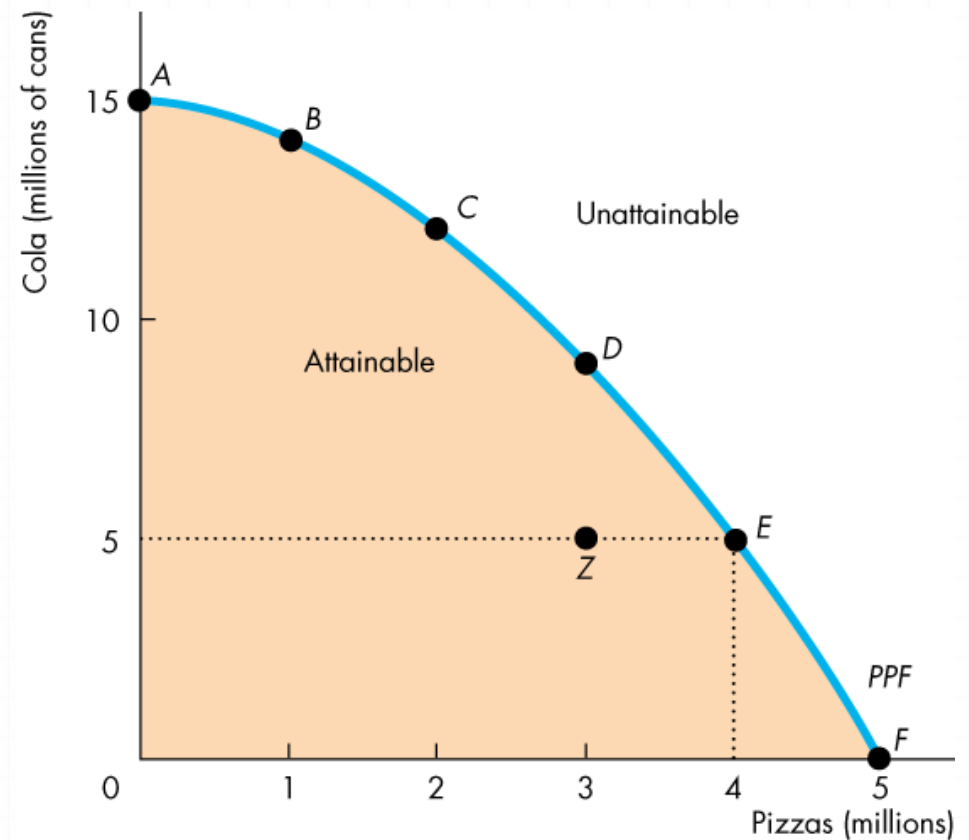


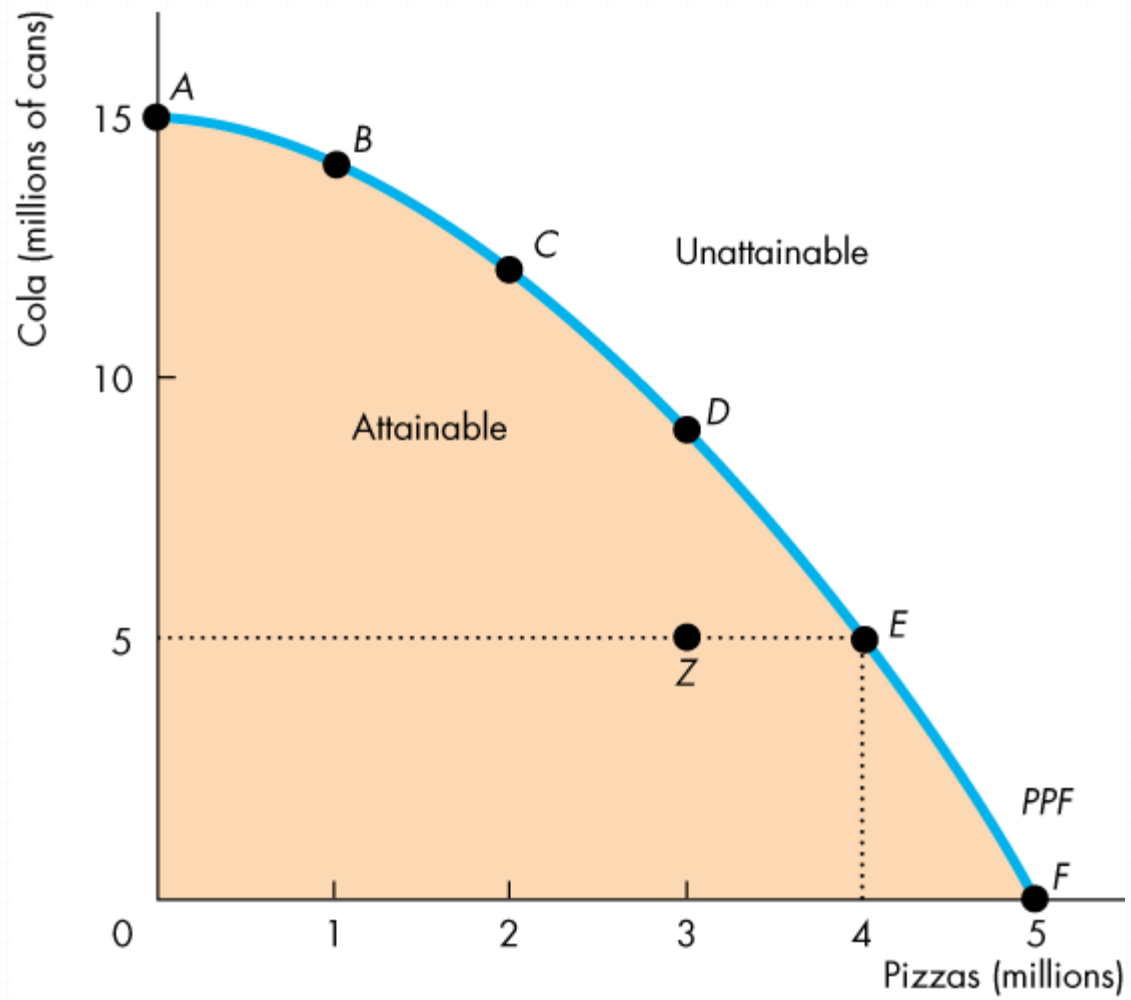
Production Possibilities and Opportunity Cost

- 0 The **production possibilities frontier** (*PPF*) is the boundary between those combinations of goods and services that can be produced and those that cannot.
- 0 To illustrate the *PPF*,
 - 0 we focus on two goods at a time
