

BC Economics 12

Unit 2: Consumer Behaviour & Decision-Making

Practice + Application Activities

Sections 5–11 · Demand · Supply · Equilibrium · Price Controls · Surplus · Elasticity

Name: _____ Date: _____ Class: _____

This workbook covers Sections 5–11 of Unit 2. Each PART begins with practice activities (vocab, calculations, quick checks) so you can build the basics, then moves to application problems (plotting graphs, showing shifts, changes in equilibrium). Show your working. Draw carefully in the graph boxes.

PART 5: Demand & the Law of Demand

Movement along the curve vs. shift of the whole curve

Activity 5A: Key Terms — Match the Definition

Match each term (Column A) to its correct definition (Column B). Write the letter next to the number.

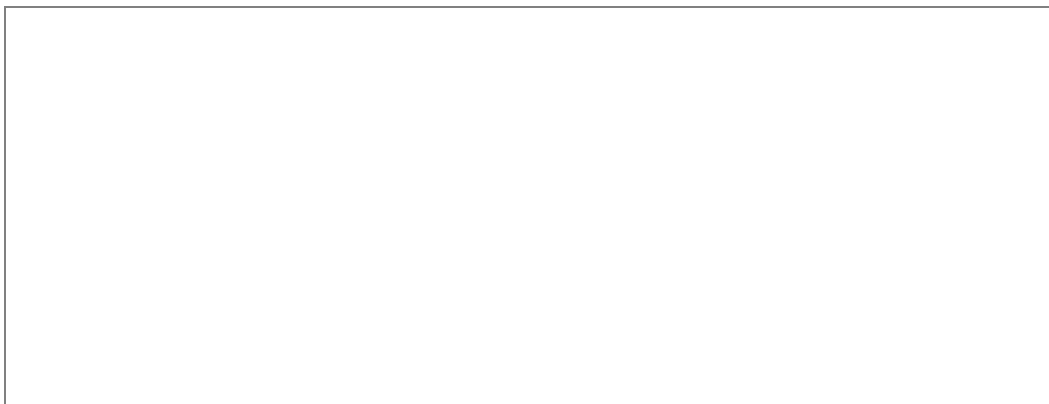
COLUMN A: Terms	COLUMN B: Definitions
1. Demand	A. A downward-sloping line on a price–quantity graph showing how much buyers will purchase at every price.
2. Law of Demand	B. The specific amount buyers will purchase at ONE particular price — a change in price moves you along the curve.
3. Quantity Demanded	C. The whole relationship between price and the quantities buyers are willing and able to purchase at each price.
4. Demand Curve	D. A table listing the quantities buyers would purchase at a series of different prices.
5. Demand Schedule	E. As price rises, quantity demanded falls; as price falls, quantity demanded rises. Price and quantity move in opposite directions.
6. Non-Price Determinants	F. Factors OTHER than price that shift the entire demand curve: income, tastes, prices of related goods, buyers, expectations.

Activity 5B: Demand Schedule → Draw the Demand Curve

Mei Ling runs a market survey for HEYTEA bubble tea in Foshan. She collects the demand schedule below. Plot each (Q, P) point on the blank axes and connect the points to draw the demand curve.

Price (¥)	Quantity Demanded (cups/day)
10	100
20	80
30	60
40	40
50	20

Draw the demand curve on the blank axes below. Label the axes *P* and *Q*, and label the curve *D*.



Activity 5C: Movement vs. Shift — Identify

For each event, decide: *MOVEMENT* along the demand curve, or *SHIFT* of the whole curve (left or right)?

