AP MICROECONOMICS • EXERCISE SHEET

2.5 Other Elasticities

Name: ____________ Class: ________ Date: __________ **Total: 9 marks**

KEY WORDS cross-price elasticity 交叉价格弹性 • income elasticity 收入弹性 • elastic 富有弹性 • demand 需求 • price elasticity of demand 需求价格弹性

Objective

Build the skills to answer exam questions on **other elasticities**.

You must be able to:

- define and calculate **cross-price elasticity of demand 交叉价格弹性**
- use its sign to classify goods as **substitutes** or **complements**
- define and calculate **income elasticity of demand 收入弹性**
- use its sign to classify goods as **normal** or **inferior**

1 Worked examples

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

■ **Cross-price elasticity**

$$\text{XED} = \frac{\%\Delta Q_d \text{ of good A}}{\%\Delta P \text{ of good B}}.$$

Positive → substitutes; **negative** → complements.

■ **Income elasticity**

$$\text{YED} = \frac{\%\Delta Q_d}{\%\Delta \text{income}}.$$

Positive → normal good; **negative** → inferior good.

2 Practice

2.1 State what a **positive** cross-price elasticity means about two goods. [1]

2.2 State what a **negative** income elasticity means about a good. [1]

2.3 When income rises 10%, demand for a good falls 5%. Find the income elasticity and classify the good. [2]

3 Exam-style questions

3.1 Two goods with a **negative** cross-price elasticity are [1]

A substitutes
B complements
C normal goods
D inferior goods

3.2 A normal good has an income elasticity that is [1]

A negative
B zero
C positive
D infinite

3.3 The price of tea rises 20% and the quantity of coffee demanded rises 10%.

(a) Find the cross-price elasticity. [2]

(b) State whether tea and coffee are substitutes or complements. [1]