BUSI 100

Answer Guide 12: PROJECT 1

Please note: The answers provided below are considered to be a guide only. Assignment answers resembling those below would have received passing grades.

Marks:

3 1. In economic decision-making, people must make tradeoffs between alternative goals, the cost of any action is what you must give up to achieve it (opportunity cost), and rational people make decisions by comparing marginal costs and marginal benefits. Mora can earn $20,000 more working in the city, but this comes at a cost. One, there is a monetary cost, as city life probably includes additional costs for housing, commuting, and the cost of travelling for her leisure activities. Two, there is also a non-monetary cost in terms of foregoing her preferred leisure activities and the rural solitude she enjoys. Which option she decides on will depend on how much value she attaches to these non-monetary benefits, and whether or not it is worthwhile to her to forego the $20,000 lost income as a trade-off for these. However, in either case, the decision would be a rational one, based on evaluation of costs and benefits.

4 2. Mike should prefer finishing the project over selling the plane now. The marginal cost of finishing the project is $95,000 and the marginal benefit of finishing the project is $310,000, for a net marginal benefit of $215,000. The marginal cost of stopping the project now is zero and the marginal benefit is the $180,000 he can obtain from selling the plane as is. The net marginal benefit from stopping the project now is $180,000, $35,000 less than the net marginal benefit from completing the project. Because the marginal benefit is greater than the marginal cost, it is worth replacing the engine.

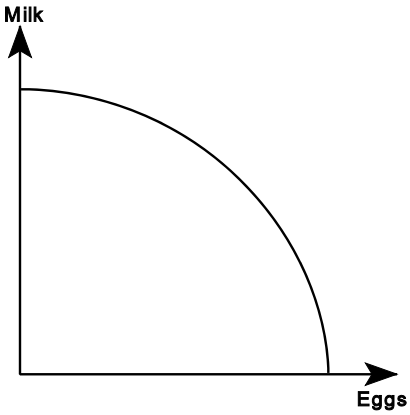
A further consideration, which goes beyond what is required for this question, is to consider further factors in this decision. One, there is risk involved: if this were a real-life decision, he would have to consider the certainty of the $310,000 price and whether or not the $35,000 cushion would be sufficient to risk this additional $95,000 investment. Two, he must also consider the opportunity cost of his time and this $95,000 -- given the time and expense involved in replacing the engine, he may be better off to sell the plane as is and invest this 3$95,000 in another more profitable alternative.

6 3. A positive statement is one that can be supported by evidence, claims to attempt to describe the world as it is, and is descriptive. A normative statement is a supposition of what may happen, involves values as well as facts, claims to attempt to prescribe how the world should be, and is prescriptive.

a, c, d, and e are positive statements. b, f are normative statements.

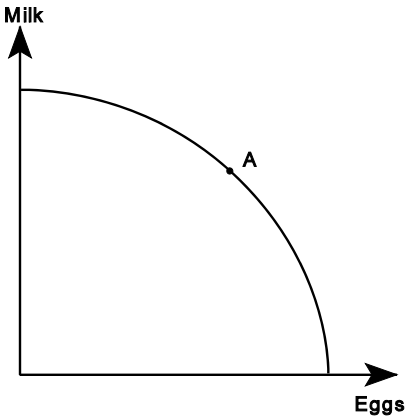
10 4.

(a)

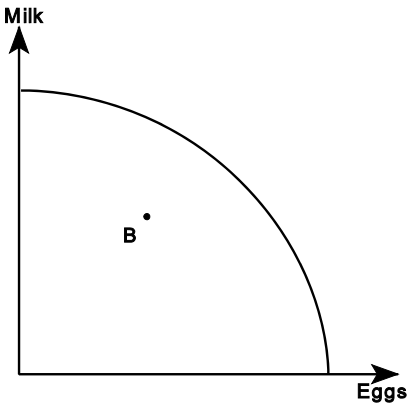


The PPC should bow outwards, reflecting the benefits of diversifying -- society is generally better off producing some of each product.

(b)

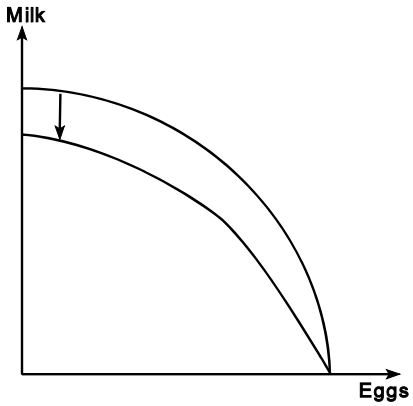


(c)