1. HEYTEA drops its price from ¥28 to ¥18 during a promotion.

Answer: _____

2. Student allowances in Foshan rise by 15% this semester.

Answer: _____

3. A viral Douyin video makes HEYTEA the trendy drink of the summer.

Answer: _____

4. A new milk-tea competitor opens on the same street selling at similar prices.

Answer: _____

5. The government adds a sugar tax that raises HEYTEA's price by ¥3.

Answer: _____

6. Weather forecasts predict a heatwave for the next month.

Answer: _____

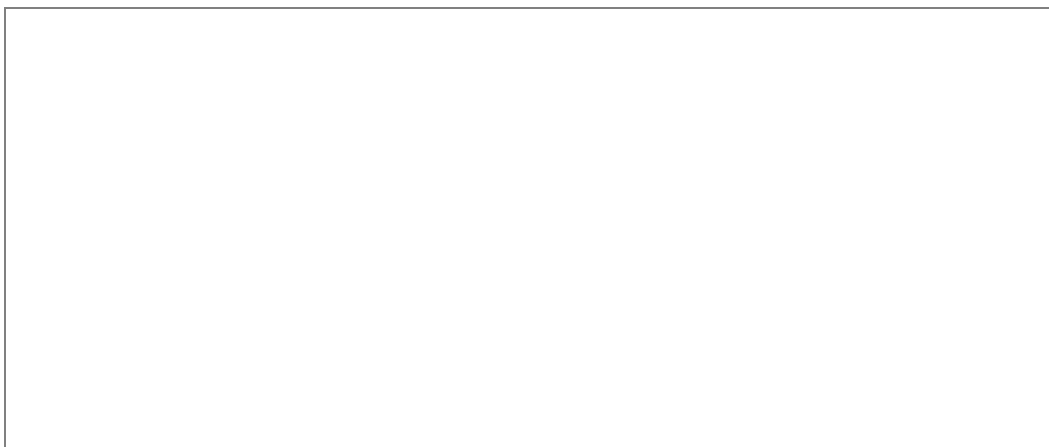
Activity 5D: Application — Two Events, Two Effects

Anya, an exchange student in Guangzhou, notices two things happen to HEYTEA bubble tea over a month: (Event 1) HEYTEA raises prices from ¥18 to ¥28 during peak hours; (Event 2) a K-pop star endorses HEYTEA and it becomes suddenly trendy on Douyin.

a) Which event causes a MOVEMENT along the demand curve? Explain.

b) Which event causes a SHIFT of the demand curve? Which direction? Explain.

c) In the space below, draw ONE graph that shows BOTH events. Label the original demand curve D_0 , the shifted curve D_1 , and mark the movement along D_0 from Event 1 with an arrow. Label axes P and Q.



PART 6: Supply & the Law of Supply

How producers respond to price and to non-price factors

Activity 6A: Key Terms — Match the Definition

Match each term to its definition.

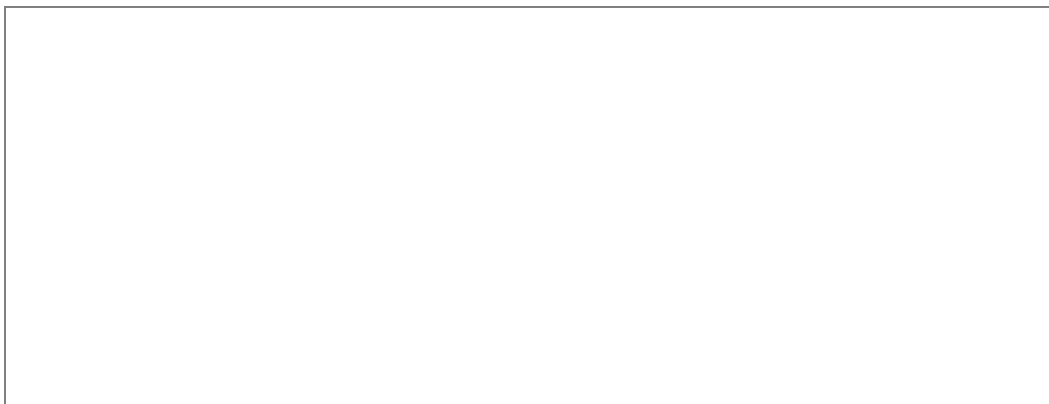
COLUMN A: Terms	COLUMN B: Definitions
1. Supply	A. An upward-sloping line on a price–quantity graph showing how quantity supplied rises as price rises.
2. Law of Supply	B. The specific amount producers will sell at ONE particular price.
3. Quantity Supplied	C. The whole relationship between price and the quantities producers are willing and able to sell.
4. Supply Curve	D. Factors that shift the entire supply curve: input costs, technology, sellers, policy, expectations.
5. Non-Price Determinants (Supply)	E. As price rises, quantity supplied rises; as price falls, quantity supplied falls.
6. Input Costs	F. The cost of resources used in production (labour, materials, energy). Higher input costs → supply falls.

