AP MICROECONOMICS • EXERCISE SHEET

1.6 Marginal Analysis and Consumer Choice

Name: _____ Class: _____ Date: _____ **Total: 9 marks**

Objective

Build the skills to answer exam questions on **marginal analysis and consumer choice**.

You must be able to:

- define **marginal benefit** 边际收益 and **marginal cost** 边际成本 and use marginal analysis
- apply the **law of diminishing marginal utility** 边际效用递减
- state and apply the **utility-maximizing rule** —equalize $\frac{MU}{P}$ across goods

1 Worked examples

Study these first. Each one shows the method for a question type used later.

■ Marginal analysis

Do one more unit while its **marginal benefit** exceeds its **marginal cost**; stop where $MB = MC$.

■ Diminishing marginal utility

Each extra unit consumed gives **less** added satisfaction than the one before.

■ The utility-maximizing rule

Spend a fixed budget so that the marginal utility per dollar, $\frac{MU}{P}$, is **equal** across all goods. If $\frac{MU_X}{P_X} > \frac{MU_Y}{P_Y}$, buy more X.

2 Practice

2.1 State the law of diminishing marginal utility. [1]

2.2 State the utility-maximizing rule. [1]

2.3 A consumer buys where marginal benefit equals marginal cost. Explain why buying one more unit would lower net benefit. [2]

3 Exam-style questions

3.1 A consumer maximizes total net benefit where [1]

- **A** $MB > MC$
- **B** $MB = MC$
- **C** $MB < MC$
- **D** the price is lowest

3.2 The law of diminishing marginal utility says that extra units give [1]

- **A** more added satisfaction
- **B** less added satisfaction
- **C** zero cost
- **D** a higher price

3.3 Good X has $MU = 20$ and $P = \$4$. Good Y has $MU = 15$ and $P = \$5$.

(a) Find $\frac{MU}{P}$ for each good. [2]

(b) State which good the consumer should buy more of. [1]

4 Go further

- work through the **1.6 Marginal Analysis and Consumer Choice** lesson on the **Learn** page;
- read the **Basic Economic Concepts** section of the AP Microeconomics handout on the **Know** page.

Solutions

2.1 each additional unit consumed adds less extra satisfaction than the previous one.

2.2 allocate spending so that $\frac{MU}{P}$ is equal for all goods.

2.3 beyond $MB = MC$, the next unit's marginal cost exceeds its marginal benefit, so it subtracts from total net benefit.

3.1 B.

3.2 B.

3.3 (a) X: $\frac{20}{4} = 5$; Y: $\frac{15}{5} = 3$. (b) buy more of good X (its MU/P is higher).