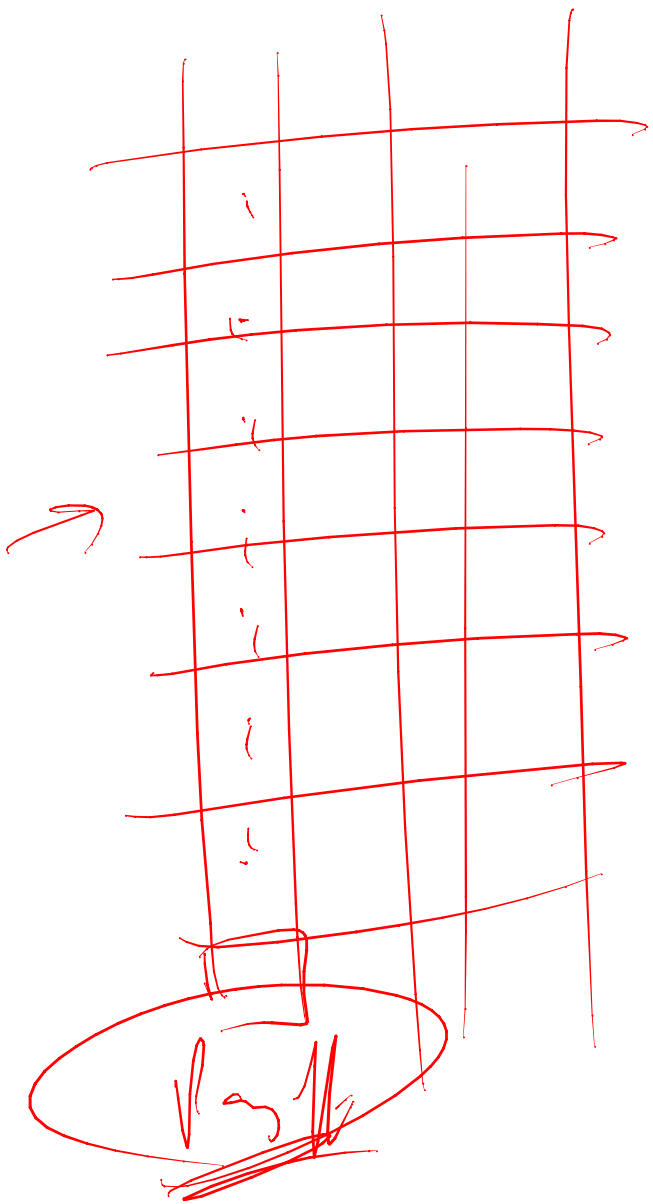
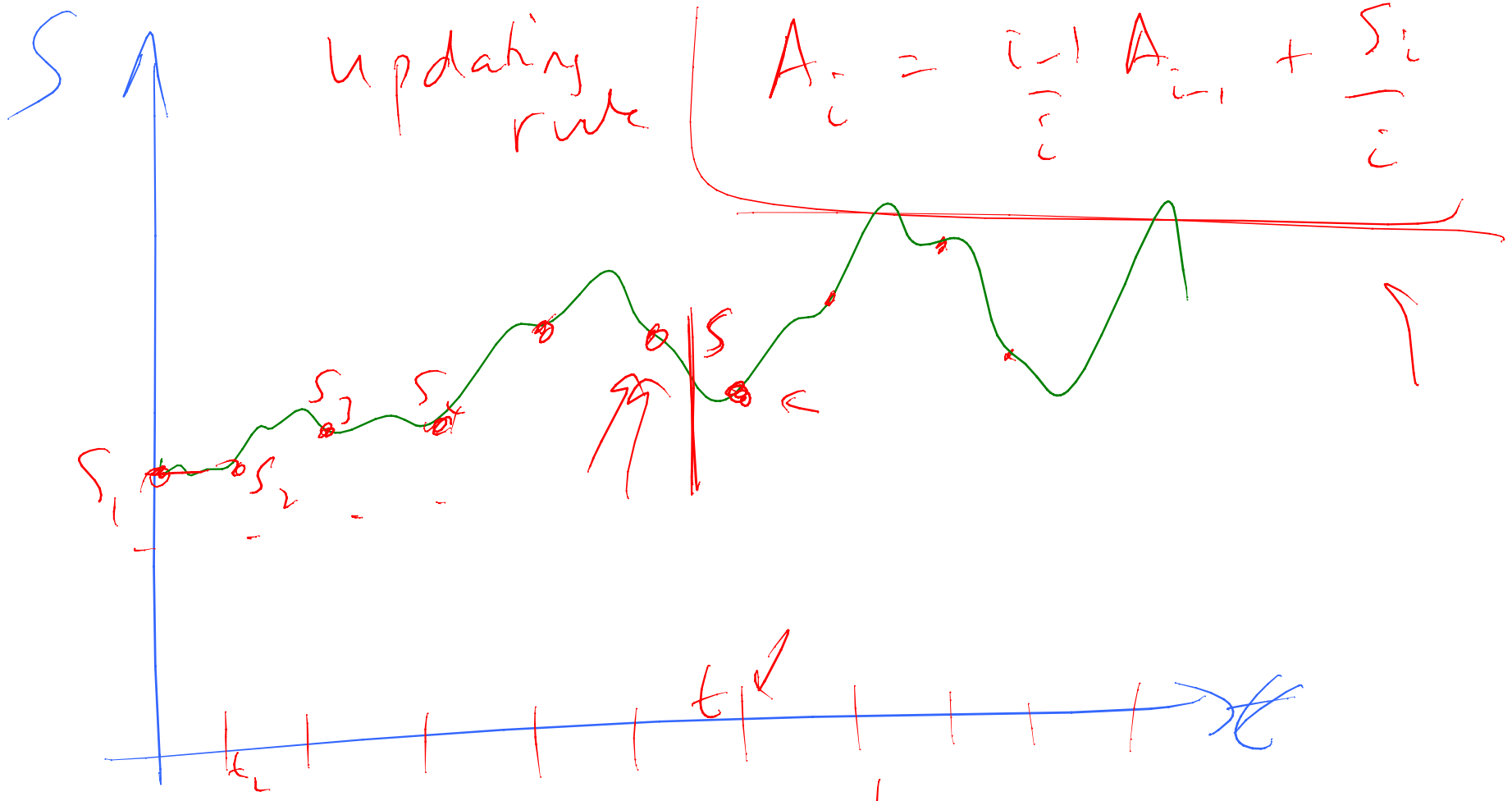