Activity 6B: Supply Schedule → Draw the Supply Curve

The table shows a Guangdong pork farm's daily supply schedule. Plot each (Q, P) point on the blank axes and connect the points to draw the supply curve.

Price (¥/kg)	Quantity Supplied (kg/day)
10	20
20	50
30	80
40	110
50	140

Draw the supply curve on the blank axes. Label axes *P* and *Q*, and label the curve *S*.



Activity 6C: Movement vs. Shift — Identify

For each event, decide: *MOVEMENT* along the supply curve, or *SHIFT* of the whole curve (left or right)?

1. The market price of pork rises from ¥25 to ¥40 per kilogram.

Answer: _____

2. A new automated slaughterhouse cuts labour costs in half.

Answer: _____

3. The Guangdong provincial government offers a subsidy to pig farmers.

Answer: _____

4. Chicken feed prices (an input) suddenly triple.

Answer: _____

5. Three new pig farms open in Foshan.

Answer: _____

6. Farmers expect pork prices to fall next month, so they hold back inventory today.

Answer: _____

Activity 6D: Application — Draw a Supply Shift

A Foshan noodle factory installs a new dumpling-making machine that cuts unit costs by half. In the space below, draw the original supply curve S_0 and the new supply curve S_1 after the technology upgrade.

a) Which direction does the supply curve shift, and why?

b) Draw S_0 and S_1 on the graph below. Label axes P and Q, and mark the shift with an arrow.



PART 7: Market Equilibrium

Where demand meets supply, and what happens when they shift

Activity 7A: Key Terms — Match the Definition

Match each term to its definition.

COLUMN A: Terms	COLUMN B: Definitions
1. Equilibrium	A. The quantity bought and sold at the market-clearing price.
2. Equilibrium Price (P^*)	B. The point where quantity demanded equals quantity supplied.
3. Equilibrium Quantity (Q^*)	C. When quantity demanded exceeds quantity supplied ($Q_d > Q_s$) — happens BELOW equilibrium.
4. Shortage	D. The price at which $Q_d = Q_s$ — also called the market-clearing price.
5. Surplus	E. When the market reaches equilibrium and every unit offered finds a buyer.
6. Market Clearing	F. When quantity supplied exceeds quantity demanded ($Q_s > Q_d$) — happens ABOVE equilibrium.

Activity 7B: Find the Equilibrium from the Table

The table shows demand and supply for milk tea in a Foshan neighbourhood. Find the equilibrium price and quantity, and identify any shortages or surpluses at prices above and below equilibrium.

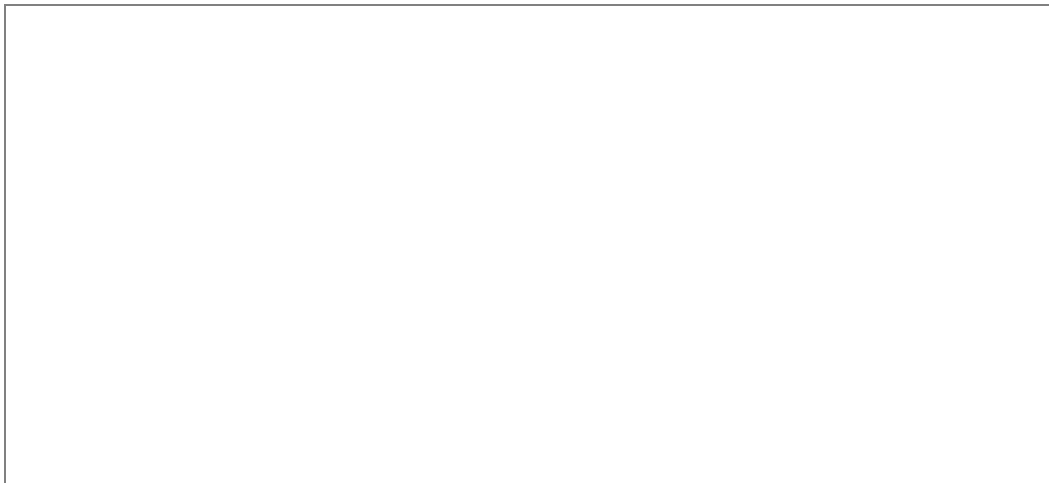
Price (¥)	Quantity Demanded	Quantity Supplied	Shortage or Surplus?
10	100	20	_____
20	80	50	_____
30	60	80	_____
40	40	110	_____
50	20	140	_____

