



Chapter 1: What is Economics? Section 3

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ECONOMICS

PEARSON

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Objectives

1. **Interpret** a **production possibilities curve**.
2. **Explain** how **production possibilities curves show efficiency, growth, and cost**.
3. **Explain** why a country's production possibilities depend on its **resources and technology**.



Key Terms

- **production possibilities curve:** a graph that shows alternative ways to use an economy's resources
- **production possibilities frontier:** a line on a production possibilities curve that shows the maximum possible output an economy can produce
- **efficiency:** the use of resources in such a way as to maximize the output of goods and services
- **underutilization:** the use of fewer resources than an economy is capable of using
- **law of increasing costs:** an economic principle which states that as production shifts from making one good to another, more resources are needed to increase production of the second good or service



Introduction

- How does a nation decide what and how to produce?
 - To decide what and how to produce, economists use **a tool known as a production possibilities curve**.
 - This **curve** helps a nation's economists **determine the alternative ways of using that nation's resources**.



Production Possibilities

- Economists often use **graphs** to analyze the **choices and trade-offs that people make.**
- A **production possibilities curve** is a graph that shows alternative ways to use an **economy's productive resources.**
 - To draw a **production possibilities curve**, an economist begins by deciding **which goods or services to examine.**



Production Possibilities Curve

- The table below shows six different combinations of **watermelons and shoes** that Capeland could produce using all of its factor resources.

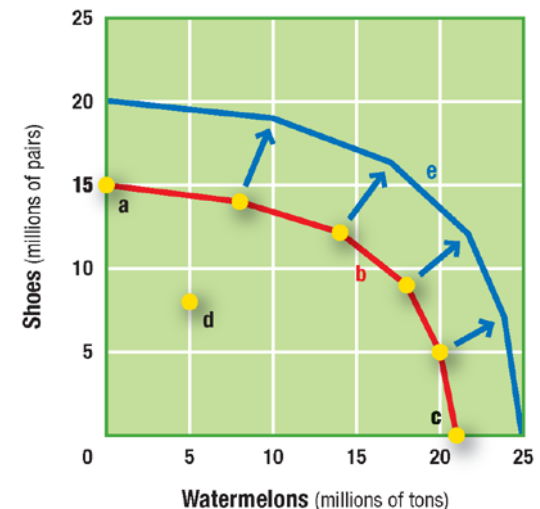
– How many **watermelons** can Capeland produce if they are **making 9 million pairs of shoes**?

18

| Watermelons (millions of tons) | Shoes (millions of pairs) |
|-----------------------------------|------------------------------|
| 0 | 15 |
| 8 | 14 |
| 14 | 12 |
| 18 | 9 |
| 20 | 5 |
| 21 | 0 |

KEY

- a. No watermelons, all possible shoes
- b. A production possibilities frontier
- c. No shoes, all possible watermelons



- d. A point of underutilization
- e. Future production possibilities frontier

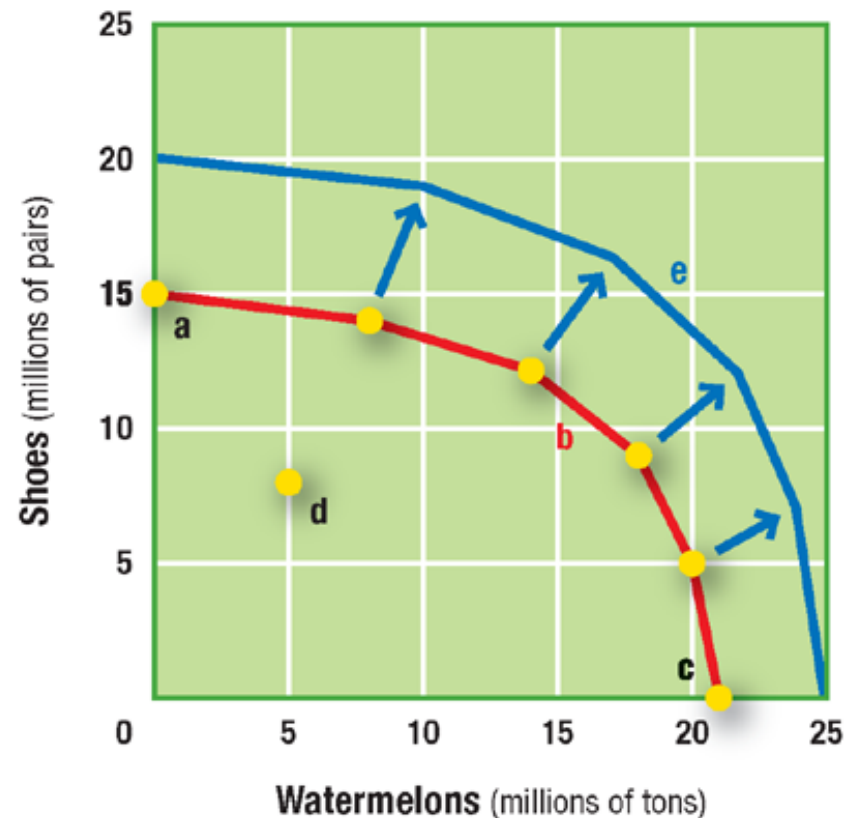


Production Possibilities Frontier

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Production Possibilities Frontier

- The line on a production possibilities curve that shows **the maximum possible output** an economy can produce is called the **production possibilities frontier**.
 - Each point on the **production possibilities frontier** reflects a **trade-off**. These **trade-offs** are necessary because **factors of production** are **scarce**.
 - Using **land, labor, and capital** to make one product means **that fewer resources** are left to make something else.