$$KI + KO = \text{Vanilla}$$

$$KI = \text{Vanilla} - KO$$

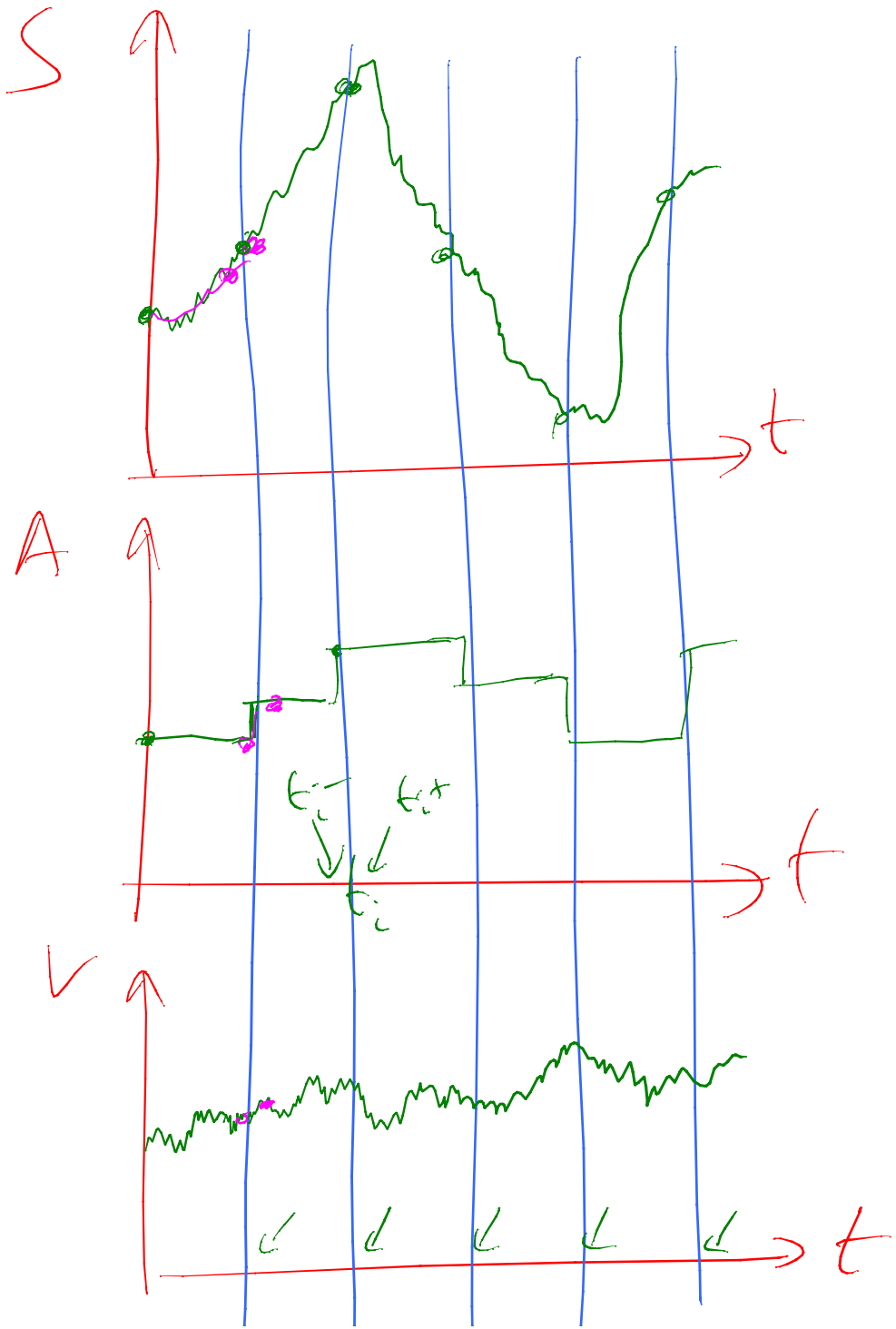


$A_1 = S_1$

$A_2 = \frac{S_1+S_2}{2} = \frac{A_1}{2} + \frac{S_2}{2}$

$A_3 = \frac{S_1+S_2+S_3}{3} = \frac{2A_2}{3} + \frac{S_3}{3}$

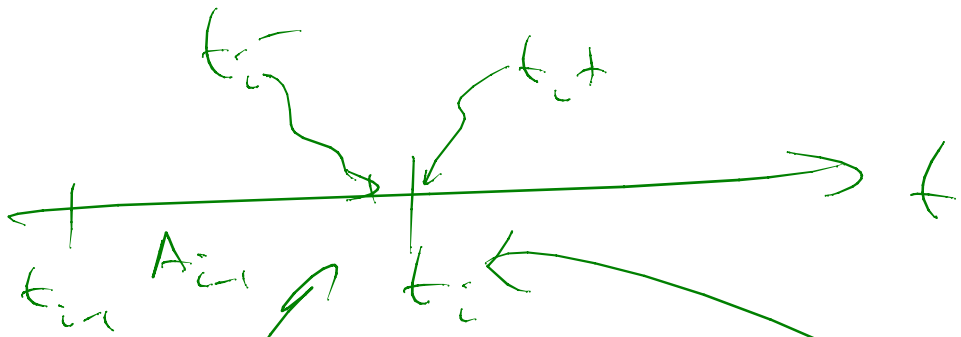
$A_4 = \frac{S_1+S_2+S_3+S_4}{4} = \frac{3A_3}{4} + \frac{S_4}{4}$



$dA = 0$

$V(S, A, t)$

V cts.

