填充題：（每格 5 分，共 20 格）

1.

Each day Paul, who is in third grade, eats lunch at school. He likes only Twinkies (T) and Orange Slice (S), and these provide him a utility of

$$\text{utility} = U(T, S) = \sqrt{TS}$$

a. If Twinkies cost $0.1 each and Slice costs $0.25 per cup, how should Paul spend the the $1 his mother gives him in order to maximize his utility? $S=$＿＿＿＿＿, $T=$＿＿＿＿＿.

b. If the school tries to discourage Twinkie consumption by raising the price to $0.4, by how much will Paul's mother have to increase his lunch allowance to provide him with the same utility he receive in part (a)? ＿＿＿＿＿. How much Twinkies and cups of Slice will he buy now (assuming that it is possible to purchase fractional amounts of both of these goods)? $S=$＿＿＿＿＿, $T=$＿＿＿＿＿.

2.

Thirsty Ed drinks only pure spring water, but he can purchase it in two different-sized containers-0.75 liter and 2 liter. Because the water itself is identical, he regards these two "goods" as perfect substitutes.

a. Assuming Ed's utility depends only on the quantity of water consumed and that the containers themselves yield no utility, express this utility function in terms of quanities of 0.75L container (X) and 2L container (Y). ＿＿＿＿＿.

b. State Ed's demand function for X in terms of P_X, P_Y, and I. ＿＿＿＿＿.

3.

Suppose a firm engaged in the illegal copying of computer CDs has a daily short-run total cost function given by

$$STC = q^2 + 25.$$

a. If illegal computer CDs sell for $20, how many will the firm copy each day and what will its profits be? ＿＿＿＿＿, ＿＿＿＿＿.

b. What is the firm's short-run producer surplus at $P = \$20$? ＿＿＿＿＿.

c. Develop a general expression for this firm's producer surplus as a function of the price of illegal CDs. ＿＿＿＿＿.

（背面仍有題目,請繼續作答）

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4.

Suppose a perfectly competitive industry can produce widgets at a constant marginal cost of $10 per unit. Monopolized marginal costs rise to $12 per unit because $2 per unit must be paid to lobbyists to retain the widget producers' favored position. Suppose the market demand for widgets is given by

$$Q_D = 1,000 - 50P.$$

a. Calculate the perfectly competitive output and price _____ , _____
and monopoly output and price _____ ; _____ .

b. Calculate the total loss of consumer surplus from monopolization of widget production. _____ .

c. Graph your results. _____ .

5.

Suppose there are only two individuals in society. The demand curve for mosquito control for person A is given by

$$q_a = 100 - P.$$

For person B the demand curve for mosquito control is given by

$$q_b = 200 - P.$$

a. Suppose mosquito control is a pure public good; that is, once it is produced, everyone benefits from it. What would be the optimal level of this activity if it could be produced at a constant marginal cost of $120 per unit? _____ .

b. If mosquito control were left to the private market, how much might be produced for A and for B? _____ , _____ .

6.

Suppose that for a particular economy and period, investment was equal to 100, government expenditure was equal to 75, net taxes were fixed at 100, and consumption (C) was given by the consumption function

$$C = 25 + 0.8Y_D$$

where Y_D is disposable income and Y is GDP.

a. What is the level of equilibrium income (Y)? _____.

b. What are the values of the government expenditure multiplier $(\Delta Y/\Delta G)$ and of the tax multiplier $(\Delta Y/\Delta T)$? _____, _____.

c. Suppose that investment declined by 40 units to a level of 60. What will be the new level of equilibrium income? _____.

7.

Suppose that, within the simple Keynesian model, the level of government spending (G) was 100, the level of investment spending (I) was 75, and consumption (C) was given by

$$C = 25 + 0.8Y_D.$$

Net taxes (T) are initially given by the tax function

$$T = -50 + 0.3Y.$$

a. Calculate equilibrium income $(\overline{Y})$. Now suppose the tax rate is decreased from 0.3 to 0.25. Find the new level of equilibrium income. _____, _____.

b. Compute the values of autonomous expenditure multiplier before and after the tax cut. _____, _____.

c. Now suppose the intercept of the net tax function (t_0) changed from -50 to -40. Find the new level of equilibrium income. _____.

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