a) Between which two prices does Q_d equal Q_s ? Estimate P^* and Q^* .

b) At ¥40, is there a shortage or surplus? By how much? What happens to the price?

Activity 7C: Plot D and S — Find Equilibrium Graphically

Using the data from Activity 7B, plot BOTH the demand and supply curves on the same graph. Mark the equilibrium point E^* , and draw dashed guide lines from E^* to both axes to show P^* and Q^* .



Activity 7D: Equilibrium Changes — Four Cases

For each event, predict what happens to equilibrium price (P^*) and quantity (Q^*). Write $\uparrow$, $\downarrow$, or $—$, and briefly explain.

1. Demand shifts RIGHT (a heat wave increases thirst).

P^* : _____ Q^* : _____ Reason: _____

2. Demand shifts LEFT (news that HEYTEA is unhealthy).

P^* : _____ Q^* : _____ Reason: _____

3. Supply shifts RIGHT (new tapioca-cooking technology).

P^* : _____ Q^* : _____ Reason: _____

4. Supply shifts LEFT (a sugar-price spike raises input costs).

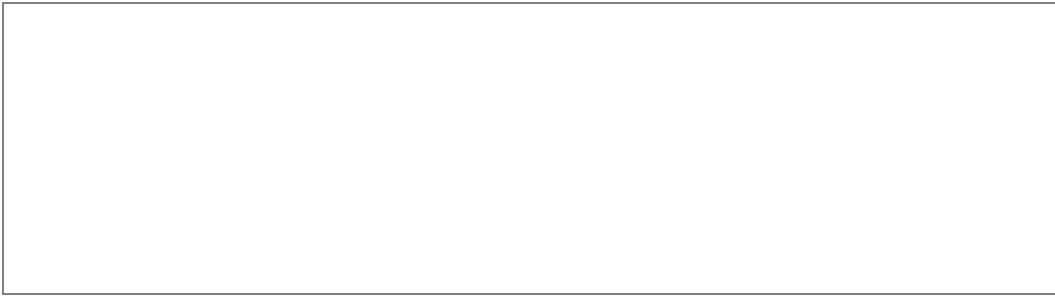
P^* : _____ Q^* : _____ Reason: _____

Activity 7E: Application — Both Demand and Supply Shift

During the Chinese New Year, TWO things happen to HEYTEA: (1) demand rises as more people travel through Foshan train stations and visit shops; (2) supply falls because HEYTEA cannot hire enough part-time staff for the holiday rush.

- a) Draw the original D_0 and S_0 , then the shifted D_1 and S_1 . Mark E_0 and E_1 .





b) What happens to P^* ? What about Q^* ? Explain why the Q^* result is ambiguous.

PART 8: Price Controls

Ceilings create shortages; floors create surpluses

Activity 8A: Key Terms — Match the Definition

Match each term to its definition.

COLUMN A: Terms	COLUMN B: Definitions
1. Price Control	A. A minimum price set by law. If set ABOVE equilibrium, it creates a surplus.
2. Price Ceiling	B. A government-imposed limit on the price of a good — either a maximum or a minimum.
3. Price Floor	C. The lost value of trades that would have occurred at equilibrium but do not, because of the price control.
4. Binding vs. Non-Binding	D. A maximum price set by law. If set BELOW equilibrium, it creates a shortage.
5. Deadweight Loss	E. Illegal trade that develops when binding price controls prevent the market from clearing.
6. Black Market	F. A price control is BINDING if it changes market outcomes (ceiling below P^* , floor above P^*).