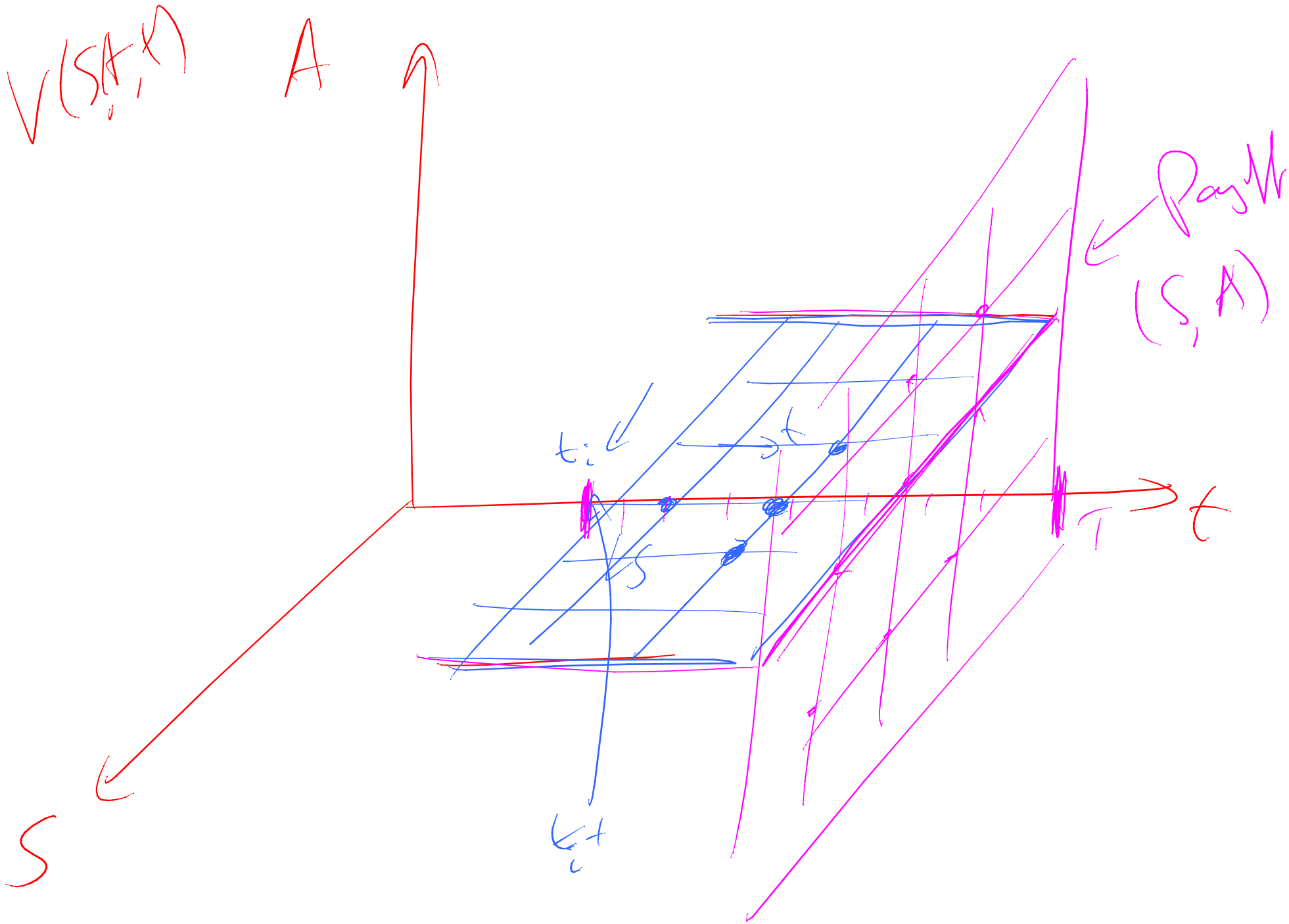


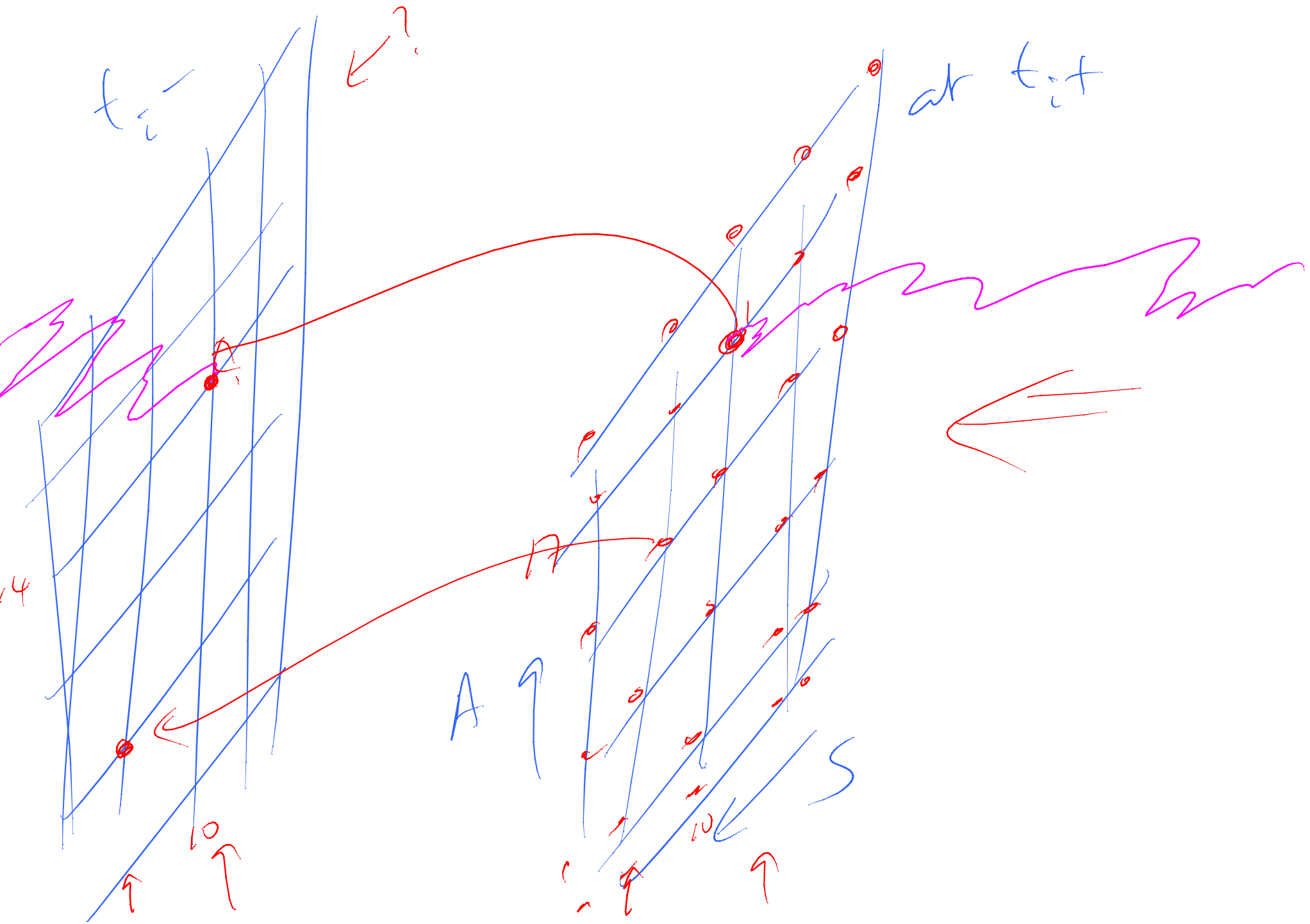
$$V(S, A_{i-1}, t_i^-)$$

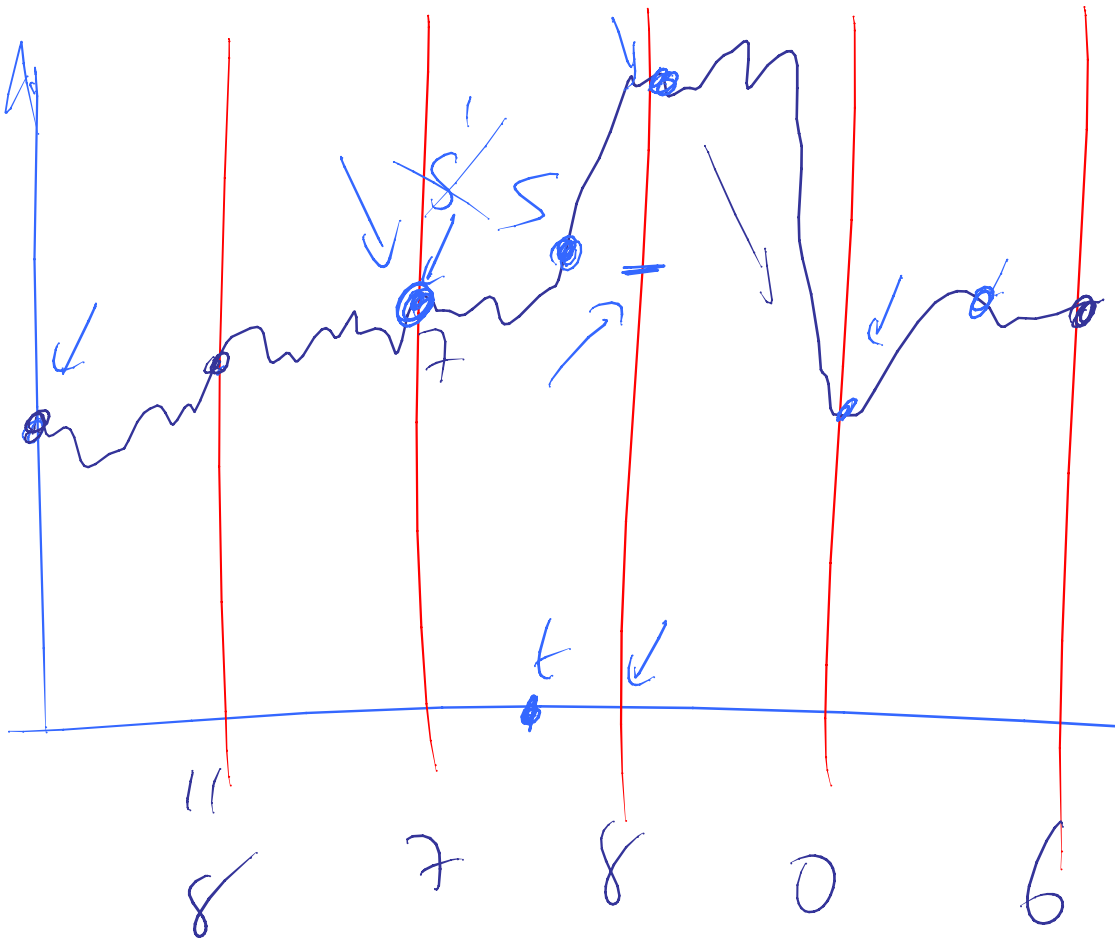
