Exercise walk-through

Opportunity Cost and the Production Possibilities Curve (PPC) ▪ 1.2

eXercise

You must be able to

- define **opportunity cost 机会成本** as the value of the next-best alternative given up
- interpret the **production possibilities curve (PPC) 生产可能性曲线**
- link a **bowed-out** PPC to increasing opportunity cost and a straight line to constant cost
- identify efficient, inefficient, and unattainable points, and explain outward shifts

Method — Opportunity cost

The **next-best alternative** given up when you make a choice — not the money price, but what you sacrifice.

Method — The PPC

Shows the maximum combinations of two goods an economy can make. Points **on** the curve are efficient; **inside** are inefficient (wasted resources); **outside** are unattainable now.

Method — Shape and shifts

A **bowed-out** PPC shows the law of **increasing** opportunity cost; a **straight** line shows constant cost. More or better resources, or new technology, shift the PPC **outward** (economic growth).

Practice 2.1 ▪ 1 mark

Define opportunity cost.

Solution 2.1

Worked steps

the value of the next-best alternative given up when a choice is made **B1**.

Practice 2.2 ▪ 1 mark

State what a point **inside** the PPC represents.

Solution 2.2

Worked steps

an inefficient use of resources (some are idle or wasted) **B1**.

Practice 2.3 ▪ 2 marks

A country moves from producing 10 cars and 40 phones to 15 cars and 25 phones. Find the opportunity cost of the 5 extra cars.

Solution 2.3

Worked steps

phones fall from 40 to 25, a loss of 15 phones **M1**; so the 5 cars cost 15 phones **A1**.

Exam-style 3.1 ▪ 1 mark

A bowed-out (concave) PPC shows

A constant opportunity cost

B increasing opportunity cost

C zero opportunity cost

D falling total output

Solution 3.1

Method: Shape and shifts

A constant opportunity cost

B increasing opportunity cost ✓

C zero opportunity cost

D falling total output

Worked steps

B.

Exam-style 3.2 ▪ 1 mark

A point outside the PPC is currently

A efficient

B inefficient

C unattainable

D optimal

Solution 3.2

A efficient

B inefficient

C unattainable ✓

D optimal

Worked steps

C.

Exam-style 3.3 ▪ 1 mark

An economy produces guns and butter.
(a) State what a point **on** the PPC represents.
(b) State one cause of an **outward** shift of the PPC.
(c) It moves from 20 guns and 30 butter to 25 guns and 22 butter. Find the opportunity cost of the extra guns.

Solution 3.3

Method: Shape and shifts

Worked steps

(a) an efficient, fully-employed use of all resources **B1**. (b) more/better resources or improved technology **B1**. (c) butter falls by 8, so the extra 5 guns cost 8 butter **B1**.