

Price Determination — Worksheet

Equilibrium · shifts in demand and supply · consumer and producer surplus · the price mechanism · indirect taxes and subsidies

Name: _____

Class: _____

Date: _____

DEFINE consumer surplus and a specific tax · **CALCULATE** consumer surplus, producer surplus and the cost of a subsidy · **DRAW** the effect of a specific tax on the price buyers pay and the price sellers keep · **ANALYSE** how two changes in a market move the equilibrium price · **DISCUSS** the effects of a change in a world price on one country's market · **EVALUATE** the likely effects of a subsidy for farmers, producers and the government

Sitting 1 — Topic practice

30 marks

MULTIPLE CHOICE Task 1 — Six questions on price determination

6 marks

Choose one answer for each question.

1. In Orana's rice market, at \$16, \$18, \$20 and \$22 a bag, the quantity demanded is 280, 250, 220 and 190 bags a day, and the quantity supplied is 160, 190, 220 and 250 bags a day. The equilibrium is:

- A \$20 and 440 bags
- B \$20 and 220 bags
- C \$16 and 280 bags
- D \$22 and 250 bags

Answer:

2. At Orin's fish market, the quantity demanded and the quantity supplied were both 900 kg a day at \$5 a kilo. A storm keeps some boats in port, and at \$5 the quantity supplied is now only 600 kg. Nothing has changed for buyers. What happens next?

- A Excess supply of 300 kg at \$5 drives the price down until buyers take the extra fish
- B Excess demand of 300 kg bids the price up, and quantity demanded contracts
- C The price rises until 900 kg are supplied again, as before the storm
- D Demand shifts left by 300 kg, as buyers cannot find the fish they want

Answer:

3. In a market with equilibrium at \$9 and 400 units, the demand curve meets the price axis at \$20 and the supply curve meets it at \$4. Producer surplus is:

- A \$2,000
- B \$1,800
- C \$2,200
- D \$1,000

Answer:

4. Only 50 tickets are left for the last train before a holiday. At the usual price, 200 people want a ticket. If the price can rise or fall, who gets the tickets?

- A The 50 people who most need to travel that day
- B The first 50 people who reach the ticket office and pay the usual price
- C The 50 people who are willing and able to pay the most
- D The 50 people who take this train every week

Answer:

5. The incidence of an indirect tax falls more heavily on:

- A whichever side is legally required to pay it
- B the side of the market with more participants
- C the side of the market that is less price elastic
- D producers, in every case, because they send the tax to the government

Answer:

6. Before a subsidy, sellers of beans in Wenu needed \$9 a kilo to supply 400 kilos a day. With it, they need only \$6.50 a kilo from buyers to supply 400 kilos. The subsidy is:

- A \$6.50 a kilo
- B \$15.50 a kilo
- C \$2.50 a kilo
- D nothing: the sellers have simply cut their profit

Answer:

DEFINE Task 2 — The meaning of consumer surplus

2 marks

Define the term consumer surplus.

consumer surplus

How is producer surplus different from consumer surplus? (practice, not marked)

EXPLAIN Task 3 — Market forces in an egg market

4 marks

At Merin's Saturday market, eggs are priced at \$2 a tray. At that price, the quantity demanded is 950 trays and the quantity supplied is 600 trays.

Explain how market forces are likely to change the price of eggs at Merin's market.

Name the gap first, then follow what buyers and sellers do.

CLASSIFY Task 4 — One price rise in the cocoa market

8 marks

A poor harvest in the main growing countries doubles the world price of cocoa beans.

Classify each event as one function of price from the key.

Key: Rationing · Signalling · Incentive

#	What happens	Function of price
1	A chocolate maker far away, who has heard nothing about the harvest, sees from the price that cocoa is scarce	
2	A farmer in another country plants cocoa trees, because cocoa now earns more than it costs to grow	
3	A small bakery that will not pay the new price buys no cocoa this month	
4	Growers pick cocoa from old trees that cost too much to pick before	
5	The cocoa that is left goes to the firms that will pay the higher price	
6	Traders who never read the news can tell from the price that there is less cocoa	
7	A café cannot afford the higher price, so it buys less cocoa than before	
8	When the price falls again a year later, growers stop picking the costly old trees	

CALCULATE Task 5 — Consumer and producer surplus in a shoe market

4 marks

In Tolo, the market for school shoes is in equilibrium at \$30 a pair, with 800 pairs sold a week. The demand curve cuts the price axis at \$50, and the supply curve cuts it at \$18. Both curves are straight lines.

