

2.4 Price Elasticity of Supply

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

KEY WORDS price elasticity of supply 供给价格弹性 • elastic 富有弹性 • supply 供给
• inelastic 缺乏弹性

Objective

Build the skills to answer exam questions on **price elasticity of supply**.

You must be able to:

- define **price elasticity of supply (PES)** 供给价格弹性
- calculate PES using the **midpoint (arc) method**
- classify supply as elastic, inelastic, unit, **perfectly elastic**, or **perfectly inelastic**
- explain how the **time horizon** and spare capacity affect PES

1 Worked examples

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

■ PES

$$PES = \frac{\% \Delta Q_s}{\% \Delta P},$$

using the midpoint method.

■ Classification

> 1 elastic; < 1 inelastic; = 1 unit. A **perfectly inelastic** supply is **vertical** (PES = 0); a **perfectly elastic** supply is horizontal.

■ What makes supply elastic

A longer **time horizon** and more **spare capacity** make supply more elastic — firms can adjust output more.

2 Practice

2.1 Define price elasticity of supply. [1]

2.2 Price rises from \$8 to \$12 and quantity supplied rises from 40 to 60. Find the PES (midpoint method). [2]

2.3 State how a longer time horizon affects PES. [1]

3 Exam-style questions

3.1 Supply is elastic when PES is [1]

- **A** less than 1
- **B** equal to 1
- **C** greater than 1
- **D** zero

3.2 A perfectly inelastic supply curve is [1]

- **A** horizontal
- **B** vertical
- **C** upward-sloping
- **D** downward-sloping

3.3 A farm can quickly grow more output using its spare land.

(a) State whether its supply is likely elastic or inelastic. [1]

(b) State one factor that makes supply more elastic. [1]

(c) State the PES of a vertical (fixed-quantity) supply curve. [1]

Solutions

2.1 the responsiveness of quantity supplied to a change in price.

2.2 $\% \Delta Q = \frac{20}{50} = 40\%$; $\% \Delta P = \frac{4}{10} = 40\%$; $PES = \frac{40}{40} = 1$ (unit elastic).

2.3 it makes supply more elastic.

3.1 C.

3.2 B.

3.3 (a) elastic. (b) a longer time horizon or more spare capacity (any one). (c) zero.