 - 0 and hold the quantities of all other goods and services constant.

Production Possibilities and Opportunity Cost

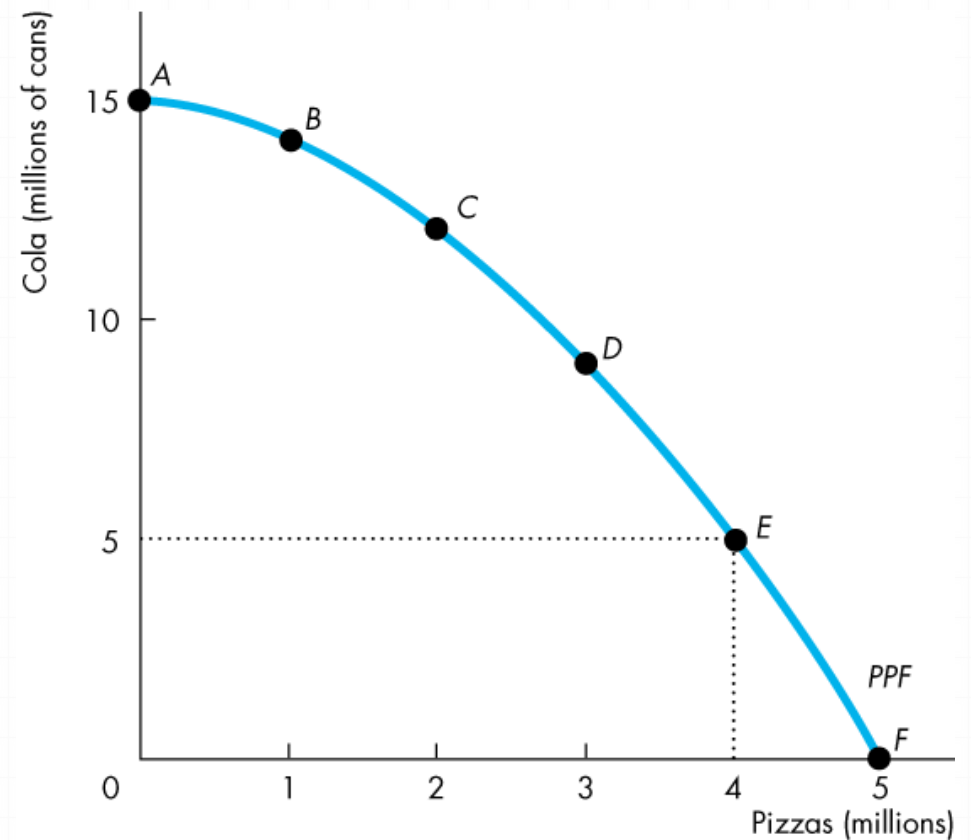
- Production Possibilities Frontier
 - Any point *on* the frontier such as *E* and any point *inside* the *PPF* such as *Z* are attainable.
 - Points outside the *PPF* are unattainable.





