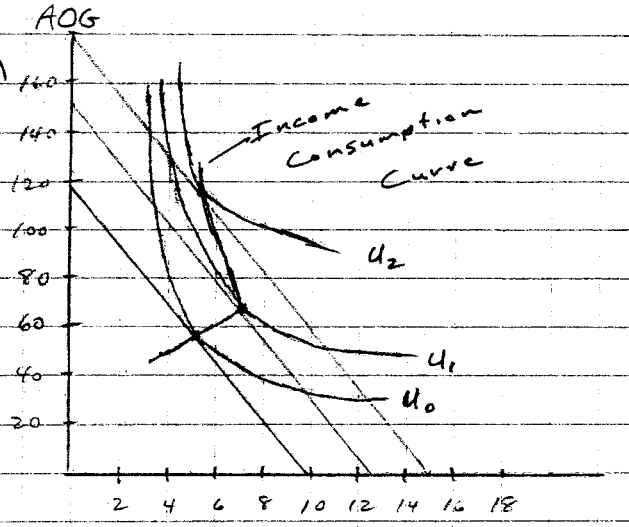
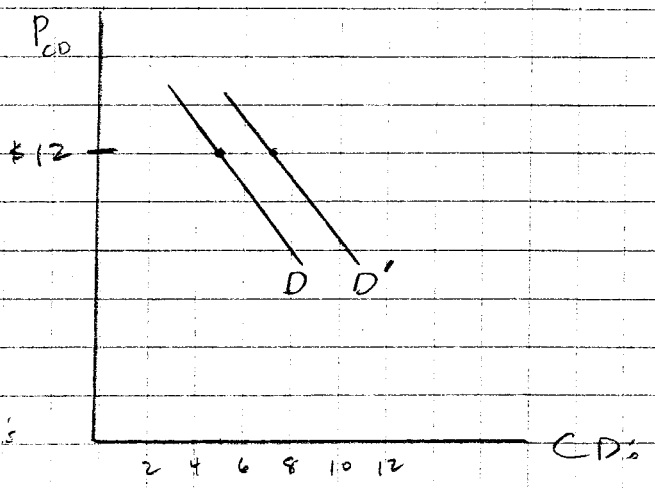
1. (a)



(b)

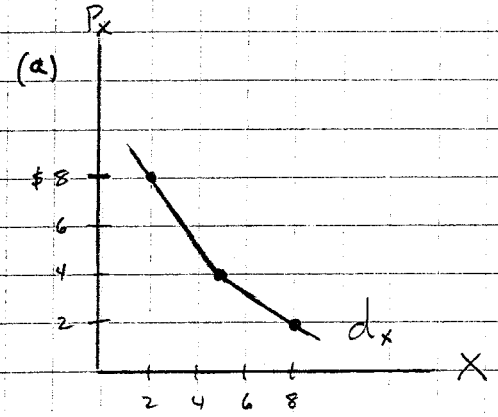


Income-consumption curve has positive slope as income increases from $120 to $150, but a negative slope as income increases from $150 to $180.

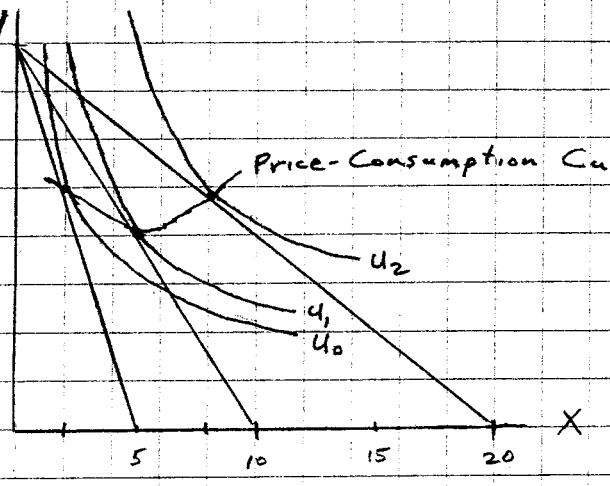
When $P_{CD} = \$12$ and Income = $120, 5 CD's are demanded, as indicated in demand curve D. When $P_{CD} = \$12$ and Income = $150, 7 CD's are demanded, as indicated in demand curve D'. When income increases to $180, demand shifts back to the left to D.

(c) I-C curve has a negative slope between incomes of $150 and $180, indicating that CD's are inferior over that income range, i.e. $E_{x,I} < 0$.

