

# Peer Assisted Study Sessions for BEA111 2017

## Week 2 – Introduction/thinking like an economist

### Cost benefit analysis

1. Sarah must decide whether to accept an extra shift at work this Wednesday afternoon. It is a 5 hour shift and she will earn \$20 per hour, which is good because she wouldn't work for any less than \$10. If she does not go to work she will be able to go to the beach with her friends. It will cost \$5 in petrol to get to the beach and she would also spend \$15 on lunch. Sarah loves the beach and would be willing to pay a \$30 admission fee if one were ever established.

Should Sarah go to work or the beach?

If working on the Wednesday afternoon was not an option and instead Sarah would be at home doing nothing, what should she do?

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2. A company must decide whether to continue with their development of a new app. They have spent \$200 000 on research and development over the past three years and just as they were about to release the app their greatest competitor released a very similar app. If they put their app on the market as it is now they will not sell many and revenue is expected to be \$40 000. If they spend another \$70 000 on research they will be able to make their app slightly better than the competitor's and revenue will be \$150 000.

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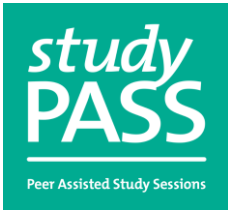
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3. Toby has bought a prepaid coffee card at a café: \$30 for 10 coffees. However, upon tasting his first coffee he realises that this café makes such awful coffee that he wouldn't pay more than \$1.5 for a coffee. To his surprise one of his friends loves this café and is willing to buy the prepaid card off him for \$20.

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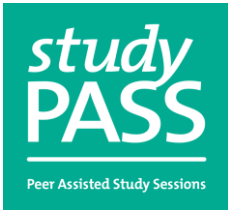


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4. Kate loves baking. She has been selling baked goods at her local market for a while, but she always sells all 100 muffins within an hour. She would love to make more but her kitchen is too small. She also has a large garage but no car. If she turns the garage space into a larger commercial kitchen she could increase production to 500 muffins and increase her profit at the market by \$200 each week. On her payment plan it will cost \$50 per week to build the kitchen. One of Kate's friends has also asked to rent the garage space off her at \$60 per week.

In preparing for a test Steve must decide how many hours to study for. He doesn't enjoy studying and would pay \$12 for each hour he didn't have to study. Steve's Aunt wants him to do well at Uni and so gives him \$1 for each percent over 50 he gets. Eg. 72% on the test would earn Steve \$22. It doesn't matter to Steve what grade he gets as long as he passes. If he could bribe someone he would pay \$20 to pass each test.

Hours of study	Grade achieved
1	40%
2	60%
3	75%
4	85%
5	90%



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## Week 3 – comparative advantage & trade

### 1. We defined the following terms:

Comparative advantage, Absolute advantage, Opportunity cost, Terms of trade, Production possibility curve, Consumption possibility curve, Specialisation, Scarcity, Trade, Sunk cost, Marginal cost, Marginal benefit

### 2. Trade questions

#### Scenario A:

With one unit of input you can produce 5 coffees or 2 muffins.

With one unit of input you can produce 10 coffees or 5 muffins.

Which person has the comparative advantage in coffee? Which person has the comparative advantage in muffins?

#### Scenario B:

You require 20 minutes to produce 1 unit of paper or 15 minutes to produce 1 unit of pens.

You require 15 minutes to produce 1 unit of paper or 10 minutes to produce 1 unit of pens.

Which person has the comparative advantage in paper? Which person has the comparative advantage in pens?

#### Scenario C:

The following table describes the production possibilities for producing souvenirs for tourists by two businesses in Hobart.

Production per hour:

	Souvenir Snow Globes	Hats with bells
Pizza Hut	6	6
Sheepskin and Opal World	4	2

a) Suppose that the two companies decide to specialize and trade with each other to increase their output. Which souvenirs would pizza hut produce? Which souvenirs would Sheepskin and Opal World produce? You must provide support for your conclusions.

b) Identify the bounds on the terms at which they would agree to trade souvenirs? Express your answer in terms of the amount of snow globes that would be 'paid' for a hat. Explain your answer.

