

# MT I Answers

(1) 4 points each

Complete ness

an individual is able to state which of any two options is preferred

$A \succ B$ ,  $B \succ A$  or  $A \sim B$

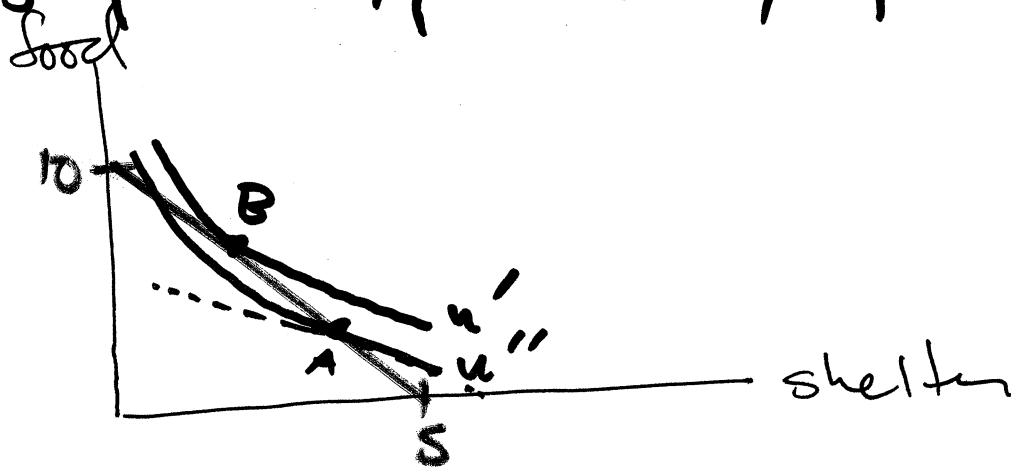
transitivity

if  $A \succ B \wedge B \succ C \Rightarrow A \succ C$

non saturation

more is better ( $A + \epsilon \succ A$ )  $\forall \epsilon > 0$

(2) graph & explanation, 6 pts each



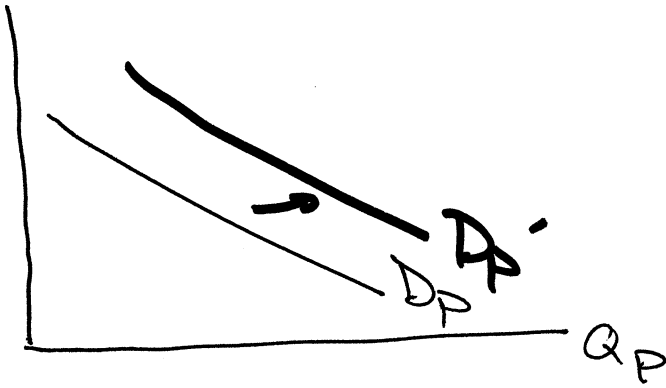
price ratio =  $\frac{10}{5} = 2 > 1 = \text{MRS}$

thus individuals need to consume more food and less shelter until price ratio = MRS and spends all of his/her income, this happens at pt. B

4 points each

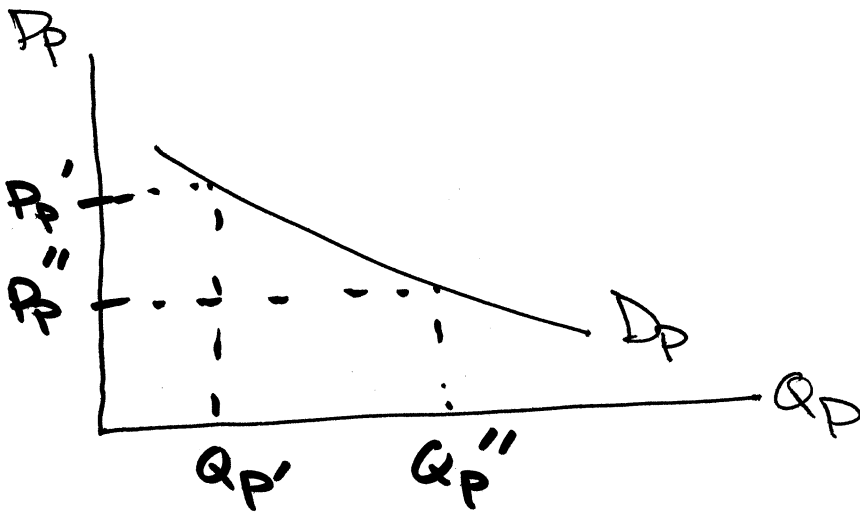
(3)  $P_p$

(a)



