

↓ $\sqrt{10}$ $\sqrt{10}$ $\sqrt{10}$

n

13

o (h)

ה'קס"ח

0152 ~ 1052

15000 - 5177

(Tolcphs)

3m

Token

تدبر في هذه الآية

$$\rightarrow \sqrt{10} \quad 73.28$$

1072 fsc

with you

50

(-NORSE

! 5/03/010

$$\frac{1}{\sqrt{t} + \sqrt{t+2}} - \frac{1}{\sqrt{t} + \sqrt{t+1}} = \frac{\sqrt{t+1} - \sqrt{t}}{\sqrt{t+1} + \sqrt{t+2}}$$

$$\frac{1}{\sqrt{t} + \sqrt{t+2}} - \frac{1}{\sqrt{t} + \sqrt{t+1}} = \frac{\sqrt{t+1} - \sqrt{t}}{\sqrt{t+1} + \sqrt{t+2}}$$

$$= \frac{2\sqrt{2}}{(\sqrt{t+1} + \sqrt{t-1})(\sqrt{t+2} + \sqrt{t-1})}$$

$$= \frac{2\sqrt{2}}{t + \sqrt{t-1} + t + \sqrt{t+2} + t + \sqrt{t+1}}$$

$$q_{\text{mort}}(op) = \text{time}(op) + \Phi_{\text{after}} - \Phi_{\text{before}}$$

$$q_{\text{mort}}(op_i) = \text{time}(op_i) + \Phi_i - \Phi_{i-1}$$

$$\sum_{i=1}^n q_{\text{mort}}(op_i) = \sum_{i=1}^n \text{time}(op_i) + \sum_{i=1}^n (\Phi_i - \Phi_{i-1})$$

$$= \sum_{i=1}^n \text{time}(op_i) + \Phi_n - \Phi_0$$

$\Phi_0 = 0$
Bank account

This holds for any potential function

$\Phi_n \geq 0$
never overdraft

first for all non empty
array

extendable Arrays

$$\Phi(M, h) = \begin{cases} 2h - M & \text{if } h \geq \frac{M}{2} \\ 0 & \text{else} \end{cases}$$

Number of
array
elements

Number of
array
elements

(ofw) of ~~is~~ provided

$$\text{amort}(\text{Insert} - \text{Last}) = \underbrace{\text{time}(\text{Insert last})}_1 + \underbrace{\Phi(M, h+1) - \Phi(M, h)}_{\leq 2}$$

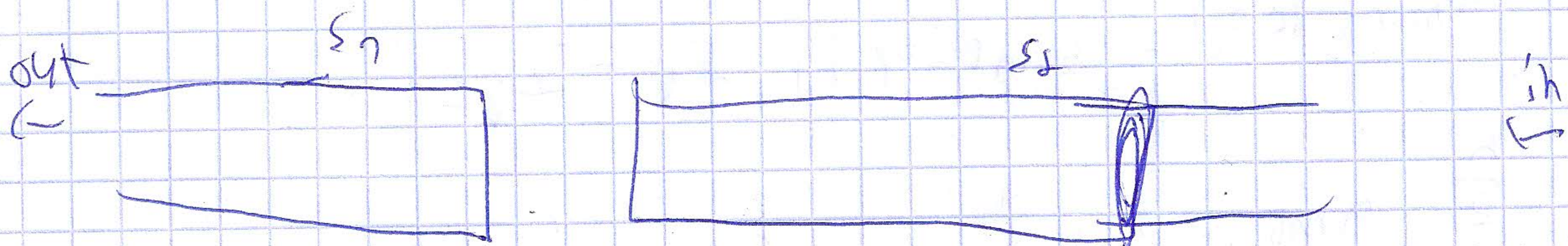
$$\frac{1}{\sqrt{t-2}} \text{ of } u = t + \sqrt{t-2}$$

$$\frac{du}{dt} = \frac{1 + 2t}{\sqrt{t-2}} = \frac{2u}{\sqrt{t-2}}$$

$$\text{amort}(\text{Insert} - \text{Last}) = \underbrace{\text{time}(\text{Insert last})}_{M+1} + \underbrace{\Phi(2M, M-1) - \Phi(M, h)}_{2-M}$$

$$\frac{1}{2u} du = \frac{1}{2ln} x^5 + \sqrt{x^{10}-2}$$

inversion 2 5 7 10



normal 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

A mortized

$$\Phi(0) = |S_2|$$

$$\Phi(1) = |S_1|$$

~~Amortized~~

Amortized

of amortized cost

Amortized cost

Amortized cost

Amortized cost

$$\text{Amortized } \Phi(P) = |S_1| - |S_2|$$

$$\Phi = |S_1|$$

$$\Phi \leq 1$$

$$\Delta \Phi \leq |S_1| - 1$$

Amortized cost

Amortized cost

Amortized cost

Amortized cost