

(1) fixed # of agents

(2) Cost function based market formulation

(3) Convergence:

1) one trade per person at least

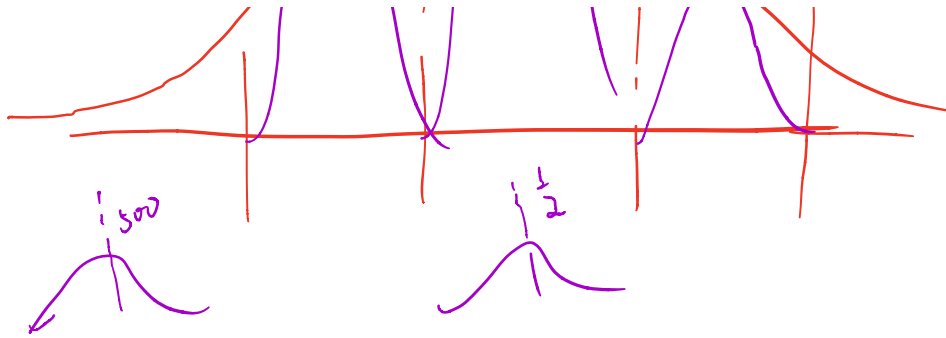
2) and then converge when market price $\Delta < \epsilon$

(4) Simulate multiple time, compare two average profits

(5) Look each agent's gain under specific outcome
when have / have no budgets

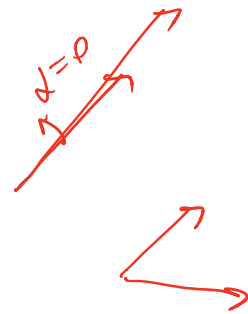
(6) Separate budget & initial belief initialization





① belief update

$\mu=0$ Bayesian prior + posterior



$$V = \frac{1}{n} \sum_i (y_i - \mu)^2$$

MSE for gray square

$$= \frac{1}{n} \sum_i (y_i - 0)^2$$

$$\vec{v}^T (A \vec{v}) = \vec{v}^T (\lambda \vec{v})$$