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## Week 4 – perfect competition, supply and demand

1. Brainstorm of what makes a market perfectly competitive
2. Match the following terms and definitions (they are NOT in order here)

Perfect competition	A simplified/small scale way to represent a real life situation
Market demand	The accumulation of all buyers' reservation prices; the number of people willing to buy a good at a certain price.
Market supply	Where all people willing to sell and all willing to buy at a certain price are satisfied.
equilibrium	A market with many buyers and sellers, identical goods, easy entry and exit to/from the market, perfect information.
Reservation price	The difference between how much someone sells a good for and how much they would be willing to sell it for.
Consumer surplus	The difference between how much someone pays for a good and how much they would be willing to pay
Producer surplus	The accumulation of all sellers' reservation prices; the number of people willing to sell a good at a certain price.
model	The minimum price that someone will sell a good for or the maximum price that someone will buy a good for.

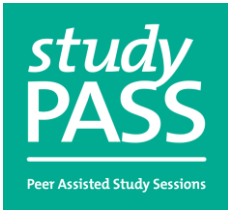
### 3. Graphing supply and demand

Use the following table to construct a demand curve for the market for movie tickets.

consumer	Reservation price	Consumer surplus
Adam	\$14	-6
Mary	\$16	-4
Lucy	\$18	-2
Tom	\$20	0
Dave	\$22	2
Joe	\$24	4

The price for movie tickets is \$20. Fill in the third column with the consumer surplus and circle the names of all consumers who will purchase a ticket. Show on your graph the area that relates to consumer surplus.

The price for movie tickets has now decreased to \$15. Change or rewrite the table from the first question. Circle the consumers who will buy a movie ticket and calculate their consumer surplus. Draw a new demand curve and show the consumer surplus on this.



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The price for movie tickets is still \$15, but a report has been released about the dangers of screen time and so each consumer is willing to pay \$2 less. Recreate the table from question one and draw the demand curve. Show the consumer surplus. Compare this demand curve to the one drawn in the first question. How has it changed?

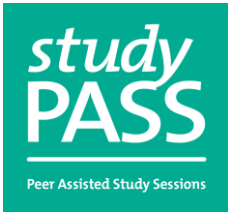
#### 4. Graphing supply

The table shows the reservation prices of 6 different cinemas per movie ticket (what it costs them to put on the movie per person)

Supplier	Reservation price	
Al's Movies	\$10	
Simone's Cinema	\$18	
Village Cinema	\$15	
State Cinema	\$23	
Imax	\$14	
Watch me films	\$20	

If the market price of movies is \$15 who will sell movie tickets and what will their producer surplus be?

If rent goes up for all 6 cinemas at the same time they will have to charge \$4 more per movie ticket. Draw the new supply curve and calculate the new consumer and producer surplus.



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## Week 5 - changes in supply and demand

### 1. Define the following terms

Pareto efficient, Pareto inefficient, Market demand, Market supply, Equilibrium, Consumer surplus, Producer surplus, Increase in price, Decrease in quantity, Equilibrium, Decrease in demand, Increase in supply, Decrease in supply, Increase in demand, Cash on the table

### 2. Examining supply and demand with articles. We looked at the following articles and how demand and supply are effected.

Bananna Crisis:

<http://money.cnn.com/2016/04/19/news/bananas-banana-crisis-disease/index.html>

House prices:

<http://www.housingwire.com/articles/39631-demand-for-houses-still-grows-despite-interest-rates-increasing>

Bumper cauliflower crop

<http://www.dailymail.co.uk/news/article-4340824/Cauliflowers-galore-bumper-crop-hits-shelves.html>

US Tourism Trump slump

<https://www.theguardian.com/travel/2017/feb/28/us-tourism-experiences-a-trump-slump>

Brisbane apartments

<http://www.yourmortgage.com.au/article/record-supply-of-new-stock-scheduled-to-flood-brisbane-apartment-market-234392.aspx>

Venezuela fuel shortage

<https://www.bloomberg.com/news/articles/2017-03-23/venezuelan-drivers-line-up-for-gasoline-as-fuel-shortage-worsens>

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## Week 6 – Elasticity

1. Fill in the following table summarising elasticity

Type of elasticity	Dependent variable	Independent variable	Formula	Example
		Price of related good		
	Quantity demanded			How reactive demand for computers is to changes in price (substitute/complementary good)
Income elasticity of demand ( $E_I$ )				
			% Change in quantity supplied / % change in price	

2. Elasticity practice questions

A company selling almonds forecasts that if they increase their price per 100 grams from \$2 to \$2.50, their quantity demanded will decrease from 500kg to 450kg. Which type of elasticity will help the business decide whether or not to increase their price? What is the value of the relevant elasticity? Should the business change their price?

