

PROBLEM SET 3 (problems #3, #4 corrected)

It's OK to work together on problem sets.

1. Starr's *General Equilibrium Theory*, problem 4.1(i)
2. Starr's *General Equilibrium Theory*, problem 4.2
3. Starr's *General Equilibrium Theory*, problem 5.3. It will make the problem a little easier if you take $X^i = \mathbb{R}_+^2$, and set $r^i = (2, 0)$.
4. The following preferences represent the notion: "I like x precisely twice as much as y, and I really like them both, but between two otherwise equivalent bundles, I'll choose the one with more x." Consider the following preferences, for a household with endowment (1, 1) and $X^i = \mathbb{R}_+^2$, in the neighborhood of prices $(p_x, p_y) = (2/3, 1/3)$, as p_x goes slightly up and down. Show that demand moves discontinuously from buying all x to buying all y. Show that the preferences specified do not fulfill C.V.

$(x, y) \succ (x', y')$ if $2x + y > 2x' + y'$, or

$(x, y) \succ (x', y')$ if $2x + y = 2x' + y'$ and $x > x'$.

$(x, y) \sim (x', y')$ only if $(x, y) = (x', y')$.