Activity 8B: Binding or Non-Binding?

For each case, decide whether the price control is BINDING or NON-BINDING.

1. Equilibrium rent is ¥3000/month. Government sets a rent ceiling at ¥4000.

Answer: _____

2. Equilibrium rent is ¥3000/month. Government sets a rent ceiling at ¥2000.

Answer: _____

3. Equilibrium wage is ¥18/hour. Government sets a minimum wage at ¥15/hour.

Answer: _____

4. Equilibrium wage is ¥18/hour. Government sets a minimum wage at ¥25/hour.

Answer: _____

Activity 8C: Draw a Binding Price Ceiling — Show the Shortage

The equilibrium rent in downtown Guangzhou is ¥3000/month. The city imposes a rent ceiling of ¥2000. Draw a supply-and-demand graph showing this ceiling.

- a)** Draw D and S. Mark E^* and label P^* and Q^* . Draw the ceiling line at P_{max} . Label Q_s (quantity supplied at P_{max}) and Q_d (quantity demanded at P_{max}). Shade the SHORTAGE.

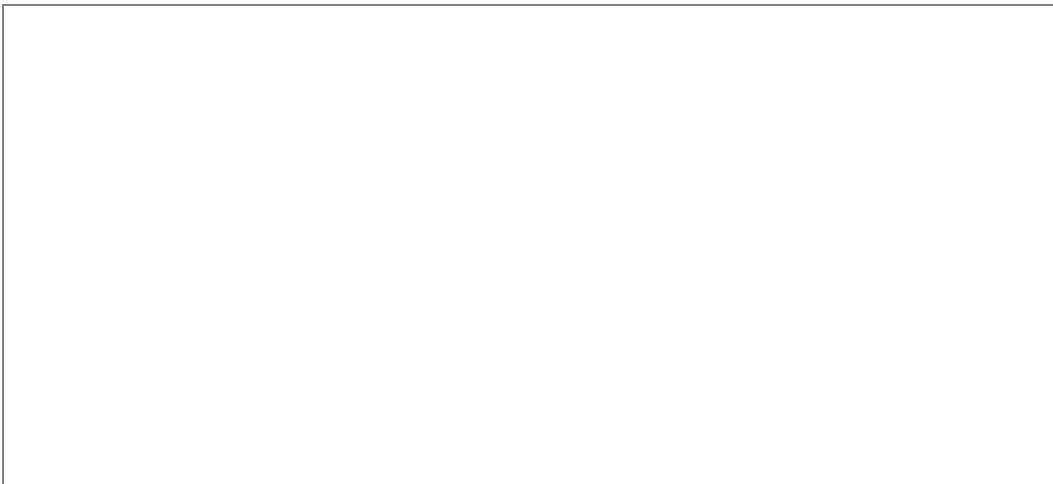


- b)** In one sentence: what is the size of the shortage in your graph? (You don't need exact numbers — describe it in terms of Q_s and Q_d .)

Activity 8D: Draw a Binding Price Floor — Show the Surplus

The equilibrium hourly wage for cleaning staff in Foshan is ¥15/hour. The government sets a minimum wage of ¥25/hour. Draw a supply-and-demand diagram for the LABOUR market (labour supply comes from workers; labour demand comes from employers).

- a)** Draw D and S. Mark E^* and label P^* and Q^* . Draw the floor line at P_{min} . Label Q_d (workers hired at P_{min}) and Q_s (workers willing to work at P_{min}). Shade the SURPLUS (unemployment).



PART 9: Consumer & Producer Surplus

Measuring gains from trade — and how price controls destroy them

Activity 9A: Key Terms — Match the Definition

COLUMN A: Terms	COLUMN B: Definitions
1. Willingness to Pay	A. CS + PS. The total gain from all trades in the market — maximised at equilibrium.
2. Consumer Surplus (CS)	B. The maximum price a buyer is willing to pay for a unit — the height of the demand curve at that quantity.
3. Producer Surplus (PS)	C. The reduction in total surplus from price controls, taxes, or other market distortions.
4. Total Surplus	D. CS = Willingness to Pay – Actual Price. The area BELOW demand, ABOVE the price line.
5. Market Efficiency	E. When total surplus is maximised — all mutually beneficial trades occur and no DWL exists.
6. Deadweight Loss	F. PS = Actual Price – Minimum Acceptable Price. The area ABOVE supply, BELOW the price line.