Due to a shortage, the price of spinach has increased from \$2 to \$3, this has caused the quantity of rocket sold to increase from 50kg to 65kg. Is spinach a substitute or complement for rocket?

A government bonus has increased the average household's disposable income from \$5000 to \$5500 per week. This has caused the quantity of salmon demanded to increase from 600kg to 630kg, while minced meat demand has decreased from 1000kg to 980kg. Determine whether each salmon and minced meat are normal or inferior goods.

Due to a decrease in demand for tennis balls, the price has decreased from \$1.50 each to \$1.25. This has caused companies to decrease their supply from 10 000 to 9 000. Is supply of tennis balls inelastic or elastic?

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The following shows the demand for chocolate:

Price	Quantity demanded
1	1000
2	800
3	600
4	400
5	200

Determine the elasticity of demand when the price is \$2. Determine the Elasticity when price is \$4. Sketch the demand and total revenue curves and identify which parts of the curves are elastic, inelastic and unitary elastic.

### 3. Demand and supply – price ceilings and floors

A) The following is the market for apples.

Price	Quantity Demanded	Quantity supplied
4	150	30
6	130	60
8	100	100
10	70	120
12	50	160
14	10	200

Sketch the demand and supply diagram for this market. Determine the equilibrium price and quantity.

The government implements a price ceiling at \$6. Show this on your diagram and determine the changes to consumer surplus, producer surplus and any deadweight loss. Think of two reasons why the government might implement such a policy.

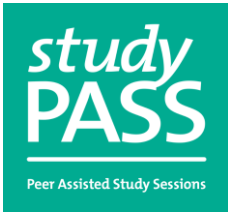
B) The following is the market for wool.

Price	Quantity Demanded	Quantity supplied
5	25	3
9	20	8
13	16	10
17	14	14
21	10	16
25	5	22

Sketch the demand and supply diagram for this market. Determine the equilibrium price and quantity.

The government implements a price floor at \$21. Show this on your diagram and determine the changes to consumer surplus, producer surplus and any deadweight loss. Think of two reasons why the government might implement such a policy.





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## Week 7 – practice multiple choice questions, taxes and elasticity

### 1. Multiple choice questions

Economics is best defined as the study of how:

- a) prices and quantities of goods and services are determined in markets.
- b) private firms and households respond to taxes and subsidies.
- c) people make choices in the presence of scarcity and the results of those choices
- d) interest rates and exchange rates are determined.

### 2. A Pareto optimal option is one that makes

- a) everyone better off
- b) everyone worse off
- c) at least one person better off and no one worse off
- d) does not change overall welfare

### 3. The scarcity principle implies that

- a) people will never be satisfied with what they have.
- b) as wealth increases, making choices becomes less necessary.
- c) the prices of scarce goods must rise due to excess demand.
- d) choices must be made and tradeoffs will occur.

4. Intel engineers proposed developing a 2 gigahertz microprocessor in early 1999 at a cost of \$20 million for a working prototype. By mid 2000, the \$20 million had been spent with no prototype yet developed. The engineers requested a further \$10 million to complete the project. In early 1999 sunk costs of this project were \_\_\_\_\_ and in mid 2000 sunk costs were \_\_\_\_\_.

- a) 0; \$20 million.
- b) 0; \$30 million.
- c) \$20 million; \$20 million.
- d) \$20 million; \$30 million.

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5. What is the opportunity cost of living in a house that you already own?

- a) Zero, because you already own it.
- b) That depends on how much you like living there.
- c) The rent you could receive if you rented the house out to someone else.
- d) The total amount you have to spend on maintenance, rates and insurance each year.

