

# Exercise walk-through

Classification of goods and services ■ 1.6

eXercise

## You must be able to

- distinguish free, private, public, merit and demerit goods
- explain **rivalry** 竞争性 and **excludability** 排他性
- explain the free-rider problem and why the government provides public goods

## Method — Types of good

- **Private good** 私人物品: has **rivalry** 竞争性 (my use reduces yours) and **excludability** 排他性 (non-payers can be stopped).
- **Public good** 公共物品: **non-rivalry** 非竞争性 + **non-excludability** 非排他性 → the **free-rider problem** 搭便车问题 → private firms won't supply it, so the government does.
- **Merit good** 优值品 (e.g. education): under-consumed; **demerit good** 劣值品 (e.g. cigarettes): over-consumed — both from **information failure** 信息失灵.

**Answer shapes:** AO1 + AO2 + AO3 (analysis) + AO4 (judgement, for evaluate questions).

## Method — Types of good

|           |           | Excludable                            | Non-excludable                              |
|-----------|-----------|---------------------------------------|---------------------------------------------|
| Non-rival | Rival     | <b>Private good</b><br>food, clothes  | <b>Common resource</b><br>ocean fish, air   |
|           | Non-rival | <b>Club good</b><br>cinema, toll road | <b>Public good</b><br>street light, defence |

*Rivalry and excludability give four types of good*

## Practice 2.1 ■ 2 marks

Define the term *public good*.

## Solution 2.1

Method: Types of good

### Worked steps

a good that is non-rival (one person's use does not reduce the amount for others) and non-excludable (non-payers cannot be stopped from using it) (2 for both features; 1 for one).

## Practice 2.2 ■ 2 marks

State the two features of a private good.

## Solution 2.2

Method: Types of good

### Worked steps

rivalry and excludability ( $1 + 1$ ).

## Practice 2.3 ■ 2 marks

State the difference between a *merit* and a *demerit* good.

## Solution 2.3

Method: Types of good

### Worked steps

a merit good is under-consumed because people undervalue its benefit; a demerit good is over-consumed because people underestimate its harm (2 for a clear difference; 1 for a partial idea).

## Exam-style 3.1 ■ 1 mark

A good that is non-rival and non-excludable is a:

**A** private good

**B** merit good

**C** public good

**D** free good

## Solution 3.1

**A** private good

**B** merit good

**C** public good



**D** free good

### Worked steps

**C.** Non-rival and non-excludable defines a public good.

## Exam-style 3.2 ■ 6 marks

Explain why the **free-rider problem** means private firms will not supply a public good.

## Solution 3.2

Method: Types of good

### Worked steps

[6] AO1 1–2 + AO3 up to 4 — because a public good is non-excludable, people can enjoy it without paying (free riders) → a firm cannot make buyers pay → it earns no revenue → it cannot make a profit, so it will not supply the good → the government must provide it.

## Exam-style 3.3 ■ 12 marks

Discuss whether the government should provide all merit goods free of charge.

## Solution 3.3

Method: Types of good

### Worked steps

[12] AO1/AO2/AO3 up to 8 + AO4 up to 4. **For:** free provision raises consumption of under-consumed merit goods (education, health), giving large external benefits to society. **Against:** it is costly (high opportunity cost and taxes), may be over-used or wasted, and some can afford to pay. Judgement: free provision is justified where external benefits are large and access matters, but full free provision of *all* merit goods may be unaffordable — targeting or subsidies may be better; it depends on the good and the budget.