$$=$$

$$V(S, A_i, t_i^+)$$

$$V(S, A_{i-1}, t_i^-) = V(S, \sum_{i=1}^{i} A_{i-1} + S_{i-1}, t_i^+)$$


V(S,A,t)
A
Payoff
(S, A)
t_i
t
T
t
S
t_i

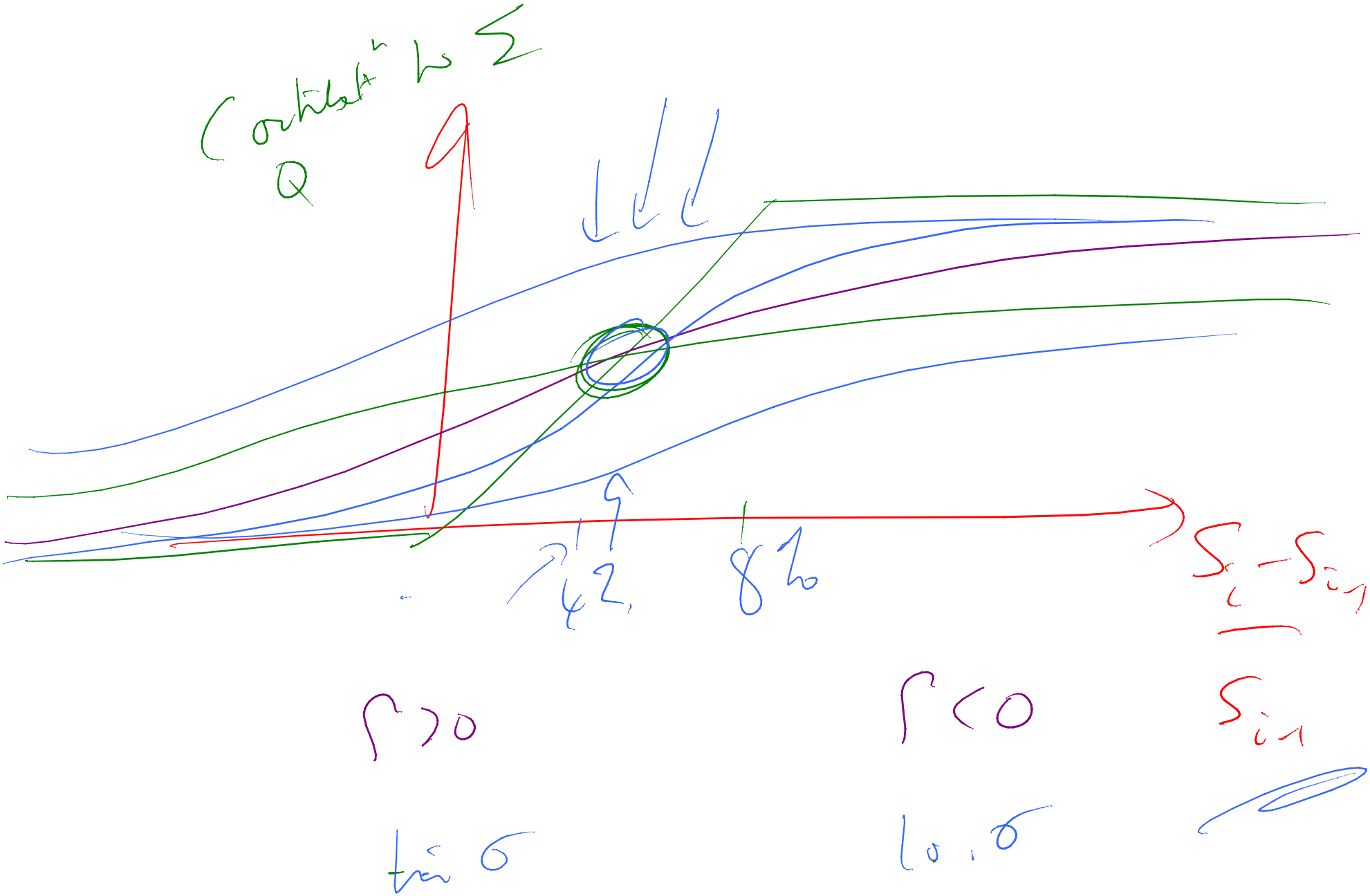


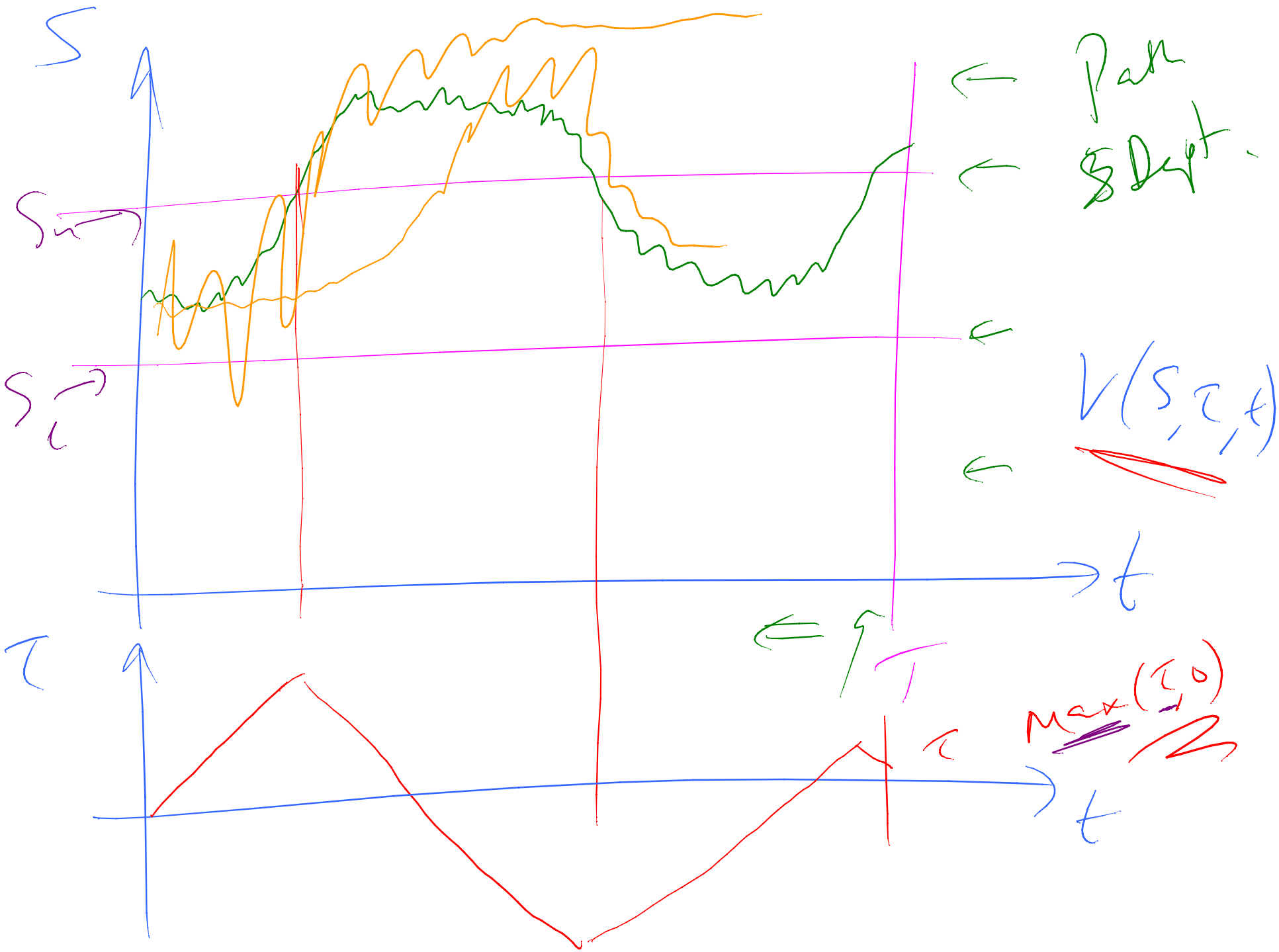


$\xi = \frac{S}{S'}$