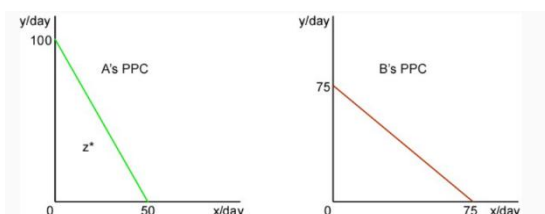
6. The meaning of the ceteris paribus assumption is:

- a) hold everything constant.
- b) vary all things at a constant rate.
- c) hold everything else constant.
- d) hold one thing constant.

7. Which of the following is not a characteristic of a perfectly competitive market?

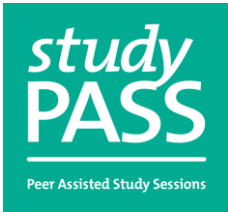
- a) Many buyers and sellers.
- b) No non-price competition.
- c) Firms are price-makers.
- d) All firms produce an identical good.

8.



The bundle of goods X and Y shown by point Z for individual A is

- a) efficient and attainable.
- b) inefficient and attainable.
- c) efficient and unattainable.
- d) inefficient and unattainable.



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9. An outward shift of a country's PPC could reflect:

- a) population growth.
- b) technological improvements.
- c) higher standards of education.
- d) Any of the above.

10. The law of demand states that a fall in the price of a good will result in

- 1) an increase in quantity demanded.
- 2) a decrease in quantity demanded.
- 3) an increase in demand.
- 4) a decrease in demand.

11. A simultaneous fall in demand and increase in supply results in a fall in

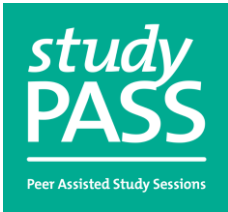
- a) quantity and price.
- b) quantity and an increase in price.
- c) quantity but an indeterminate effect on price.
- d) price but an indeterminate effect in quantity.

12. Which of the following statements is NOT correct?

- a) Competitive market equilibrium will sometimes be socially optimal.
- b) When a competitive market is in equilibrium there will be no 'cash on the table'.
- c) At competitive market equilibrium buyer's and seller's would like to exchange more of the good.
- d) At competitive market equilibrium buyers and sellers are both 'satisfied'.

13. At each level of quantity, the supply curve shows the \_\_\_\_\_ of the last unit supplied.

- a) marginal benefit
- b) average benefit
- c) marginal cost
- d) average cost



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14. Mike's total benefit schedule for apples is shown in the table below.

If Mike is currently consuming 15 apples per week, the marginal benefit (MB) of an extra apple is

Apples/Week	Total Benefit per Week (\$)
5	40
10	60
15	70
20	75
25	70

- A) \$70
- B) \$5
- C) \$4.66
- D) \$1

15. Paul can eat as many muffins as he likes each week for free. He should continue to eat more muffins each week so long as

- A) marginal benefit is positive.
- B) total benefit increases.
- C) marginal benefit exceeds marginal cost.
- D) All of the above answers are correct.

### 2. Tax questions

- A) In the market for luxury cars, the government has decided to implement a tax on each car sold. Draw a supply and demand diagram for this market. Show the how the tax will alter the market, including the areas relating to consumer and producer surplus, government revenue and deadweight loss.

How would this change if the price elasticity of demand were relatively inelastic? Elastic?

How would this change if the price elasticity of supply were relatively inelastic? Elastic?

What would consumers prefer? What would producers prefer? And would the policy makers prefer in terms of elasticity?

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B) The following is the market for pasta

Price (\$)	Quantity demanded (kg)	Quantity supplied (kg)
5	10	3
10	9.5	6
15	9	9
20	8.5	11
25	8	12
30	7.5	13

Sketch the demand and supply curves. Calculate consumer and producer surplus at equilibrium.

The government implements a tax on pasta at 50c per kilo. Add the changes to your diagram and calculate the government revenue at the new equilibrium. Also calculate the new consumer and producer surplus and any deadweight loss.

