

5.1 Introduction to Factor Markets

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

KEY WORDS derived demand 派生需求 • factor market 要素市场
• marginal factor cost (mfc) 边际要素成本 • marginal revenue product (mrp) 边际收益产品

Objective

Build the skills to answer exam questions on **factor markets**.

You must be able to:

- explain that the demand for a **factor of production** is a **derived demand** 派生需求
- calculate the **marginal revenue product (MRP)** 边际收益产品
- calculate the **marginal factor cost (MFC)** 边际要素成本
- state the profit-maximizing hiring rule: employ a factor until $MRP = MFC$

1 Worked examples

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

■ Derived demand

A firm demands a factor (like labour) only because of the demand for the **good it helps produce**.

■ MRP and MFC

$MRP = MP \times \text{price of the good}$ — the extra revenue from one more unit of the factor. MFC is the extra cost of hiring one more unit (the wage, in a competitive factor market).

■ Hiring rule

Hire until $MRP = MFC$. The factor demand curve is the firm's **MRP** curve.

2 Practice

2.1 State what “derived demand” means for a factor of production. [1]

2.2 A worker's marginal product is 5 units, and each unit sells for \$4. Find the worker's MRP. [2]

2.3 State the profit-maximizing hiring rule. [1]

3 Exam-style questions

3.1 The marginal revenue product of labour is [1]

- | | |
|---|---|
| A | B |
| C | D |
- A** marginal product $\times$ price
B the wage
C total revenue
D marginal cost

3.2 A firm hires labour until [1]

- | | |
|---|---|
| A | B |
| C | D |
- A** $MRP > MFC$
B $MRP = MFC$
C $MRP < MFC$
D the wage is zero

3.3 A worker adds 8 units of output, each selling for \$5; the wage is \$30.

- (a) Find the worker's MRP. [1]
(b) State whether the firm should hire this worker. [1]
(c) Explain why. [1]