Activity 9B: Calculate Consumer Surplus

Key formula: CS = Willingness to Pay – Actual Price

Calculate each student's consumer surplus. Show your working.

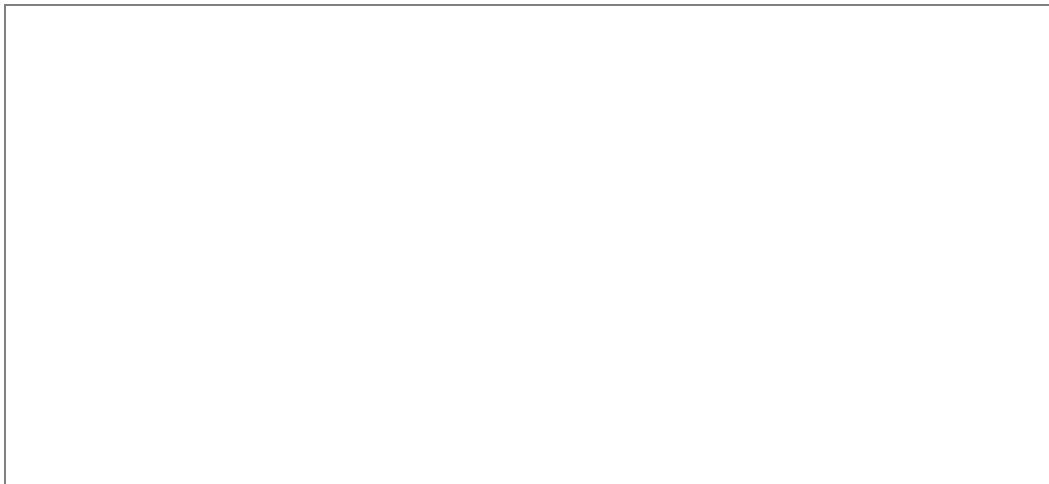
Student	Willingness to Pay	Actual Price	Consumer Surplus
Zhang Ming	¥80	¥55	_____
Chen Li	¥40	¥25	_____
Xiao Yu	¥450	¥300	_____
Mei	¥130	¥150	_____

a) Which student does NOT buy? Why?

b) Total consumer surplus across all buyers?

Activity 9C: Draw CS, PS, and Total Surplus

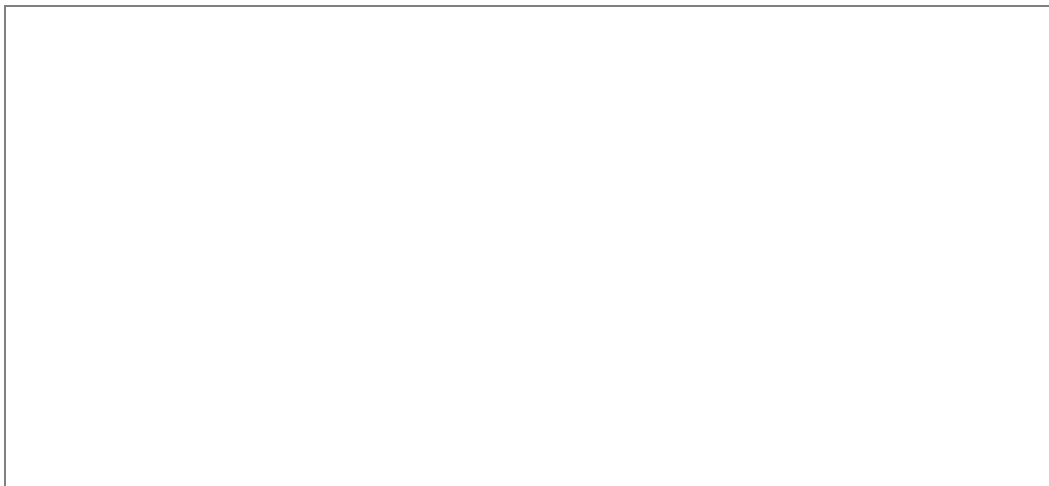
Draw a supply-and-demand graph at equilibrium. Shade CS in one colour and PS in another. Label E^* , P^* , Q^* , and both shaded areas.