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## Week 8 – elasticity, taxes, consumer theory

1. We discussed & defined the following words:

Deadweight loss, Tax, Elasticity of demand, Elasticity of supply, Marginal utility, Rational spending rule, Law of diminishing marginal utility, Marginal revenue, Short run, Long run, Total revenue, Average revenue

2. Practice tax and elasticity questions.

- A) The government wants to discourage consumption of fatty foods. To do this they will be implementing a tax of serving of fatty food consumed. Evaluate this tax in the market for hot chips using the supply and demand diagram. One of the policy makers of this decision has claimed that “the total amount of government revenue generated decreases the more inelastic demand is”. Use your demand and supply diagram to explain whether or not this statement is correct.
- B) The government wants to decrease consumer spending on plastic so will tax firms for each unit of plastic they sell. Evaluate this tax in the market for bottled water (assume all bottled water is sold in plastic bottles). Explain whether the statement, “the size of the deadweight loss decreases the more elastic demand is.”

3. Consumption choices

The following shows the utility gained by Sarah for consuming cheese and chocolate.

Units	Total utility (chocolate)	Total utility (cheese)
1	30	10
2	51	19
3	70	27
4	87	34
5	101	40
6	112	45
7	121	49

1. Calculate Sarah’s marginal utility for each cheese and chocolate? What do you notice?
2. Chocolate costs \$2 per unit and cheese costs \$1. If Sarah has \$10 to divide between the two units how much should she spend on each? What is her consumer surplus?
3. Use the rational spending rule to determine how Sarah should spend.
4. What happens to your answers to questions 2&3 if the price of chocolate changes to \$2.20 and cheese to \$1.80?

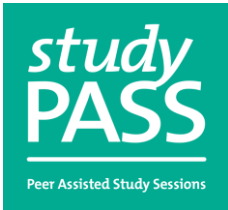
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## 4. Competitive firm

- I. A firm sells bananas in a perfectly competitive market. The market price for bananas is \$5 per kilo.
- II. Determine the firm's marginal revenue, total revenue and average revenue schedules for the first 10 kilos sold.
- III. Sketch the demand curve faced by this firm. What else can the demand curve represent?
- IV. The firm owns 6 fields. In the fields they can either grow bananas or coconuts. If they grow coconuts their revenue per field is 1500.

Number of fields growing bananas	Kilos of bananas grown
1	2 400
2	3 000
3	3 500
4	3 900
5	4 200
6	4 300

How many fields should they plant bananas in? What if the price per kilo was \$5.50? \$6?



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## Week 9 - competitive firm, cost curves

Bob makes brownies. He pays \$500 a month in rent and \$1000 in equipment repayments. He hires a number of employees depending on how many brownies he wants to make. Each employee costs \$400, and require \$100 of ingredients each.

Output	Input	Total fixed costs	Total variable Costs	Total costs.	AFC	AVC	ATC	MC
0	0	1500						
100	1					5		
220	2							4.17
320	3			3000				
400	4							
460	5		2500					8.33
500	6						9	

Fill in the table above and roughly sketch the cost curves of Bob's firm.

Show on your diagram the profit/loss when the price per brownie is \$8.75 (assume for a quantity of 470 brownies  $AFC=3.15$ ,  $AVC=5.60$ ,  $ATC=8.75$ ,  $MC=8.75$ ).

What if the price is \$5.50?

What if the price is \$10.20?

Which price is more likely in a perfectly competitive market? Why?