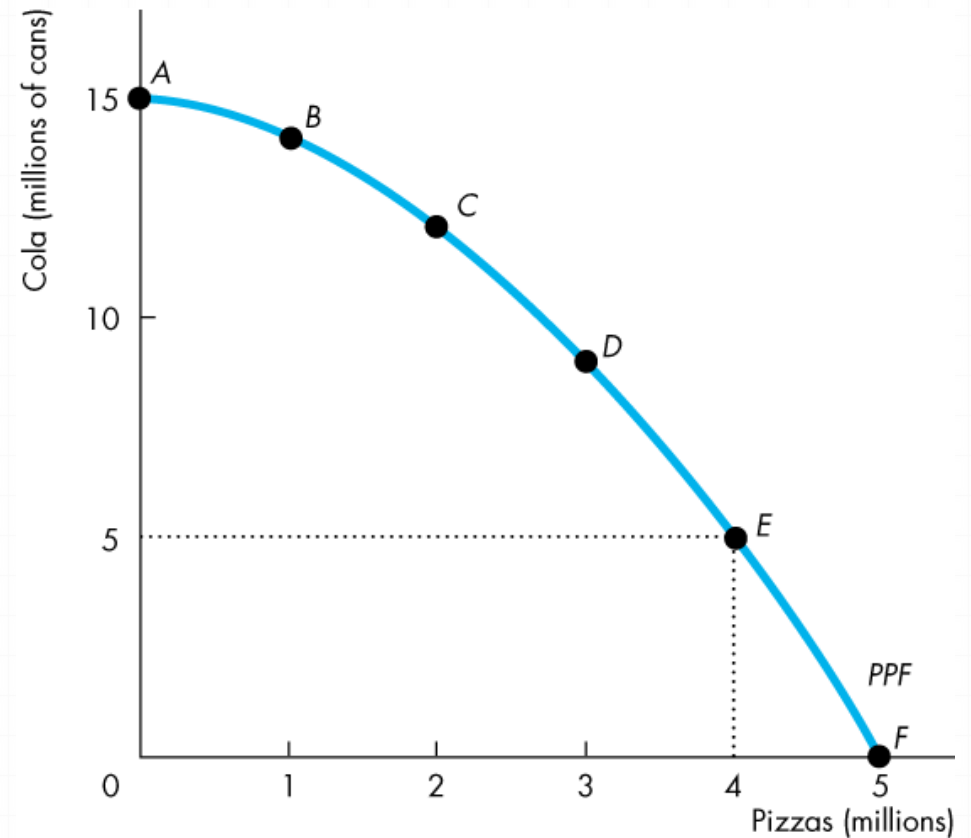
Production Possibilities and Opportunity Cost

- Opportunity Cost
 - As we move down along the *PPF*, we produce more pizzas, but the quantity of cola we can produce decreases.
 - The opportunity cost of a pizza is the cola forgone.