Calculate the consumer surplus and the producer surplus each week at the equilibrium.

Consumer surplus

Workings

Answer: \$

Producer surplus

Workings

Answer: \$

Each surplus is a triangle: $\frac{1}{2} \times \text{base} \times \text{height}$.

ANALYSE

Task 6 — Two changes in the market for taxi rides

6 marks

In the city of Rimo, a new bus route opens along the busiest taxi route. In the same month, 200 new drivers start to offer taxi rides.

Analyse the likely effect of these two changes on the equilibrium price of taxi rides in Rimo.

Knowledge — how each of the two curves shifts (2)

Application — use the two changes in Rimo (2)

Analysis — your chain of reasoning (2)

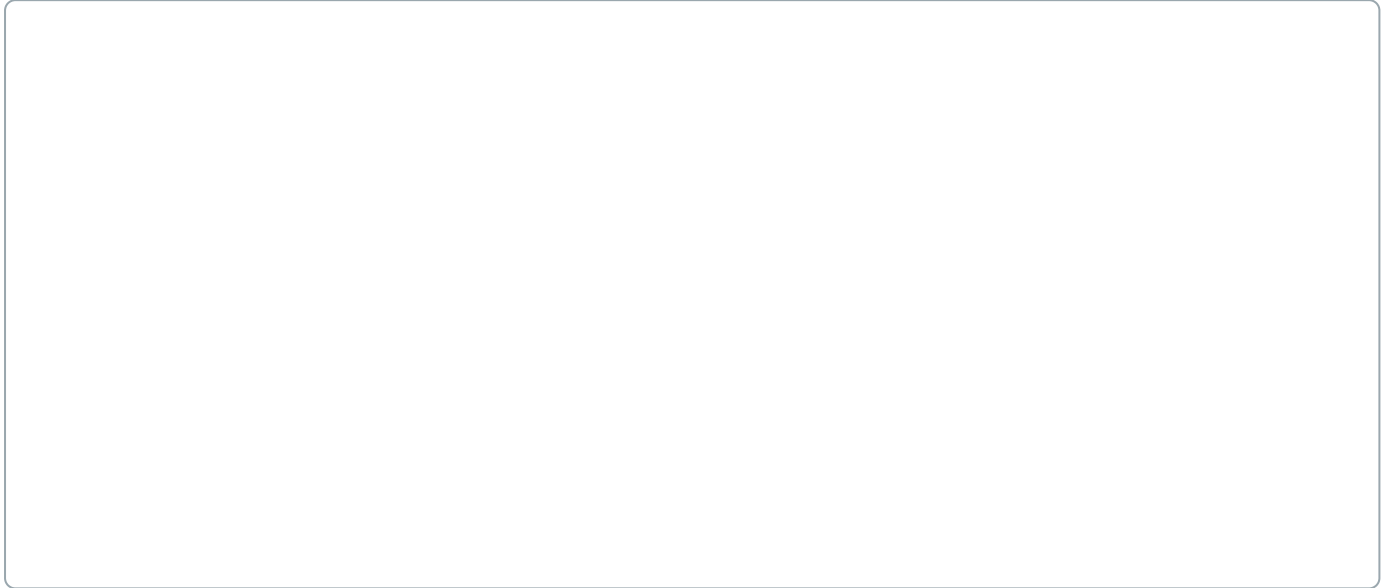
Study each change alone first, then combine the two.

DRAW Task 7 — A diagram of a specific tax

4 marks

The government of Sevan puts a specific tax of \$3 on each kilo of sugar sold.

Draw a supply and demand diagram showing the effect of the tax on the price buyers pay and the price sellers keep.

**EXPLAIN Task 8 — Producer surplus after a rise in demand**

4 marks

A popular film makes cycling fashionable in Corla, so demand for bicycles increases. The supply of bicycles in Corla does not change.

Explain the likely effect of the increase in demand on producer surplus in Corla's bicycle market.

