

First Exam

Write all answers in your blue book and show all work there. Return your exam in your blue book.

16 pts.

- 1) a) The country of Noreg has heretofore had no health care insurance required of employers and the demand for labor has been $L_D = 100 - 2P$ and the supply of labor has been $L_S = -30 + 3P$. Draw a well-labeled diagram of this labor market and calculate the equilibrium price of labor.
- b) Now suppose that health care plans are required by law that cost the firms 20 dollars per unit of labor and that give benefit to workers of 15 dollars per unit of labor. Find the new equilibrium price of labor. Do workers gain from the new plan? Do employers gain? Explain.

16 pts.

- 2) True or false. Explain.

Consider the following table which shows the time that Chris and Alex spend on two tasks, sewing and soldering.

	Chris	Alex
Sewing	15	25
Soldering	20	40

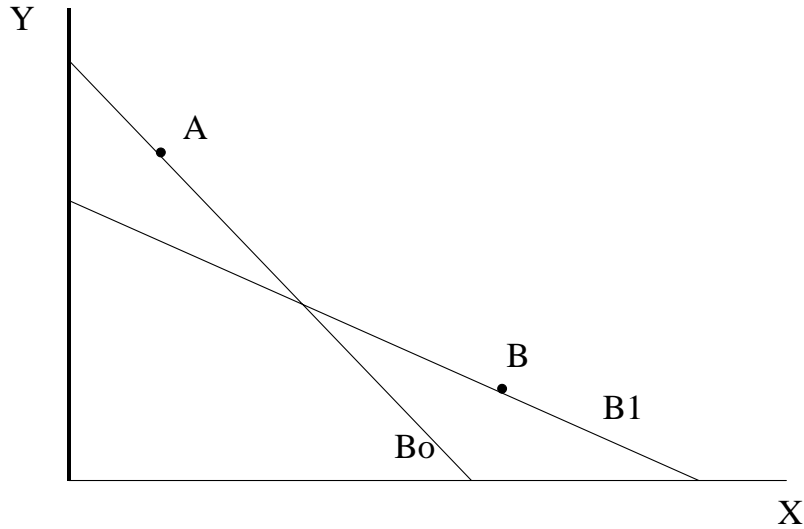
- a) Find the opportunity costs and use them to identify areas of comparative advantage.
- b) Will Chris and Alex trade, if a sewing job trades for half of a soldering job? Explain.

16 pts.

- 3) a) If the MRS_C or MV is -2 and the MRS_E or $-P_X/P_Y$ is -3 , what can be done to improve utility? Explain either numerically or diagrammatically.
- b) If the $MU_X = 10$ and the $P_X = 5$ and the $MU_Y = 9$ and the $P_Y = 3$, what can be done to improve utility? Explain.

20 pts

4) Consider the diagram below.



- If B0 and B1 are the budget lines for years 0 and 1, what has happened to the relative price of X? Why? Could the absolute price of X have gone up? Explain.
- If point A is the utility maximizing point in year 0, what will happen to real income from year 0 to 1, if a Laspreyes price index is used to calculate it? Explain.
- Could utility be higher in year 1? Explain.

16 pts.

- Suppose that $TC = 8 + X + (X^2)/4$. Find the equation for MC and draw a well-labeled diagram of both the MC and TC functions. Are there any maximums, minimums or inflection points? Why?
 - If $TR = PxQ$, use the product rule find an equation for MR.

16 pts.

- Draw a well-labeled diagram for income and leisure that shows the individual to maximize utility by choosing all leisure.
- Use your diagram to show the effect, if any, of an income tax on such an individual.
- Use your diagram to show the effect, if any, of a head tax on such an individual.

I have neither given nor received unfair aid on this test.