2. (a)

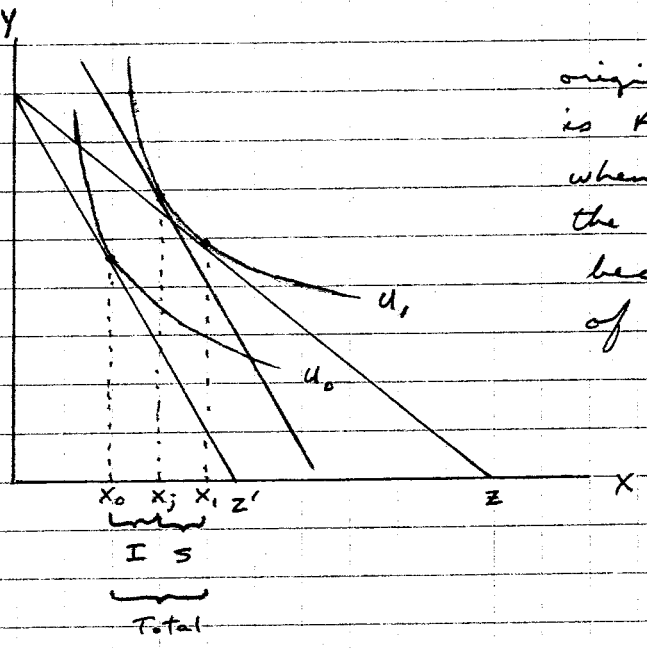


(b)



(c) When price falls from $P_X = 8$ to $P_X = 4$, the price-consumption curve is downward sloping, so demand for X is elastic. When price falls from $P_X = 4$ to $P_X = 2$, the P-C curve is upward sloping, so demand for X is inelastic.

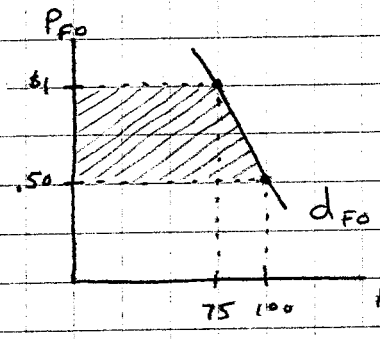
3. (a)



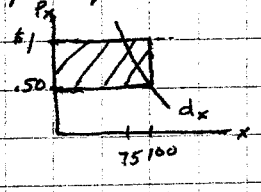
original budget constraint is AZ and utility = U_1. when the price of X rises, the new budget constraint becomes AZ'. Consumption of X falls from X_1 to X_0.

(b) see figure 4.5 (a), B & Z p. 93.

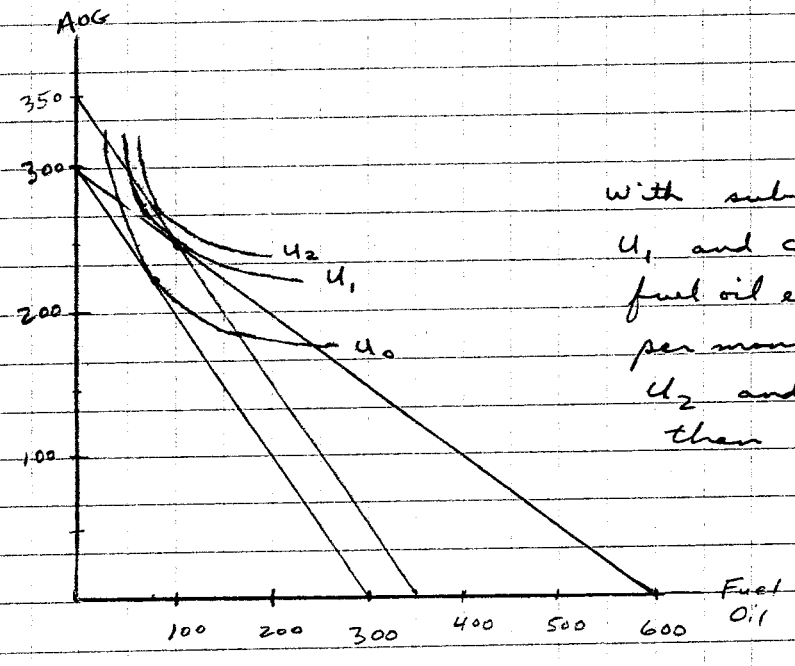
4. (a)



(b) gain in consumer surplus to Jones when P_{FO} drops from $1 to $.50 is given by the shaded area in the diagram. ($\simeq$ #43.75) The cost to government of this subsidy program is $.50 × 100 gal or $50.00:



5.



with subsidy program Jonses reach U_1 and consume 100 gallons of fuel oil each month. With $50 per month cash grant they reach U_2 and consume somewhat less than 100 gallons per month.