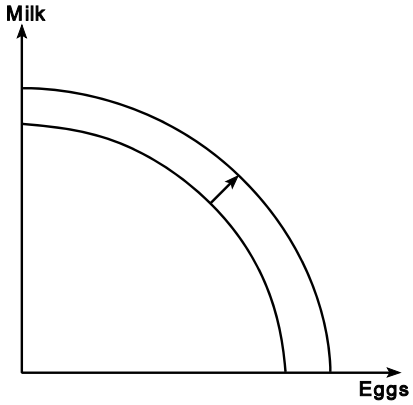
The PPC will not shift; instead, production will occur at a point below the PPC, reflecting that society is producing a less-than-optimal output

(d)



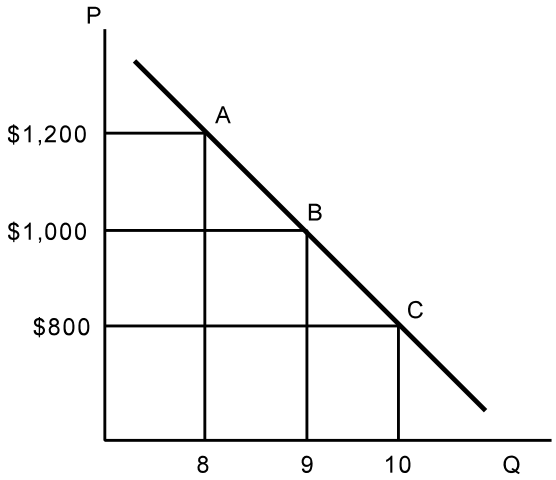
In this case the PPC shifts down, reflecting that less milk output is possible at all production levels of eggs.

(e)

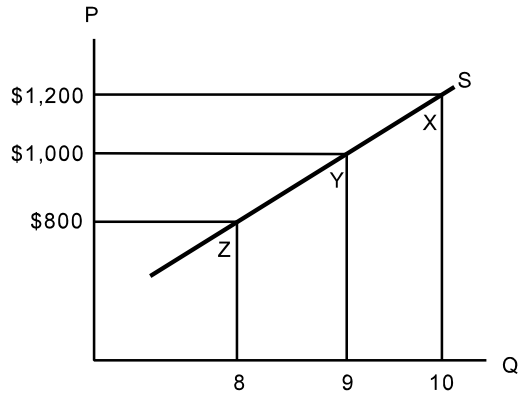


In this case the PPC shifts out, reflecting that more production of milk and eggs is possible at all combinations of production.

4 5. (a)

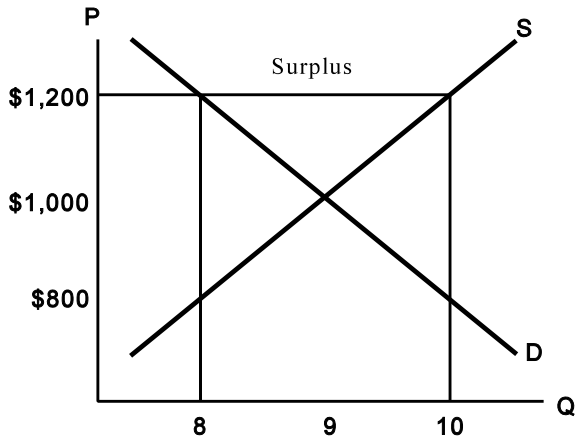


4 (b)



3 (c) Equilibrium is reached where the supply and demand curves intersect, and quantity supplied equals the quantity demanded. At P=$1,200, the quantity demanded is 8 and the quantity supplied is 10. In this situation, there is excess supply (surplus). Price will likely decrease until all of the apartments are rented and equilibrium is attained.

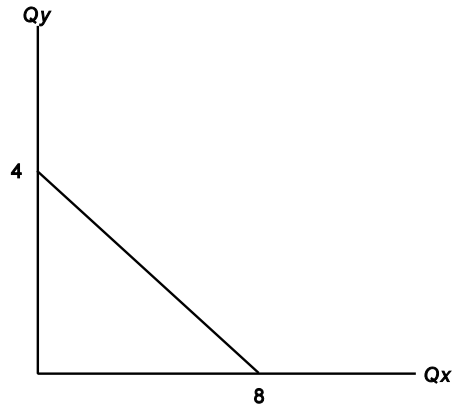
2 (d) P = 1,000 and Q = 9.



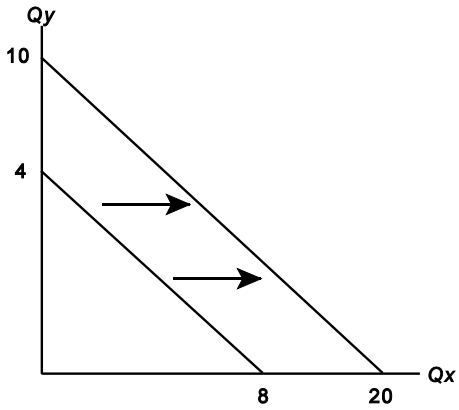
5 6. Since the demand for admissions by adults is inelastic, if you raise the price of admission, your total revenue will increase from that group. However, since the demand by children is elastic, raising the admission price will reduce total revenue from that group. For an elastic demand, lowering prices will increase total revenue, as the resulting increase in demand will more than compensate for the price drop. Thus, the price of children's tickets should be reduced. The solution is a two-tier price system, with higher prices for adults and lower prices for children.