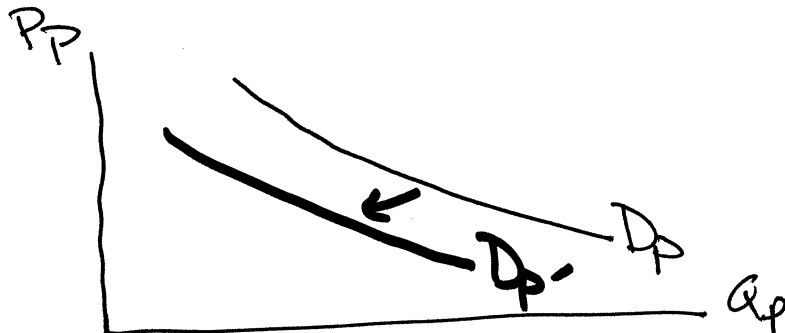
↑ price of a substitute, ↑ the DD for popcorn

(b)



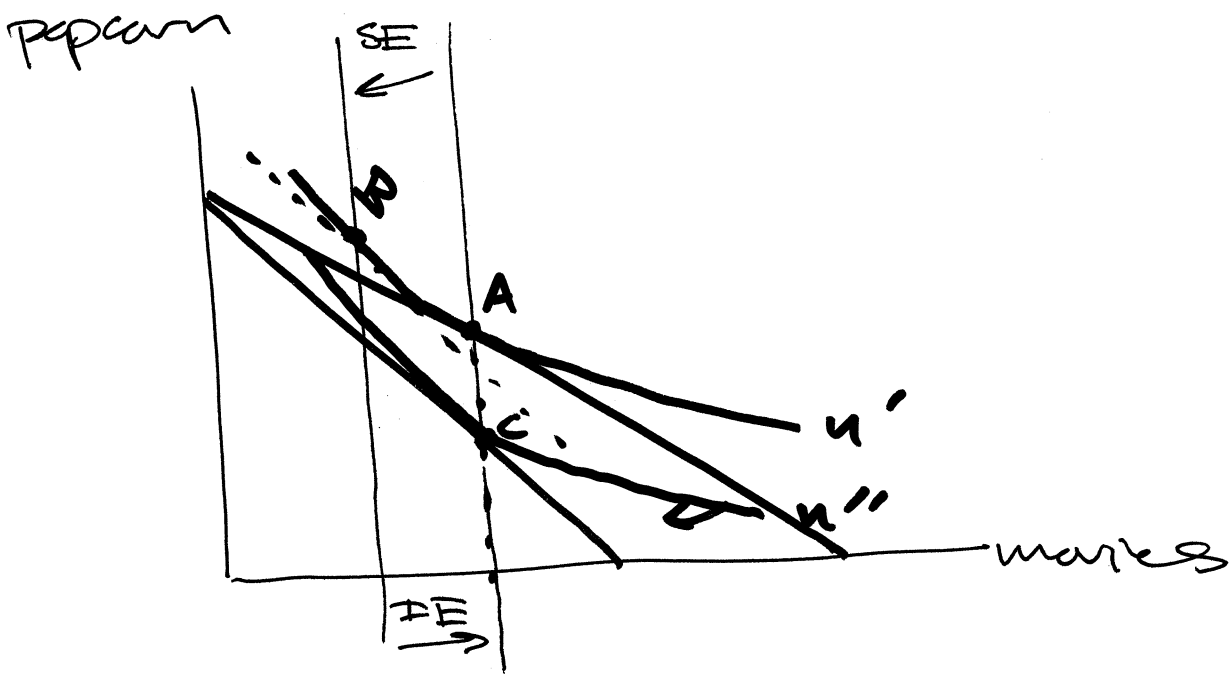
a  $\Delta$  price of popcorn results in a movement along the demand curve

(c)



this is a result of a change in preferences, we do not like waiting in line

(4) graph & explanation, 6 points each



for an  $\uparrow$  price of movie tickets, the SE says to  $\downarrow$  consumption of movie tickets &  $\uparrow$  consumption of popcorn

movie tickets must be inferior and thus a decrease in relative income will cause the IE to say buy more movie tickets

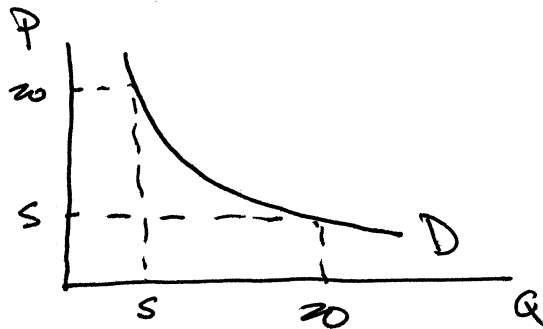
the SE & IE are equal, but move in opposite directions