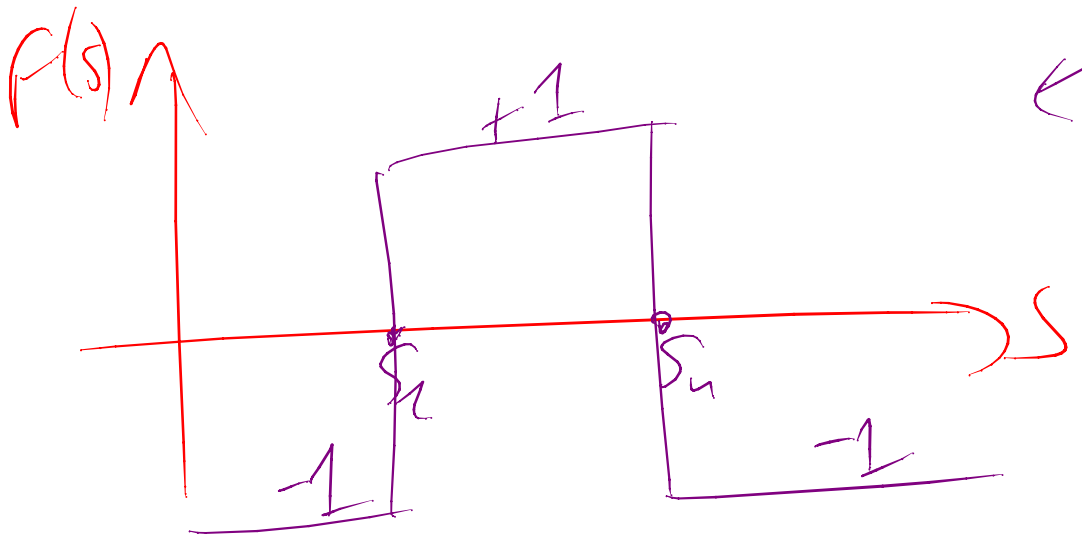
$\xi \geq$	V
20	17
25	17.1
15	16.9
30	16.95
10	17.05
D.V.A	17.08
St.d.V.A	16.97
	17.02