Activity 9D: Draw Deadweight Loss from a Price Ceiling

Building on Section 8: a binding price ceiling reduces the number of trades that happen. The trades that WOULD have occurred at equilibrium but do not now = deadweight loss.

- a) Draw a supply-and-demand graph. Mark E^* , then draw a price ceiling BELOW P^* . Mark Q_s on the supply curve. Shade the DWL triangle between D and S from Q_s to Q^* .



- b) In one sentence, explain in words why those trades don't happen.

PART 10: Price Elasticity of Demand

Measuring how much buyers respond to price changes

Activity 10A: Key Terms — Match the Definition

COLUMN A: Terms	COLUMN B: Definitions
1. Elasticity	A. $ PED < 1$ — buyers respond WEAKLY. Curve is relatively steep.
2. Price Elasticity of Demand (PED)	B. $ PED > 1$ — buyers respond STRONGLY. Curve is relatively flat.
3. Elastic Demand	C. $ PED = \infty$. Curve is horizontal.
4. Inelastic Demand	D. A general measure of how much one variable responds to a change in another.
5. Unit Elastic	E. $ PED = \%\Delta Q_d \div \%\Delta P$. Measures buyer response to a price change.
6. Perfectly Elastic	F. $ PED = 0$. Q_d does not change at all. Curve is vertical.
7. Perfectly Inelastic	G. $ PED = 1$. $\%\Delta Q_d$ exactly equals $\%\Delta P$.

Activity 10B: Calculate PED and Classify

Formula: $|PED| = \%\Delta Q_d \div \%\Delta P$

For each case, compute $|PED|$ and classify demand as Elastic, Inelastic, or Unit Elastic.

1. HEYTEA raises the price 20%, sales fall 40%.

$|PED| =$ _____ Classification: _____

2. The city water bill rises 30%, water use falls 6%.

$|PED| =$ _____ Classification: _____

3. A movie ticket rises 10%, ticket sales fall 10%.

$|PED| =$ _____ Classification: _____

4. Salt rises 25%, salt purchases fall 2%.

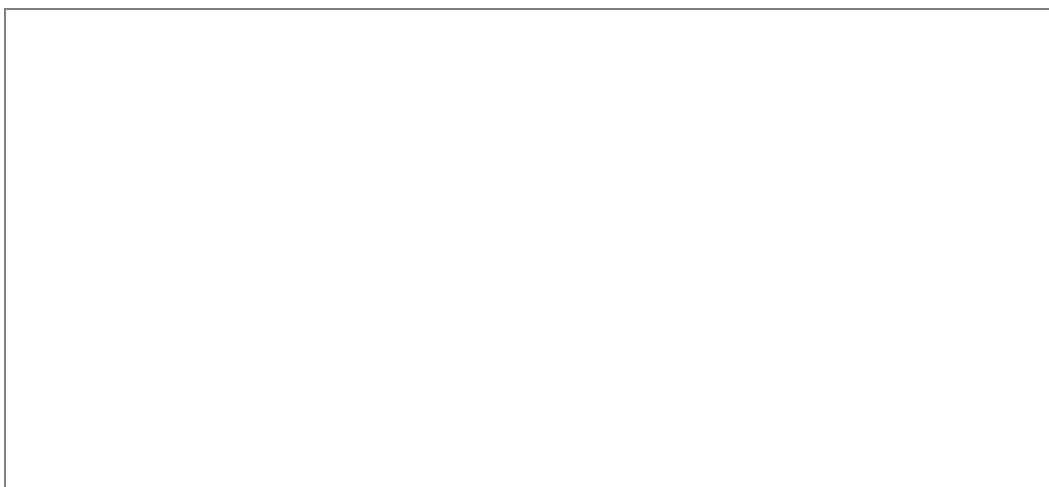
$|PED| =$ _____ Classification: _____

5. An iPhone rises 15%, iPhone sales fall 30%.

$|PED| =$ _____ Classification: _____

Activity 10C: Draw the Extremes

In the box below, draw TWO demand curves side by side: (1) perfectly elastic $|PED| = \infty$ and (2) perfectly inelastic $|PED| = 0$. Label each and give ONE real-world example.



