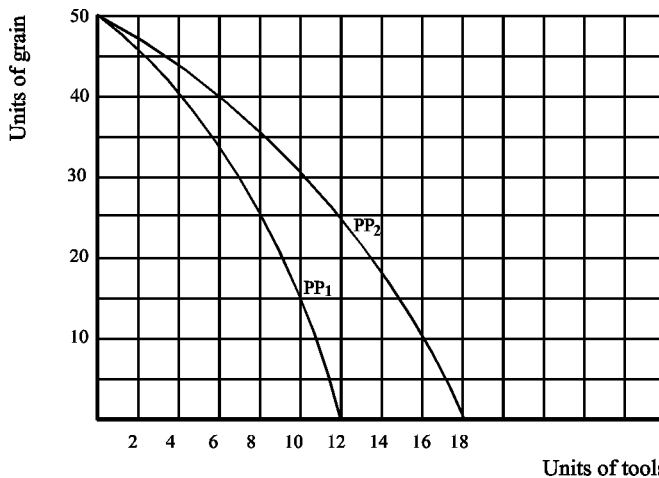


CHAPTER ONE

The Economic Problem

Answers to Test Your Understanding Questions

1. a) P
b) N
c) N
d) P
2. a) Mi
b) Ma
c) Mi
d) Ma
3. a) K
b) C
c) K
d) C
e) B
f) K
4. a) K
b) N
c) N
d) L
e) E
f) K
5. a) **400 guns**
b) **100 guns.** (This means going from combination *b* to combination *c*. As a result, the number of guns would drop from 400 to 300)
c) **greater** (since it costs 150 guns going from *c* to *d* compared to only 100 guns from *b* to *c*)
6. a) and b) See the following figure:



- c) **25 units of grain** (old combination C would now be 25 grain and 12 tools)

Answers to It's News to Me

- I. **d)** (Any activity that uses resources has an opportunity cost and is therefore not free)
- II. **c)** (One could argue that taking a deep breathe on a remote mountain top is free)
- III. **b)** (This is the answer that reveals the concept of opportunity costs, i.e., what other uses those resources could have been used for)

Answers to Study Problems

1. a) **20** tea is gained at a cost of **10** coffee. (Point u means 0 tea and 120 coffees; point v is 20 tea and 110 coffees)
 b) **20** tea is gained at a cost of **30** coffee (Point w means 35 tea and 100 coffees; point x is 55 tea and 70 coffees)
 c) **5** tea is gained at a cost of **30** coffee (Point y means 65 tea and 30 coffees; point z is 70 tea and 0 coffees)
2. a) **10 beef** (half-way between **D** and **E**)
 b) **70 rice** (half- way between **B** and **C**)
 c) **no** (100 rice is between **C** and **D** but that means production of beef is between 20 and 35)
 d) **yes** (combination **C** is 90 rice and 35 beef so it can certainly produce less than this)
3. a) **15 units of beef** (This means going from combination A to combination C, where beef drops from 50 to 35)
 b) **15 units of beef.** (The increase in rice from 90 to 120 causes beef to drop from 35 to 20)
 c) **½ unit of beef.** (30 more rice costs 15 beef; therefore 1 more rice costs 15/30 beef)
 d) **30 units of rice** (The increase in beef from 20 to 35 causes rice to drop from 120 to 90)

4. a) See the following table: **Table 1.9 (Completed)**

Possibility	A	B	C	D	E	F
Cheese	0	30	50	65	75	80
Wine	110	105	95	70	40	0

- b) **No** (If it produced 65 cheese – combination D – the maximum wine would be 70)
 - c) **30 wine** (This would mean going from combination D to E. Production of wine would drop from 70 to 40, a difference of 30)
 - d) **15 cheese** (This would mean going from combination D to C. Production of cheese would drop from 65 to 50, a difference of 15)
5. a) **40 wheat** (This is half-way between combinations C and D. Half-way between 35 and 45 wheat is 40 wheat)
 b) **4 cars** (This means going from combination C to D. Car production would drop from 18 to 14, a difference of 4)

- c) **2 ½ wheat** (This means going from combination D to C. 4 more cars would cost 10 wheat; so 1 car would cost 10/4 or 2 ½ wheat)

6. a) See the following table: **Table 1.12 (Completed)**

	A	B	C	D	E	F
Balls	0	150	250	325	375	400
Bats	55	52	46	36	20	0

- b) **100 balls** (Going from combination C to combination B, ball production drops from 250 to 150).