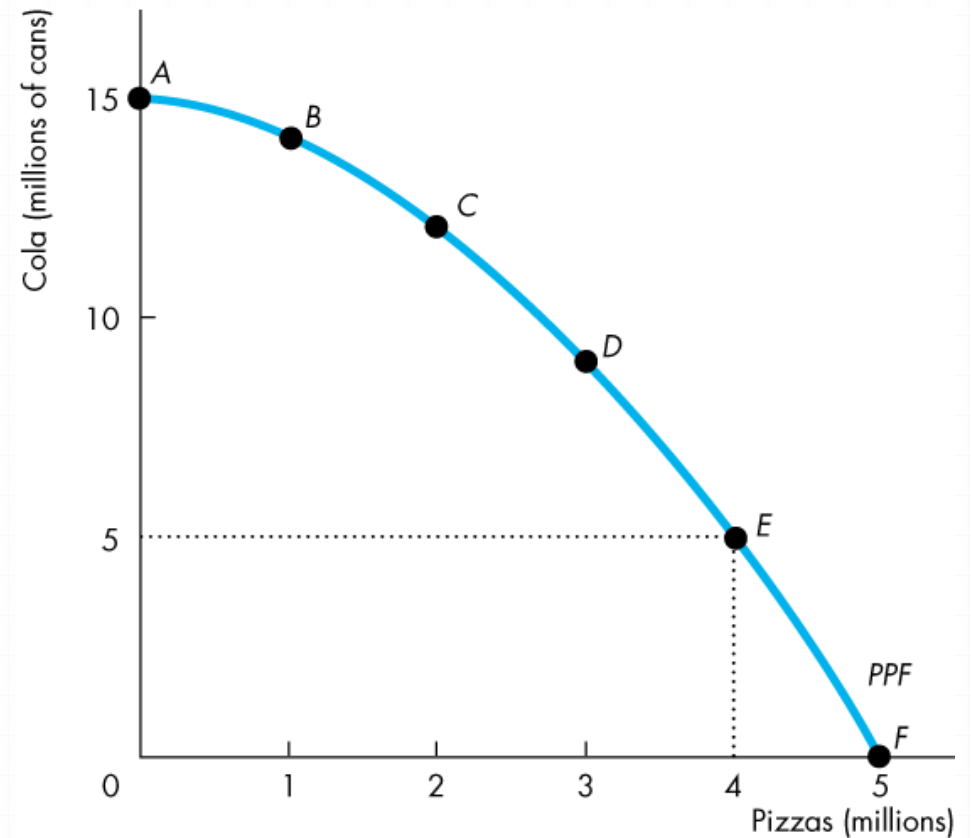
Production Possibilities and Opportunity Cost

- In moving from *E* to *F*, the quantity of pizzas increases by 1 million.
- The quantity of cola decreases by 5 million cans.
- The opportunity cost of the fifth 1 million pizzas is 5 million cans of cola.
- One of these pizzas costs 5 cans of cola.



Production Possibilities and Opportunity Cost

- Note that the opportunity cost of a can of cola is the *inverse* of the opportunity cost of a pizza.
- One pizza costs 5 cans of cola.
- One can of cola costs $1/5$ of a pizza.