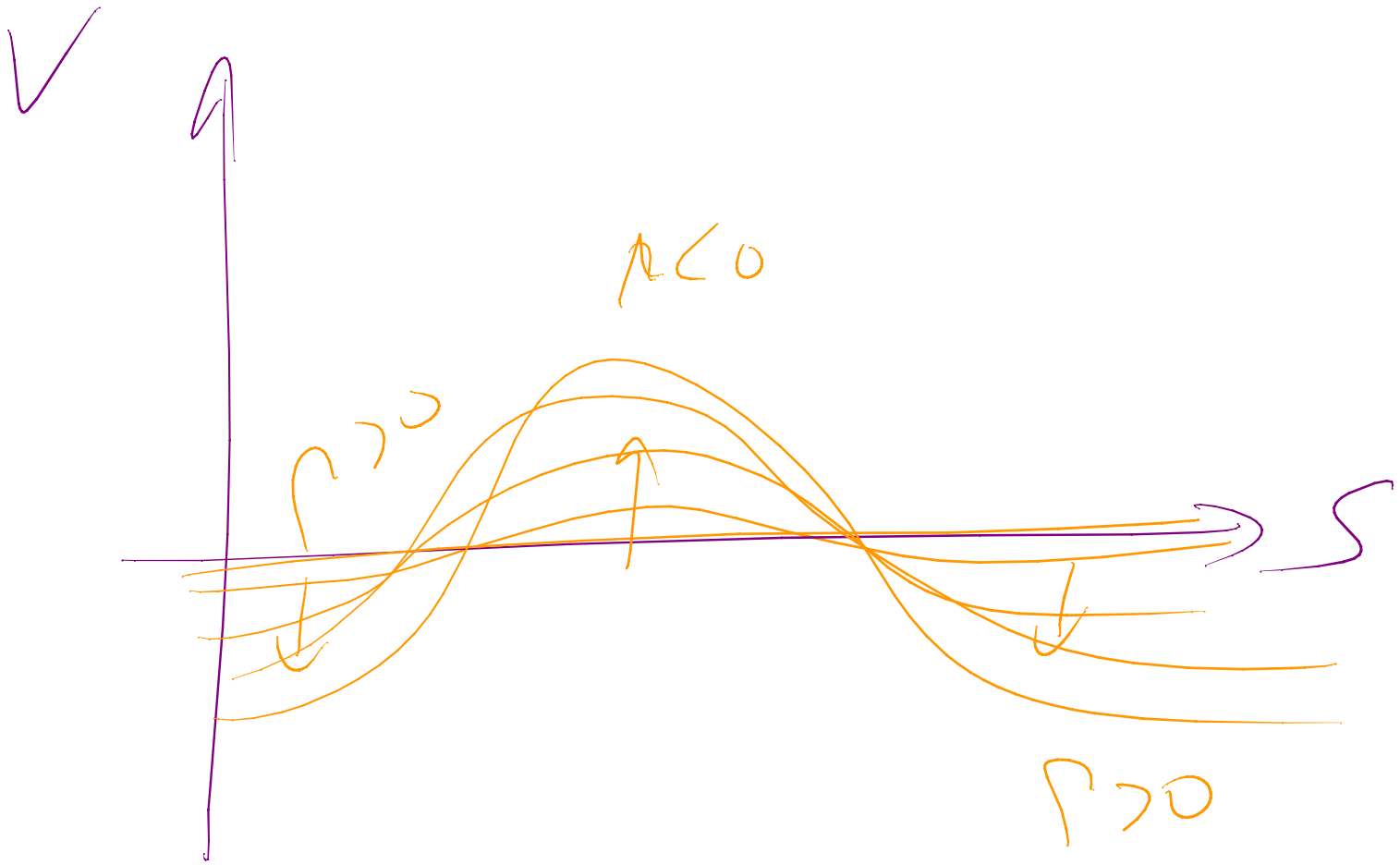
$$V(S, S', Q, t_{i-}) = V\left(S, S, Q + \sum \max\left(\frac{S - S'}{S'}, 0\right), t_{i+}\right)$$