- c) **No.** (The closest is combination C at 250 balls and 46 bats).

d) See the following table: **Table 1.12 (Completed)**

	A	B	C	D	E	F
Balls	0	150	250	325	375	400
Bats	55	52	46	36	20	0
Bats 2	80	72	61	46	25	0

(Bat production increases by ½ unit *per worker* – this is not a 50% increase in production!)

- e) **Yes.** This is shown in the revised production possibilities table: New combination C gives exactly 250 balls and 61 bats.

7. a) **0.75 trucks** (12/16)

b) **1.75 trucks** (14/8)

c) **1.33 kiwis** (16/12)

d) **0.57 kiwis** (8/14)

e) **12 kiwis and 13 trucks** (8 kiwis and 6 trucks in Kitchener and 4 kiwis and 7 trucks in Waterloo).

f) **16 kiwis and 14 trucks** (Kitchener produces only kiwis and Waterloo only trucks).

g) **4 kiwis and 1 truck** (The difference between answers e) and f)).

8. a) See the following table: **Table 1.13 (Completed)**

	A	B	C	D	E	F
Capital goods	0	25	40	50	55	58
Capital goods 2	0	40	64	80	88	92.8
Consumer goods	50	40	30	20	10	0

- b) **24 more capital goods** (If it still wants 30 consumer goods, it could now have 64 capital goods – 24 more than previously)

c) **10 more consumer goods** (If it still wants 40 capital goods, it can get them at the new combination B, which will also give 40 consumer goods – 10 more than previously)

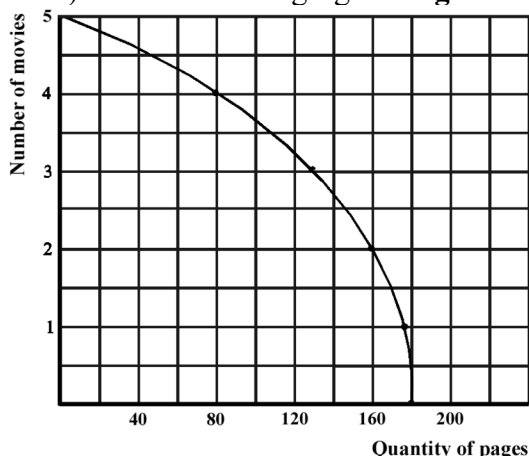
d) **33 capital goods** (This is a movement from combination F to combination B, which would result in capital goods falling from 58 to 25)

e) **52.8** capital goods (This is a movement from combination F to combination B in the table above which would result in capital goods in the capital 2 row falling from 92.8 to 40)

9. a) See the following table: **Table 1.15 (Completed)**

	A	B	C	D	E	F
Movies watched	0	1	2	3	4	5
Pages studied	180	175	160	130	80	0

b) See the following figure: **Figure 1.10 (completed)**



c) **20 pages** of reading. It might be helpful to produce a production possibilities table as follows: From combination A to C gives 2 movies watched, pages studied drops from 180 to 160.

d) **No**. Combination C shows the best she can do is 3 movies and 130 pages studied.

e) **80 pages** of reading. Going from combination B to combination A, pages studied drops from 80 to 0.

10. a) Oz: **20** food units and **10** equipment units; Zas **10** food units and **15** equipment units (This represents one-half of the quantities for each country shown in the question).

b) **30** food units and **25** equipment units (Found by adding together the totals for each country shown in answer a)).

c) Oz: **40** food units and **0** equipment units; Zas: **0 food** units and 30 equipment units (Since Oz is more productive in food than is Zas, it would produce the amount of food as shown in the question and zero equipment. Since Zas is more productive in equipment than is Oz, it would produce the amount of equipment as shown in the question and zero food).

d) **40** food units and **30** equipment units. (Found by adding the quantities in answer c)).

e) **10** food units and **5** equipment units. (The difference between the quantities in answer d) and answer b)).

Answers to The Impossible Answer

1. a) incorrect b) impossible c) correct

- Communism is an example of a command economy where the state has central control over all aspects of the economy.
 - Consensus is not one of the four types of economies (the Four Cs).
2. a) impossible b) incorrect c) correct
- A tractor is a piece of capital – the human made resource that is used to produce other products.
 - Money is not one of the four factors of production.
3. a) incorrect b) correct c) impossible
- “When to produce” is not one of the three fundamental questions.
 - By technology, economists mean the method of production used, i.e., how to produce.