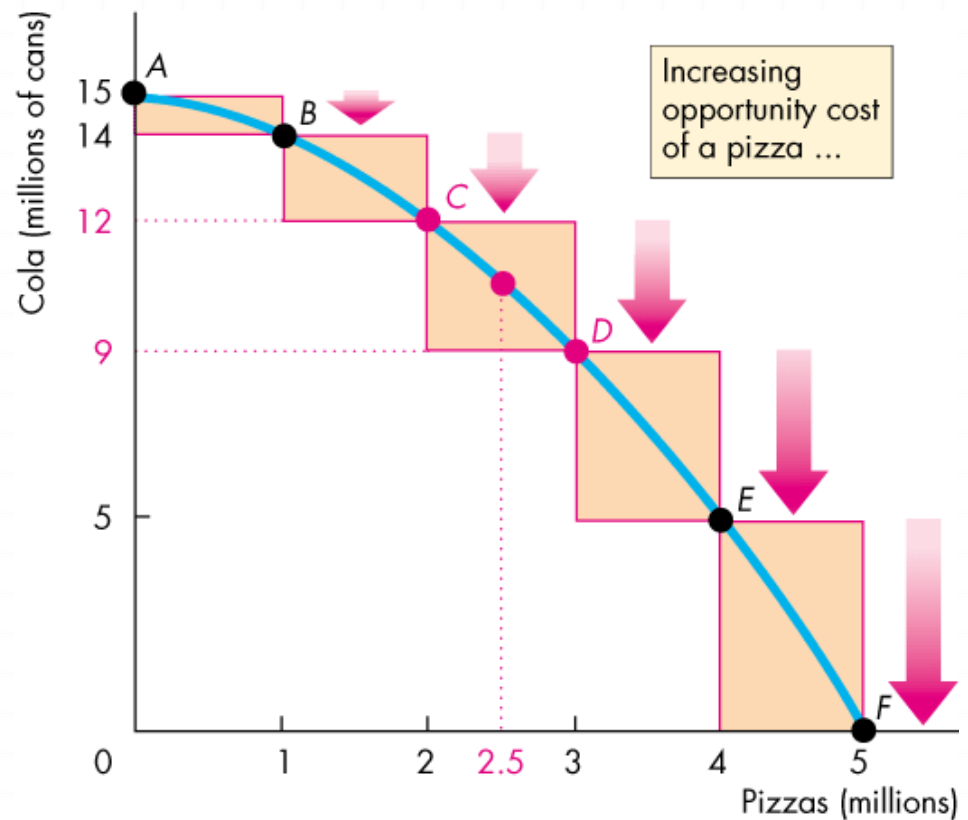


Using Resources Efficiently

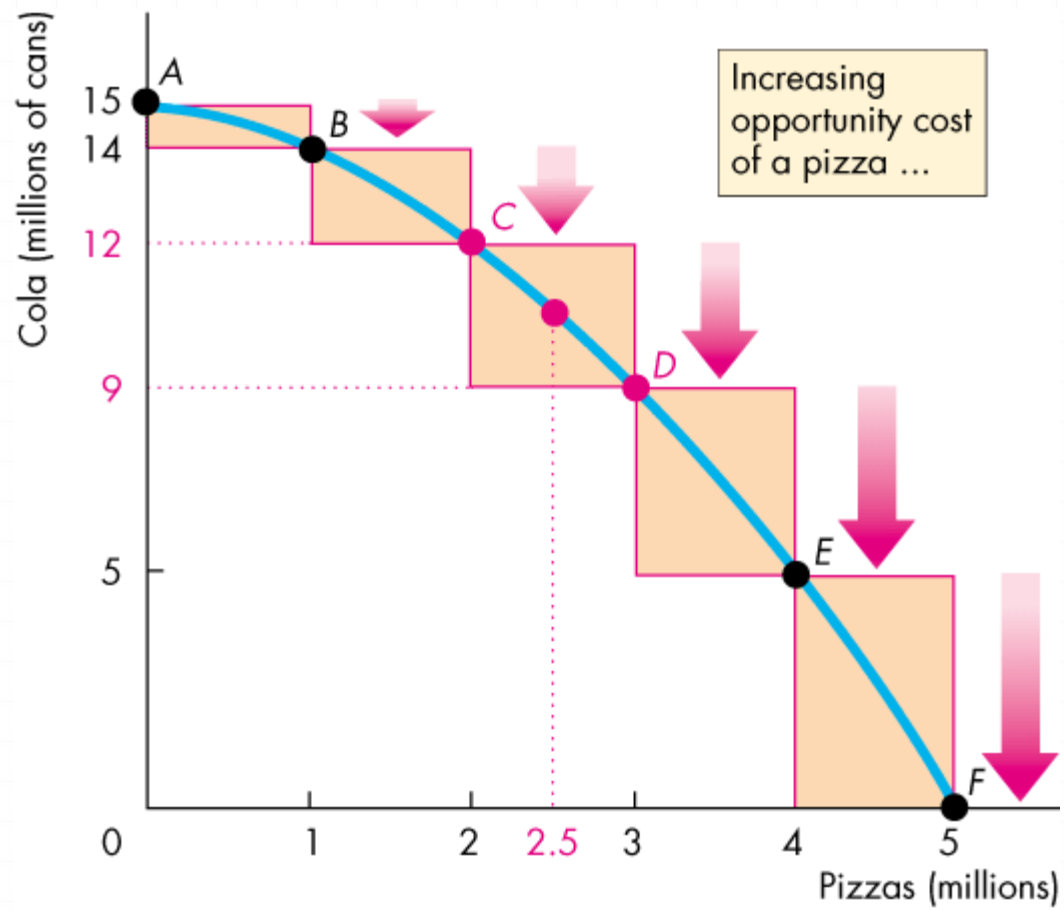
- 0 All the points along the *PPF* are efficient.
- 0 To determine which of the alternative efficient quantities to produce, we compare costs and benefits.
- 0 The *PPF* and Marginal Cost
 - 0 The *PPF* determines opportunity cost.
 - 0 The **marginal cost** of a good or service is the opportunity cost of producing *one more unit* of it.

Using Resources Efficiently

- Figure 2.2 illustrates the marginal cost of pizza.
- As we move along the *PPF* in part (a), the opportunity cost of a pizza increases.
- The opportunity cost of producing one more pizza is the marginal cost of a pizza.



(a) *PPF* and opportunity cost



(a) PPF and opportunity cost

Using Resources Efficiently

- Allocative Efficiency
 - When we cannot produce more of any one good without giving up some other good, we have achieved *production efficiency*.
 - We are producing at a point *on* the *PPF*.
 - When we cannot produce more of any one good without giving up some other good *that we value more highly*, we have achieved **allocative efficiency**.
 - We are producing at *the* point on the *PPF* that we prefer above all other points.