9 7.

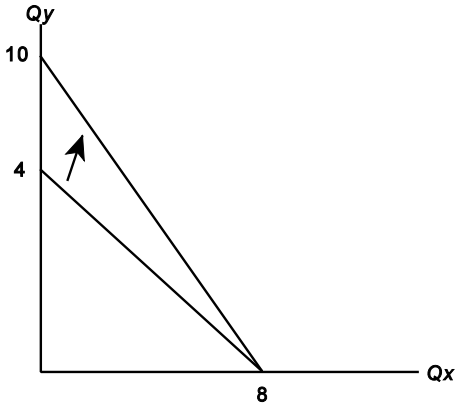
(a - 3 marks)



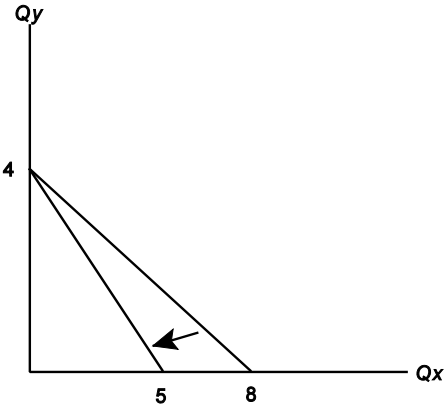
(b - 2 marks)



(c - 2 marks)



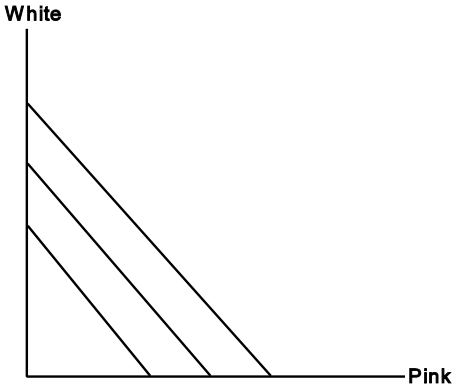
(d - 2 marks)



10 8. The four standard properties of indifference curves:

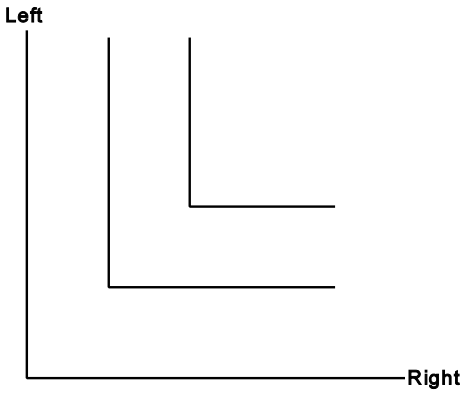
i. Higher indifference curves are preferred to lower ones.
ii. Indifference curves are downward sloping.
iii. Indifference curves do not cross.
iv. Indifference curves are bowed inward.

(a)



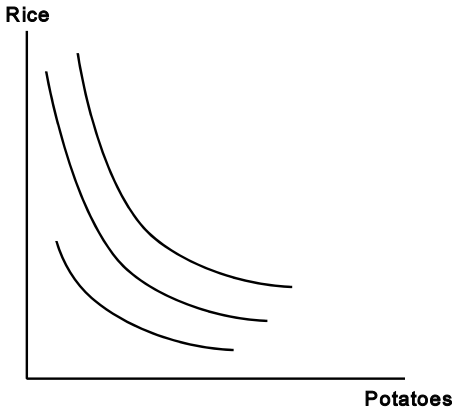
This is an example of a perfect substitute. It violates property iv, in that the curves are not bowed inward.

(b)



This is an example of a perfect complement. It violates property ii, in that the curves are not downward sloping (infinite slope on vertical part and zero slope on horizontal).

(c)



Rice and potatoes are substitutes, in that they can replace each other fairly easily in a meal. However, they are not perfect substitutes -- at the extremes, if you were eating nothing but potatoes or rice, a serving of the other would be strongly preferred. Thus, the indifference curve will slope at the ends. This meets the standard properties for indifference curves.

10 9.

Output (hundreds of documents delivered per month)	Fixed Cost	Variable Cost	Total Cost	Average Fixed Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	1850						
1	1850	400	2250	1850	400	2250	400
2	1850	850	2700	925	425	1350	450
3	1850	1350	3200	617	450	1067	500
4	1850	1900	3750	463	475	938	550
5	1850	2500	4350	370	500	870	600
6	1850	3200	5050	308	533	842	700
7	1850	4100	5950	264	586	850	900
8	1850	5400	7250	231	675	906	1300
9	1850	7300	9150	206	811	1017	1900
10	1850	9800	11650	185	980	1165	2500

70 Total Marks