Activity 10D: Application — Classify Common Goods

For each good below, mark whether demand is likely to be Elastic (E) or Inelastic (I). Explain in one line.

1. Insulin (life-saving medication)

E / I: _____ Reason: _____

2. A single brand of milk tea in Foshan

E / I: _____ Reason: _____

3. Tap water

E / I: _____ Reason: _____

4. Designer handbags

E / I: _____ Reason: _____

5. Petrol (short run)

E / I: _____ Reason: _____

6. Petrol (long run)

E / I: _____ Reason: _____

PART 11: Determinants of PED & Total Revenue Test

What makes demand elastic — and how a shop can use that to grow revenue

Activity 11A: Key Terms — Match the Definition

COLUMN A: Terms	COLUMN B: Definitions
1. Normal Good	A. Goods that replace each other. More substitutes → more elastic.
2. Inferior Good	B. Necessities are inelastic; luxuries are elastic.
3. Determinants of PED	C. Demand INCREASES when consumer income rises.
4. Substitutes	D. Demand DECREASES when consumer income rises (e.g. instant noodles).
5. Necessity vs Luxury	E. The main factors that decide elasticity: substitutes, necessity vs luxury, income share, time.
6. Proportion of Income	F. Goods that take a LARGE share of income are more elastic.
7. Time Horizon	G. If price↑ and TR↓ → elastic. If price↑ and TR↑ → inelastic. If TR unchanged → unit elastic.
8. Total Revenue (TR)	H. Over time, demand becomes MORE elastic — buyers find substitutes.
9. Total Revenue Test	I. TR = Price × Quantity. The total income a seller receives.

Activity 11B: Normal or Inferior — Watch Income Rise

The table shows what happens to demand for each good as incomes in Foshan rise. Classify each as NORMAL or INFERIOR.

Good	Effect on demand when income rises	Type
Restaurant meals	Demand increases sharply	_____
Instant noodles	Demand falls	_____
Branded electronics	Demand increases	_____
Bus tickets	Demand falls (switch to taxi / car)	_____
Designer handbags	Demand increases sharply	_____

Activity 11C: Which Determinant Explains It?

For each case, name the primary determinant of PED: SUBSTITUTES, NECESSITY vs LUXURY, INCOME SHARE, or TIME HORIZON.

1. HEYTEA's price rises 10% and sales fall sharply because there are 5 other bubble tea shops on the same street.

Determinant: _____

2. A car costs one year's salary — demand is very sensitive to price.

Determinant: _____

3. When petrol prices rose in 2022, demand fell slowly at first but families gradually switched to EVs over the next 3 years.

Determinant: _____

4. The price of rice doubles — Chinese families still buy roughly the same amount.

Determinant: _____

Activity 11D: The Total Revenue Test

Formula: $TR = P \times Q$

A Foshan milk-tea shop tests two prices for one week each. Calculate TR before and after each price change, then use the Total Revenue Test to classify demand as elastic, inelastic, or unit elastic.

Case	Old P	Old Q/day	Old TR	New P	New Q/day	New TR	Classify
A	¥18	500	_____	¥22	350	_____	_____
B	¥18	500	_____	¥22	450	_____	_____
C	¥18	500	_____	¥22	409	_____	_____

Activity 11E: Application — Should the Shop Raise Its Price?

You own a milk-tea shop in Foshan. You are considering raising your price from ¥18 to ¥22. You notice: (1) there are 6 other milk-tea shops within a 200 m radius, (2) your customers are mostly high-school students living on allowance.

- a) Given the two facts above, do you expect demand for YOUR bubble tea to be elastic or inelastic? Explain using two determinants of PED.

- b) Using the Total Revenue Test: if demand is elastic and you raise your price, what will happen to your total revenue?

c) What would you recommend the shop do instead of raising the price? Give ONE specific strategy that fits an elastic-demand market.