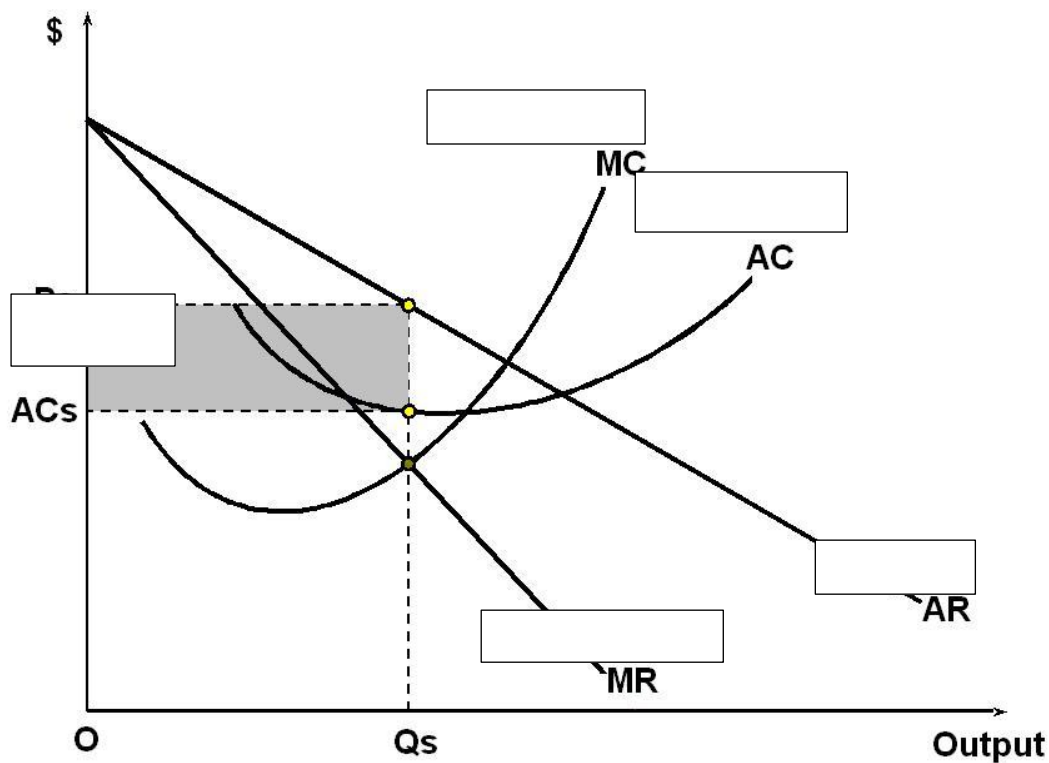
(The consumer theory questions and marginal revenue/price questions from week 8 were also done in this week 9 session)



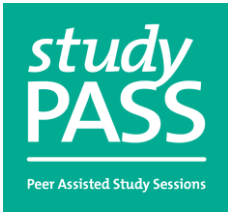
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### Week 10 - monopoly firm, cost curves

1. The cost curve for the firm "Von Chilli" which operates in a unique market for herbs and spices.



- A) Fill in the blank spaces on the chart with the appropriate labels
- B) Is this representative of a perfectly competitive firm?
- C) What is the relationship between Marginal revenue and Demand?
- D) Are more firms likely to join or leave this market in the long term?
- E) Is there any deadweight loss operative at this quantity? What is it?



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2. Lavender's chocolate company has the following consumers in a market.

Consumer	Reservation Price \$
Rose	8
Tulip	7
Petunia	9
Dahlia	6
Camelia	4
Violet	6
Poppy	12

The firm has a Constant Marginal Cost of 5.

1. What does it mean if the firm has a constant marginal cost?
2. What is the profit of this firm if they can only use linear pricing?
3. How would profit change if the firm can set prices to each individual consumer?
4. Is this possible or realistic for a firm to undergo this price discrimination?
5. How would consumer surplus change?
6. Can you demonstrate this level of profit in a chart

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## Week 11 - Game Theory

- Two people are faced with the follow pay off scheme for the coveted prize of PASS lollies

PLAYER 1

PLAYER 2

	split	steal
split	2,2	0,3
steal	5,0	0,0

- What is player 1's best option
- What is player 2's best option
- How would your decision change if you did not know what the other person's pay off would be?

### 2. The Remote Office Game

The sale of chilli associated products is booming in Tasmania. To respond to the boom 'Von Chilli' is thinking about setting up a second store. John manages the old store in Hobart but needs a second person to manage the new store in Launceston. Therefore, John decides to hire Darren and is willing to pay him \$300 a day for his honest work in the shop, which is \$100 more than Darren would be earning elsewhere. If John does this, he will earn an average profit of \$400 per day.

If Darren is dishonest, and steals from 'Von Chilli', Darren can earn \$700 and the shop will make a loss of \$200. John knows this and therefore likes to check in on the Launceston.