(8) 6 points each

$$(a) \quad Q = \frac{0.1 (2I)^2}{2P} = \frac{0.1 \cdot 2^2 I^2}{2P} = \frac{0.1(2I^2)}{P}$$

thus, no, an equal % in  $I$  &  $P$  will lead to a  $\Delta$  in  $Q$

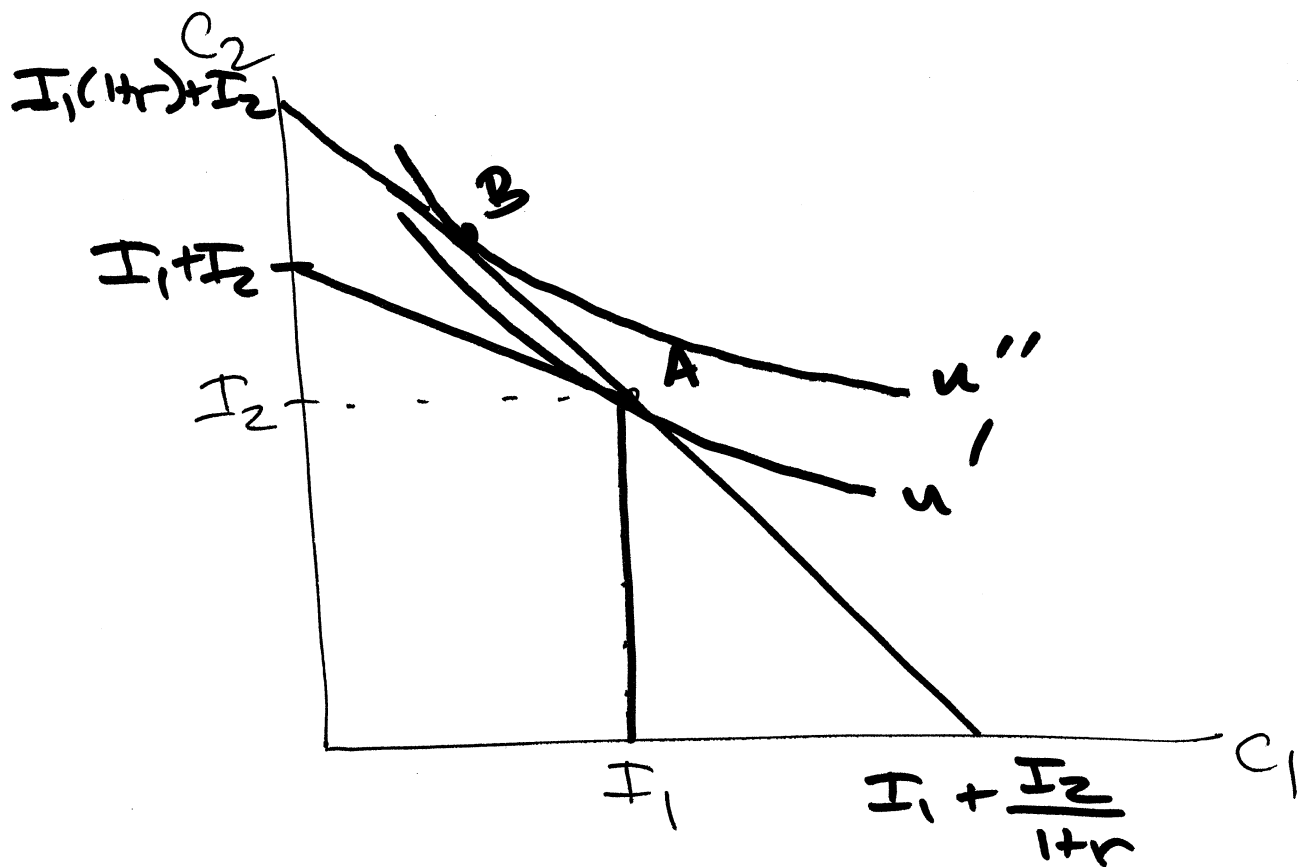
$$(b) \quad Q = 0.1 (100)^2 / P = 100/P$$



$$e_{Q,P} = \frac{\% \Delta Q}{\% \Delta P} = \frac{\frac{Q_1 - Q_0}{(Q_1 + Q_0)/2} \times 100}{\frac{P_1 - P_0}{(P_1 + P_0)/2} \times 100} = \frac{\left(\frac{20-5}{20+5}\right) \times 100}{\left(\frac{5-20}{20+5}\right) \times 100} = -1$$

$$\text{or} \quad e_{Q,P} = \frac{\partial Q}{\partial P} \cdot \frac{P}{Q} = \frac{-100}{P^2} \cdot \frac{P}{Q} = \frac{-100}{PQ} = \frac{-100}{100} = -1$$

(8) graph 8 pts, explanation 4 pts



w/o banks, we cannot borrow, but we can leave our money in say a mattress

the introduction of banks can put this individual on a higher IC (say point B), w/ banks he has an expanded BC and can be made no worse off