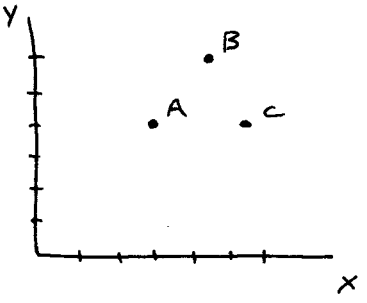
ECO 401-002 Problem Set #2 KEY SPRING 2003

1.

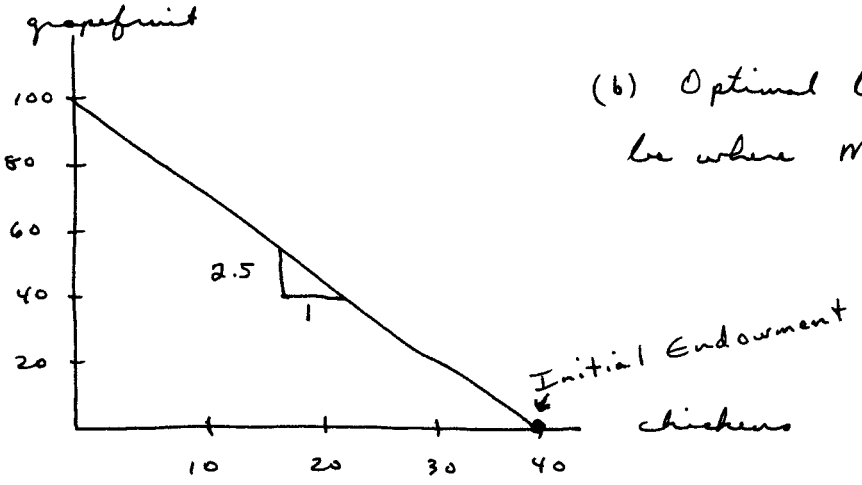


(a) Both B and C are preferred to A, but neither is clearly preferred to the other.

(b) Only if X is a neutral commodity (i.e. more X is not preferred to less) could this occur.

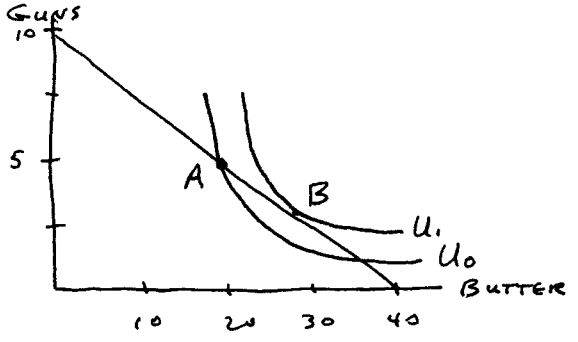
(c) If B and C lie on the same indifference curve, then $MRS = \Delta Y / \Delta X$.

2. (a)



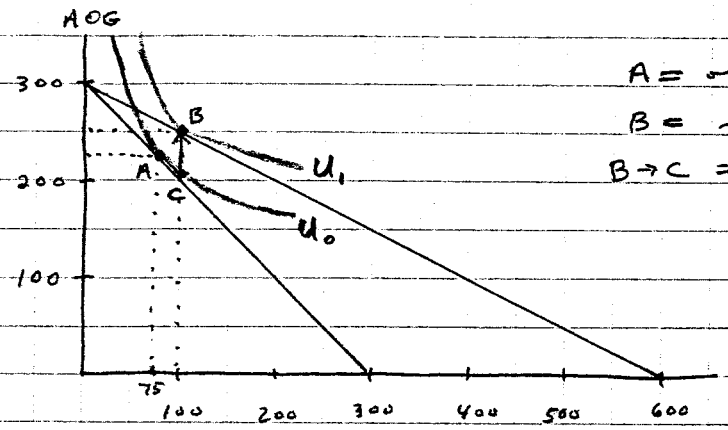
(b) Optimal bundle will be where $MRS_{X,Y} = \frac{2.5 GF}{1 ch}$

3.



Sam is at a point like A, where MRS (slope of IC) is greater than the slope of her budget constraint. Optimal bundle B has more butter and fewer guns.

4.



A = original consumption bundle

B = new consumption bundle

B → C = $50 = total cost of subsidy

Joneses originally consume FO = 75 and AOG = 225 when they face P_{FO} = $1 and P_{AOG} = $1. Indifference curve U_0 is tangent to their budget constraint at point A. when the price of fuel oil falls to $.50 as a result of the government subsidy, the Joneses increase their consumption of fuel oil to 100 gallons and of AOG to 250 units, at point B. On their original budget constraint without a government subsidy, if the Joneses consumed 100 gallons of fuel oil they could only have afforded 200 units of AOG. The government subsidy allows them to increase their consumption of AOG from 200 to 250, which is represented by the distance BC, or $50.

5.

3.16 The new budget line is RR'Z', which is found by subtracting $50 from the purchase of other goods (point R) and moving horizontally $150 from R to R'. The price of food has not changed so from point R' on, the budget line falls at slope ñ1 until Z' is reached. The $100 gift of food stamps generates budget line AA'Z'. The system that prevailed prior to 1979 will generate more food consumption if the optimal consumption point under the post-1979 regime is tangent to AA'Z' to the left of R'. Otherwise, food consumption is the same under the two regimes.