

Exercise walk-through

4.3

Price Discrimination

AP Microeconomics

Different prices: discrimination or different costs?

Price discrimination : different prices for the same good, not explained by differences in supply cost.

Classify the offers; identify the evidence

A: a student pays less for the same cinema seat and service.

B: a premium ticket costs more because it includes a costly meal.

Check market power, separation by willingness to pay and limits on resale. A discount is not perfect knowledge of every buyer's valuation.

Different prices: discrimination or different costs?

Price discrimination : different prices for the same good, not explained by differences in supply cost.

Classify the offers; identify the evidence

A: a student pays less for the same cinema seat and service.

B: a premium ticket costs more because it includes a costly meal.

A can be price discrimination. B alone does not establish it: the service and cost differ. Student ID separates groups, and personal tickets restrict resale.

Check market power, separation by willingness to pay and limits on resale. A discount is not perfect knowledge of every buyer's valuation.

Perfect discrimination: who receives the surplus?

Original monopoly: $D : P = 110 - Q$, $MC = 20 + Q$, fixed cost \$600.

Predict before calculating

Each unit sells for its buyer's maximum willingness to pay. No price cut applies to earlier units. Find the final unit, its lowest price, and consumer surplus.

Perfect discrimination: who receives the surplus?

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Predict before calculating

Each unit sells for its buyer's maximum willingness to pay. No price cut applies to earlier units. Find the final unit, its lowest price, and consumer surplus.

$$P = MC \Rightarrow 110 - Q = 20 + Q$$

$$Q_E = (110 - 20)/2 = 45 \text{ units}$$

$$P_{\text{lowest}} = 110 - Q_E = 110 - 45 = \$65$$

More efficient output does not mean buyer surplus

Original firm's outcome	Uniform price	Perfect discrimination
Output	30	45
Consumer surplus	\$450	\$0
Producer surplus	\$1,350	\$2,025
Economic profit	\$750	\$1,425
Deadweight loss	\$225	\$0

Each buyer pays their maximum willingness to pay. With no externalities, all worthwhile trades occur, but consumers keep no surplus.

Perfect discrimination removes the uniform-price deadweight loss. Producer surplus still differs from profit by fixed cost \$600.

Exercises 2.1-2.3

2.1 Define price discrimination.

[1]

2.2 State two conditions needed for a firm to price discriminate.

[2]

2.3 State what happens to consumer surplus under perfect price discrimination.

[1]

Exercises 2.1-2.3

2.1 Define price discrimination. [1]

2.1

- charging different buyers different prices for the same good
-

2.2 State two conditions needed for a firm to price discriminate. [2]

2.2

- any two of: market power, ability to separate buyers, ability to prevent resale
-

2.3 State what happens to consumer surplus under perfect price discrimination. [1]

2.3

- it is reduced to zero (captured by the firm)

Exercises 3.1-3.2

3.1 Perfect price discrimination charges each buyer

[1]

☐

A the same price

B their maximum willingness to pay

C marginal cost

D zero

3.2 Under perfect price discrimination, the deadweight loss is

[1]

☐

A doubled

B zero

C at its maximum

D unchanged

Exercises 3.1-3.2

3.1 Perfect price discrimination charges each buyer

[1]

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A the same price

B their maximum willingness to pay

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3.1 B

- their maximum willingness to pay.

3.2 Under perfect price discrimination, the deadweight loss is

[1]

☐

A doubled

B zero

C at its maximum

D unchanged

3.2 B

- zero.

Exercise 3.3 (a)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(a) Name the pricing strategy it can use.

[1]

Exercise 3.3 (a)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(a) Name the pricing strategy it can use.

[1]

(a)

- perfect (first-degree) price discrimination

Exercise 3.3 (b)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(b) State what happens to consumer surplus.

[1]

Exercise 3.3 (b)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(b) State what happens to consumer surplus.

[1]

(b)

- it falls to zero

Exercise 3.3 (c)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(c) State whether output is allocatively efficient.

[1]

Exercise 3.3 (c)

3.3 A firm can identify each buyer's willingness to pay and prevent resale.

(c) State whether output is allocatively efficient.

[1]

(c)

- yes – it is allocatively efficient