

1. 回答下列問題：(20 points)

- (1) 為何消費函數與總支出(aggregate expenditure)函數之斜率相同？該斜率愈大，是否乘數效果也愈大？
- (2) 在簡單乘數模型中，如果投資也是 GDP 之函數，則乘數是否會變大？(以圖說明)

2. 設若消費者只購買 x_1 與 x_2 兩種財貨，試以無異曲線理論圖形回答以下問題：(20 points)

- (1) 假設在目前價格下，買得起 (14,15)，但他選擇 (10,19)，又若價格改變後他選擇 (14,15)，試問他是否買不起(10,19)？是否一定更不快樂？是否買更多 x_1 ？或更多 x_2 ？
- (2) 若原來價格為 ($p_1=\$5, p_2=\6)，他選擇 (12,16)，今價格改變為 ($\$7, \4)而所得不變，試問他是否更快樂？是否買更多 x_1 ？或更多 x_2 ？

3. 關於生產可能邊界(Production Possibility Frontier)，以圖分析：(20 points)

- (1) 設社會生產兩種財貨如(x_1, x_2)，若(16,30)以及(36,10)均為其有效率之生產組合，但(20,26)則為其所不能及(infeasible)，試問該社會可否選擇生產(22,18)？可否選擇(28,18)？
- (2) 設 x_1 為消費財而 x_2 為資本財，則該社會之兩種選擇(36,10)及(16,30)，可以導致如何不同之未來？

4. Comment on the followings and explain: (20 points)

- (1) As marginal product is increasing, average product must be increasing too. As average product is decreasing, marginal product must be decreasing, too.
- (2) Marginal cost is decreasing if and only if average cost is decreasing.
- (3) Along a supply curve, its price elasticity can vary from less than one to greater than one.
- (4) Suppose that the variable cost of medical service only shares a tiny portion of total cost. As such, a medical doctor prefers to lower his charge in order to sell more.

5. Suppose a monopoly has the following revenue and cost data: (20 points)

Q	AR	VC
1	\$140	\$60
2	107	110
3	92	156
4	80	200
5	66	243
6	50	288

- (1) Determine the profit maximizing output and price.
- (2) Suppose the total fixed cost equals \$50. Determine the maximal profit. What is the optimal output if the total fixed cost equals \$150?
- (3) Suppose the government imposes \$1.6 tax per unit of output. What is the optimal output (and price) for the monopoly? How much of the tax is borne by the consumer?