professor ____.
Mathematical

market operate

Efficiency

· Exchange Economy 2 individuals
                    2 "goods"

(pefectly divisible good (money)
| indivisible good, one unite unaviliably.
{ and individual who own good => seller (S)
| - - - - - not => buyer (b) } money

· allocation

is a complete description of money and the rddeogo of asset

buyer (0 ↑ , m_b ↓)
seller (1 ,) ← initial allocation
individual money
good

· Fesiable allocation individually rational

total b / s utility $v+m_b$ / $c+m_s$

· Judge efficiency

⇒ pareto optimality ← Or : pareto dominated.

An allocation in PO

↳ if there exists no alternative allocation

that makes everybody at least as well off

and at least one person strictly bottom off.

- bilateral trade

bargaining

(i) $V > C$

In any PO, buyer has the asset.
(allocation)

$b\ (1, m_b - t)$ t = transfer.

$s\ (0, m_c + t)$ $V \geq t \geq C$

surplus improvement in total utility.
can be distributed in any form.

(ii) $V = C = t$

2PO

(iii) $V < C$ only PO is the initial allocation.

- multilateral trade

M buyers $V_1 \geq V_2 \geq \cdots \geq V_m$

n sellers $C_1 \leq C_2 \leq \cdots \leq C_n$

Ex. $V_1 = 10$ $C_1 = 2$ $C_2 = 11$