Contribution to Σ
Q
42
8%
$\frac{S_i - S_{i-1}}{S_{i-1}}$
$\rho > 0$
$\rho < 0$
$\tan\sigma$
$\cos\sigma$


S
Path
S_{min}
S_t
V(S, τ, t)
t
T
τ
τ
max(τ, 0)
t

$$\frac{\partial V}{\partial t} + F(S)\frac{\partial V}{\partial \tau} + \frac{1}{2}\sigma^2 S^2 \frac{\partial^2 V}{\partial S^2} + rS\frac{\partial V}{\partial S} - rV = 0$$

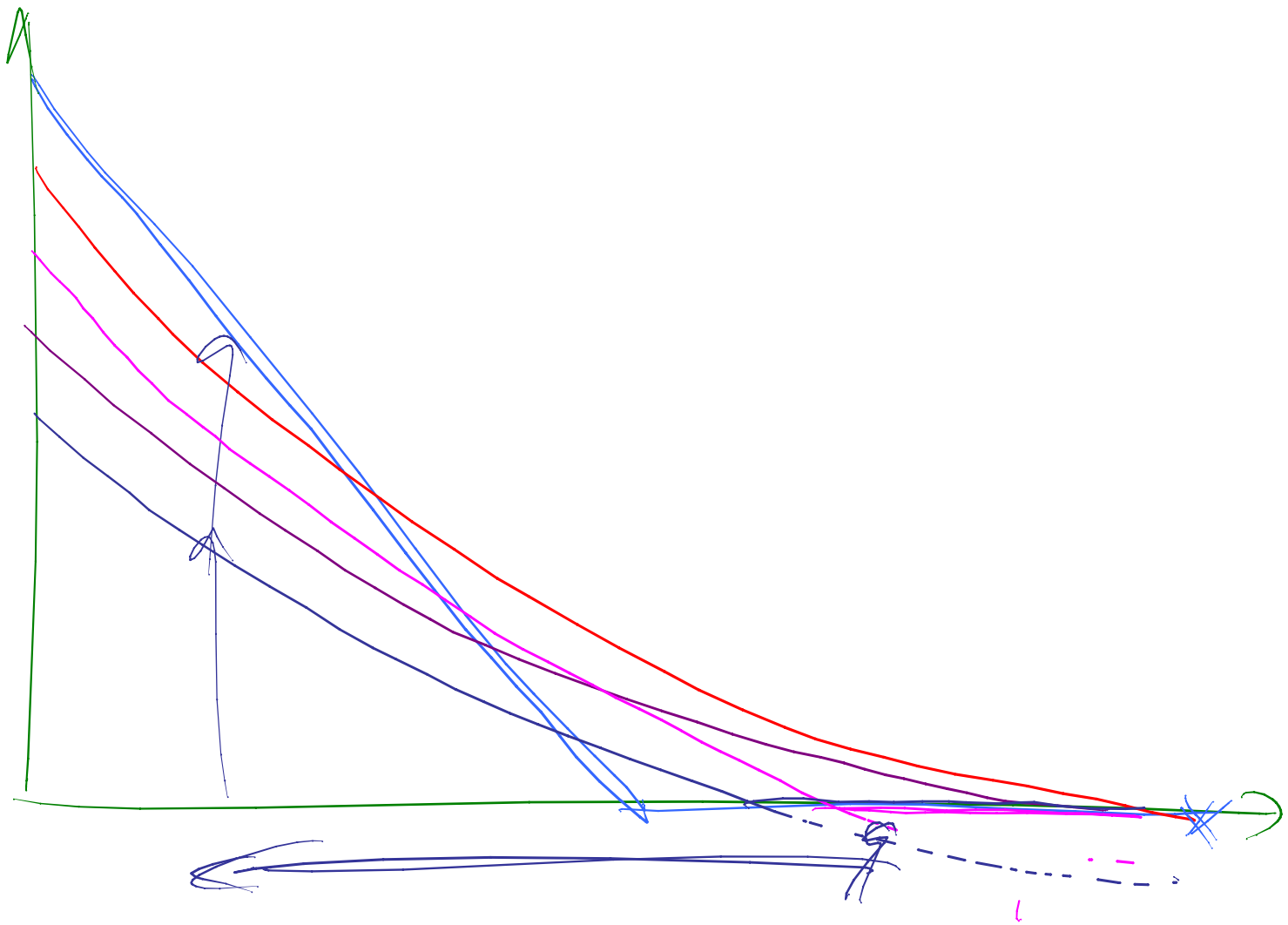



V
Λ<0
r>0
r>0
S

Passport Option

"Derivative & Stock Control"

Perfect Trader


0
T