CALCULATE**Task 9 — A subsidy on solar lamps****4 marks**

The government of Bresa pays sellers a subsidy of \$5 for each solar lamp sold. Before the subsidy, buyers paid \$30 a lamp, and 1,500 lamps were sold a week. After the subsidy, buyers pay \$27 a lamp, and 1,800 lamps are sold a week.

Calculate the price sellers receive for each lamp after the subsidy and the weekly cost of the subsidy to the government.

Price sellers receive for each lamp

Workings

Answer: \$**Weekly cost of the subsidy**

Workings

Answer: \$**EXPLAIN****Task 10 — A closed cement factory in a small town****4 marks**

Tamu is a small town with three cement factories. Cement is heavy, so firms in Tamu rarely buy it from other towns. One of the three factories closes for a year.

Explain why the closure is likely to raise the price of cement in Tamu.

EXPLAIN Task 11 — Two taxes and the revenue they raise

4 marks

The government of Ardo puts the same tax per unit on bread and on fizzy drinks. Before the tax, the two markets had the same price, quantity and supply curve. Families have few foods to eat instead of bread, but they can easily switch from fizzy drinks to other drinks.

Explain which of the two taxes is likely to raise more tax revenue for the government.

Source: The market for sugary drinks in Talmora

- 1 Talmora is a small country. It grows no sugar, so its drink makers buy sugar on the world market. Sugar is one of the main costs of making sugary drinks. In 2025, a drought cut the sugar harvest in two of the world's largest growing countries. The world price of sugar rose by about a third. Drink makers in Talmora paid more for their sugar, although nothing had changed in Talmora itself.
- 2 In January 2026, the government put a specific tax of \$0.40 on each litre of sugary drink sold. Shops collect the tax and pass it to the government. The government wants people to drink fewer sugary drinks. It plans to spend the tax revenue on school meals.
- 3 Figure 1 shows the market before and after the tax. Many shoppers switched to bottled water and tea, which are not taxed. One drinks firm says it has cut jobs at its bottling plant. A health group says that the tax should be higher, so that people drink even fewer sugary drinks.

Figure 1: Talmora's market for sugary drinks

Market	Price buyers pay (\$ a litre)	Litres sold a week
Before the tax (2025)	1.20	500,000
After the tax (2026)	1.35	380,000

DEFINE Task 12 — The meaning of a specific tax

2 marks

Define the term 'specific tax' (paragraph 2).

specific tax

EXPLAIN Task 13 — The tax and consumer surplus

4 marks

With reference to Figure 1, explain one likely effect of the tax on consumer surplus in Talmora's market for sugary drinks.

ANALYSE Task 14 — Sharing the burden of the tax

6 marks

With reference to the source and a supply and demand diagram, analyse how the burden of the tax is split between buyers and sellers.

Diagram

Knowledge — draw and label the diagram (2)

Application — use the numbers in Figure 1 (2)

Analysis — one chain that explains the split (2)

EXAMINE**Task 15 — The impact of the tax on three groups****8 marks**

With reference to the source, examine the likely impact of the tax on consumers, on producers and on the government.

Knowledge — explain how this tax works: one sentence on prices and sales, one on the government (2)

Application — use two numbers or facts from the source (2)

Analysis — one short chain of reasoning for each group: consumers, producers and the government (2)

Evaluation — say what the impact depends on (2)

DISCUSS**Task 16 — The rise in the world price of sugar****14 marks**

With reference to the source, discuss the likely effects of the rise in the world price of sugar on Talmora's market for sugary drinks.

Knowledge — name two economic ideas that explain the effects (2)

Application — use two facts or numbers from the source (2)

Analysis — two chains of reasoning (4)

Evaluation — weigh the effects and say what they depend on (6)

EVALUATE Task 17 — A subsidy on fertiliser

20 marks

"The government of Merova pays producers a subsidy for each bag of fertiliser they sell. It wants farmers to buy more fertiliser and grow more food."

Evaluate the likely effects of this subsidy on farmers, on fertiliser producers and on the government.

Knowledge — define a subsidy, and explain two other economic ideas that you use (3)

Application — apply each idea to the fertiliser market (3)

Analysis — one chain each for farmers, producers and the government (6)

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Write the one sentence that answers Task 17's question.



Revision 464a480d