Economic Growth

- The expansion of production possibilities—and increase in the standard of living—is called **economic growth**.
- Two key factors influence economic growth:
 - Technological change
 - Capital accumulation
- **Technological change** is the development of new goods and of better ways of producing goods and services.
- **Capital accumulation** is the growth of capital resources, which includes *human capital*.

Economic Growth

0 **The Cost of Economic Growth**

- 0 To use resources in research and development and to produce new capital, we must decrease our production of consumption goods and services.
- 0 So economic growth is not free.
- 0 The opportunity cost of economic growth is less current consumption.

Gains from Trade

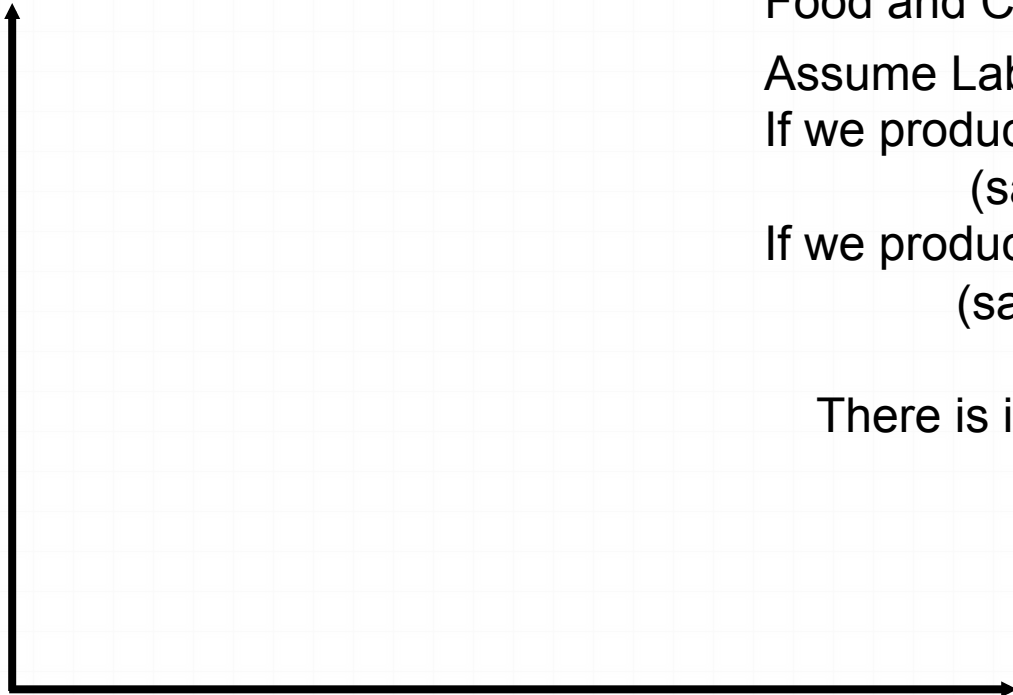
- Comparative Advantage and Absolute Advantage
 - A person has a **comparative advantage** in an activity if that person can perform the activity at a lower opportunity cost than anyone else.
 - A person has an **absolute advantage** if that person is more productive than others.
 - Absolute advantage involve comparing productivities while comparative advantage involves comparing opportunity costs.



PPF

Resources and Production Possibilities

Output of
food, Q_F



Labor is used in the production of both
Food and Cloth

Assume Labor = 1 million

If we produce only Food

(say apples – 10 thousand units)

If we produce only Cloth

(say pant suit – 18 thousand units)