Efficiency

- A **production possibilities frontier** represents an economy working at its **most efficient level**.
- Sometimes an economy works **inefficiently** and it uses **fewer resources** than it is capable of using. This is known as **underutilization**.



- A production possibilities curve can also show **growth or contraction of an economy**.
 - When an economy **grows**, the curve **shifts to the right**.
 - However, when an economy's production capacity **decreases**, the economy **slows** and the curve **shifts to the left**. This is contraction.



- Production possibilities curves can be used to determine the **opportunity costs involved in make an economic decision.**
 - Cost increases as production shifts from **making one item to another.**
 - The **law of increasing costs** helps explain the **production possibilities curve.**
 - As we **move along the curve**, we trade off **more and more for less and less output.**



Law of Increasing Costs

STEP 1

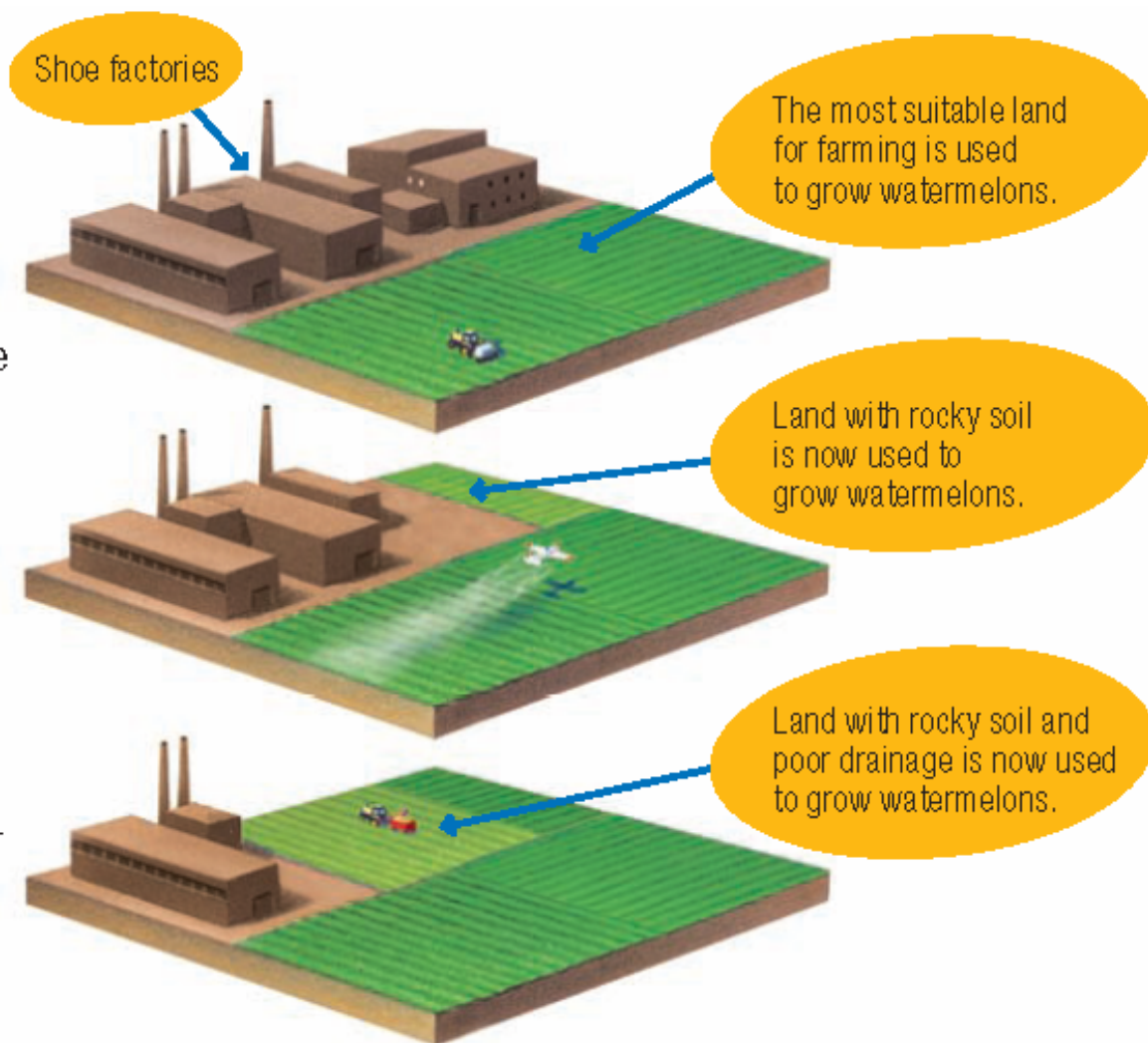
Initially, resources are used efficiently to make a balance of watermelons and shoes.

STEP 2

A decision is made to grow more watermelons. Less suitable resources are shifted to farm production. Farm production increases. Shoe production decreases.

STEP 3

A decision is made to grow even more watermelons, and more resources are shifted to farm production. Because the added land is less productive, a greater amount of it must be cultivated. Farm output increases. Shoe output decreases by an even greater amount.



Technology and Education

- Technology can increase a nation's **efficiency**.
- Many governments spend money investing in **new technology, education, and training for the workforce**.

