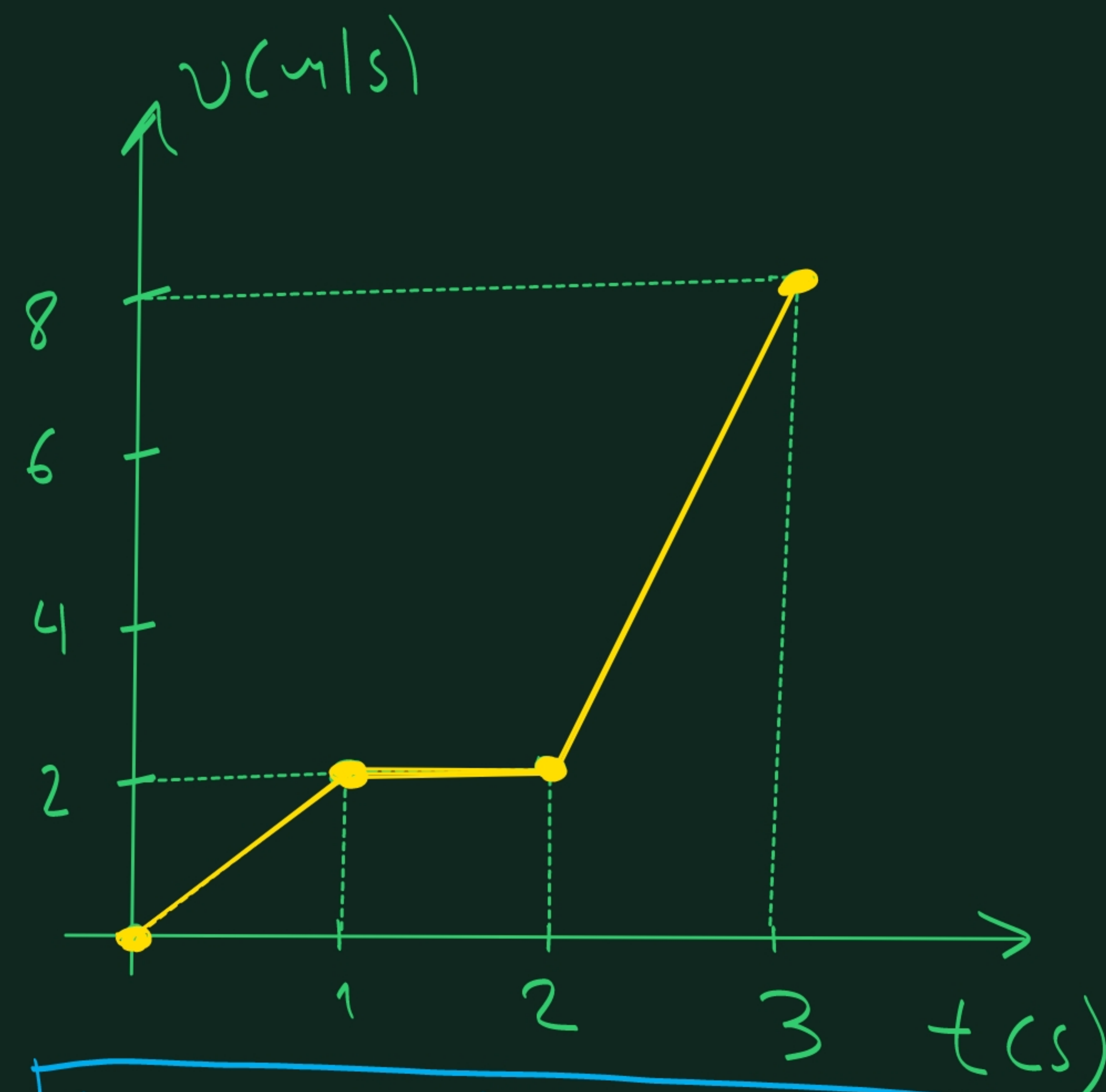
$$\Delta v = 0 \Rightarrow v(2) - v(1) = 0 \Rightarrow$$

$$v(2) = 2 \text{ m/s}$$

Από $2 \rightarrow 3 \text{ sec}$ έχουμε:

$$\Delta v = 1 \cdot 6 \Rightarrow v(3) - v(2) = 6 \Rightarrow$$

$$v(3) - 2 = 6 \Rightarrow v(3) = 8 \text{ m/s}$$



Από $0 \rightarrow 1 \text{ sec}$

$$\Delta x = \frac{1 \cdot 2}{2} = 1 \text{ m} \Rightarrow$$

$$x(1) - x(0) = 1 \Rightarrow$$

$$x(1) = 1 \text{ m}$$

Από $1 \rightarrow 2 \text{ sec}$

$$\Delta x = 1 \cdot 2 \Rightarrow x(2) - x(1) = 2 \Rightarrow$$

$$x(2) - 1 = 2 \Rightarrow x(2) = 3 \text{ m}$$

$$\text{Αρα: } \begin{array}{ll} v(0) = 0 \text{ m/s} & v(2) = 2 \text{ m/s} \\ v(1) = 2 \text{ m/s} & v(3) = 8 \text{ m/s} \end{array}$$