There is increasing marginal cost

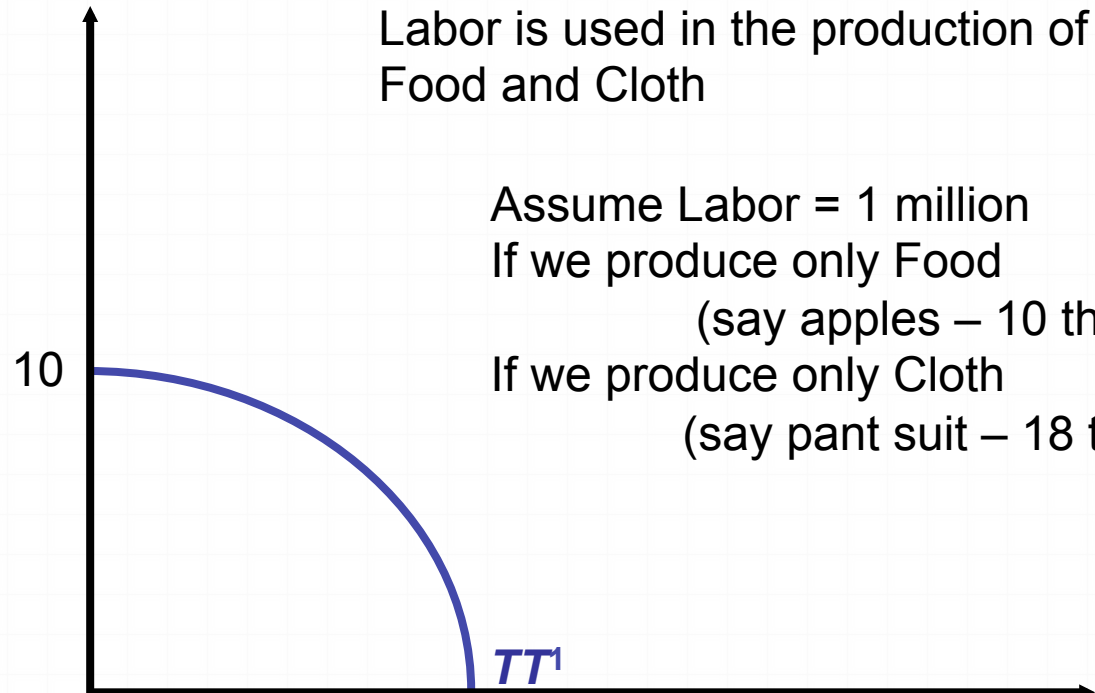
Output of
cloth, Q_C



PPF

Resources and Production Possibilities

Output of
food, Q_F



Labor is used in the production of both
Food and Cloth

Assume Labor = 1 million

If we produce only Food

(say apples – 10 thousand units)

If we produce only Cloth

(say pant suit – 18 thousand units)

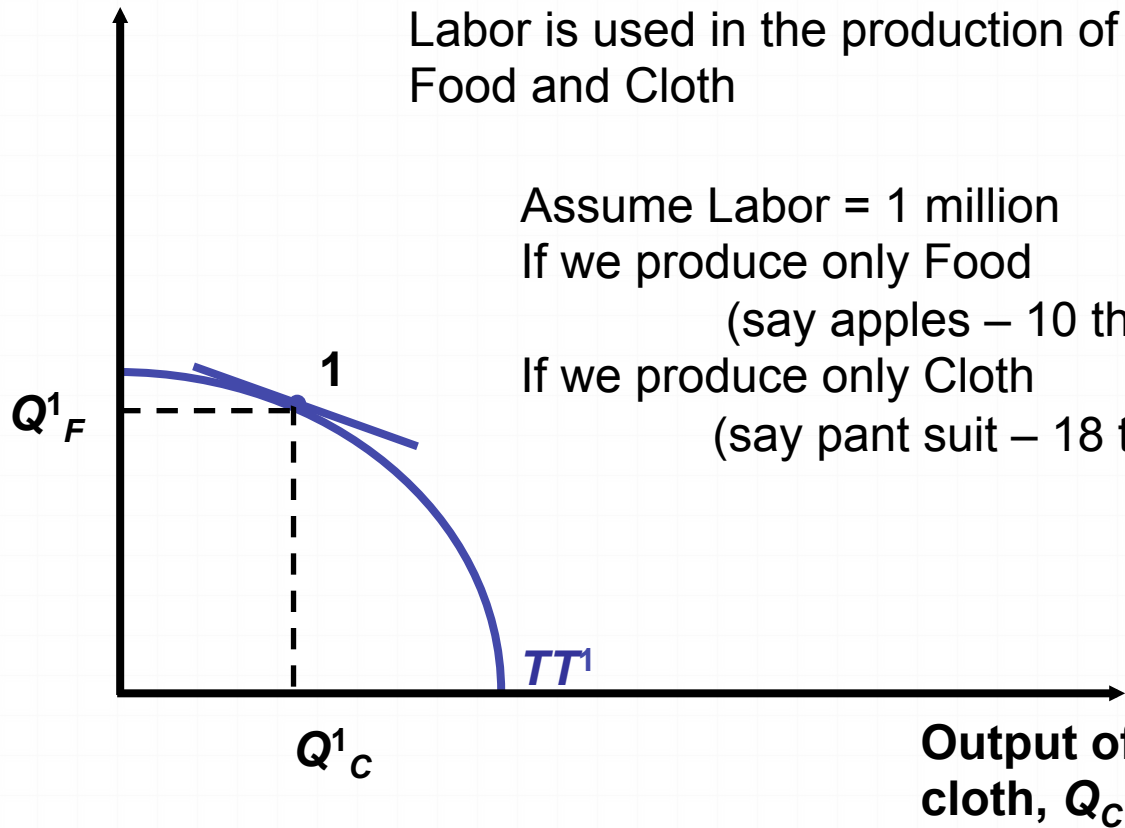
18

Output of
cloth, Q_C

Increase in Labor ?

Resources and Production Possibilities

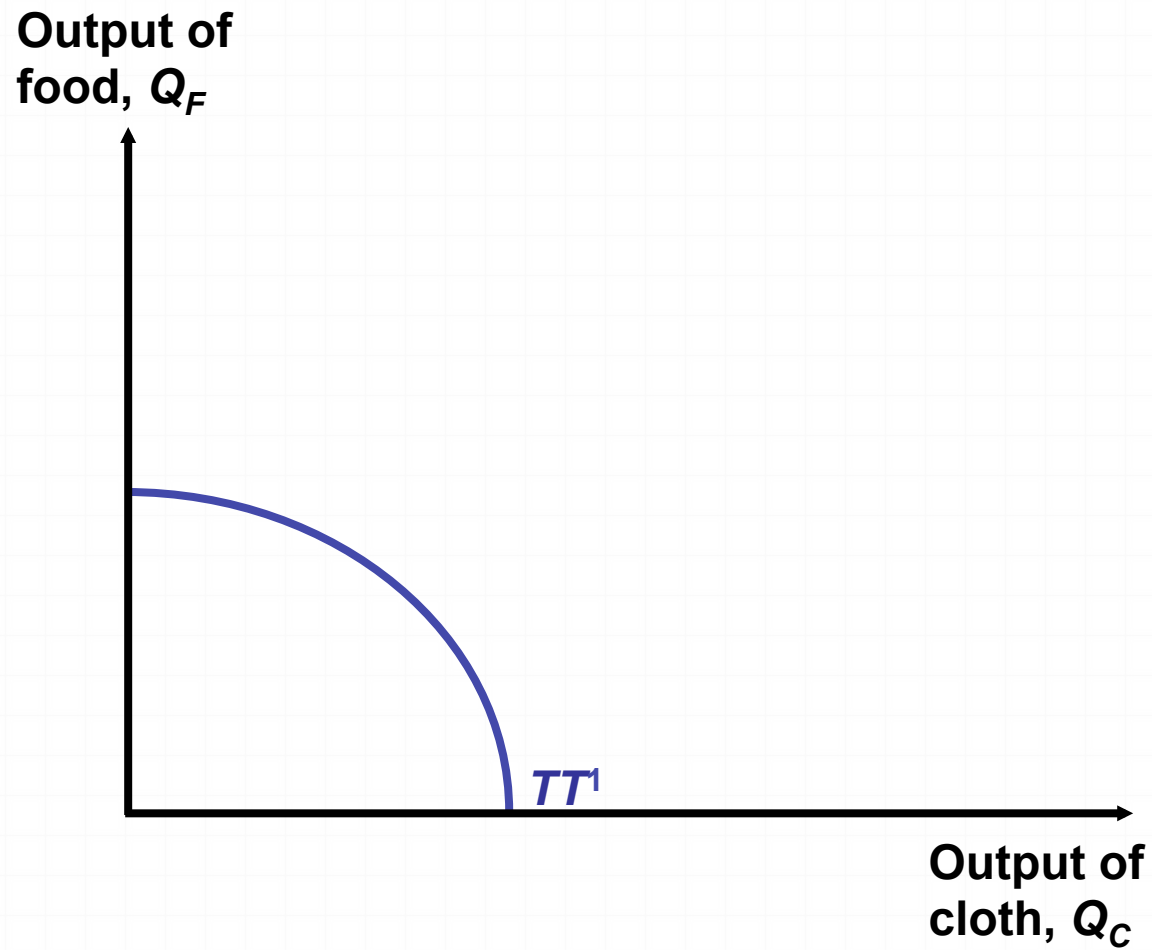
Output of
food, Q_F





Increase in Labor ?

Resources and Production Possibilities





Increase in Labor ?

Resources and Production Possibilities