- What would a decision tree of the current situation look like?
- Is John likely to open the second shop? (what is John's best option given Darren's best option)
- How can John encourage Darren to be honest?

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## 3. The Prisoner's Dilemma

		Prisoner B	
		Confess	Keep Quiet
Prisoner A	Confess	Both go to jail for 5 years	Prisoner B goes to jail for 10 years, Prisoner A goes free
	Keep Quiet	Prisoner A goes to jail for 10 years, Prisoner B goes free	Both go to jail for 1 year

- What is a Nash equilibrium?
- Should A confess?
- Should B confess?
- What is the most likely scenario to occur in this game? (Is there a Nash equilibrium?)
- Is this an efficient outcome?

## 4. The Oligopoly Game

Figure 3 Jack and Jill's Oligopoly Game

		Jack's Decision	
		High Production: 40 Gal.	Low Production: 30 gal.
Jill's Decision	High Production 40 gal.	Jack gets \$1,600 profit Jill gets \$1,600 profit	Jack gets \$1,500 profit Jill gets \$2,000 profit
	Low Production 30 gal.	Jack gets \$2,000 profit Jill gets \$1,500 profit	Jack gets \$1,800 profit Jill gets \$1,800 profit

- What is the best strategy for each firm?
- How can they cooperate to get a better result for each firm?
- When would a firm be likely to break the agreement?
- Would this situation occur in real life? If so where?

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## Week 12 - Price Discrimination and Externalities

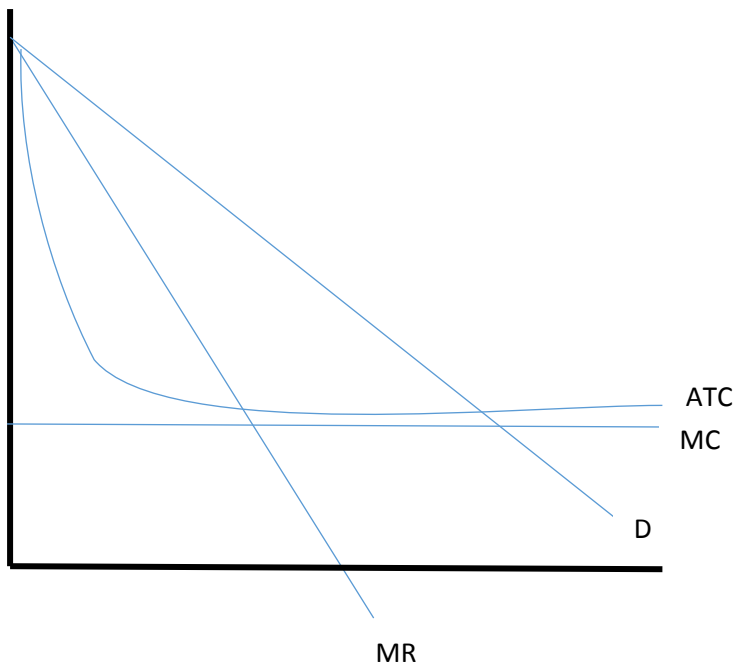
### 1. Price Discrimination

Lavender's chocolate company has the following consumers in a market.

Consumer (age)	Reservation Price \$
Rose (50)	8
Tulip (15)	7
Petunia (70)	9
Dahlia (12)	6
Camelia (4)	4
Violet (18)	6
Poppy (30)	12

The firm has a Constant Marginal Cost of 5.

1. Calculate the firm's profit under single pricing.
2. The firm can implement price discrimination (group or versioning). Create a pricing strategy for Lavender's chocolate company.
3. Show graphically and work out mathematically the changes in revenue, profit and consumer surplus and deadweight loss that result from your pricing strategy.
4. Is your pricing strategy realistic; would it be able to be implemented by a business or can you think of a business with a similar pricing strategy?



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2. Identify the externalities in the following pictures, draw a supply and demand diagram showing the effects on the market and develop a policy response to resolve the issue.

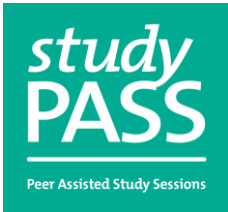


## 3. Cosean Externalities

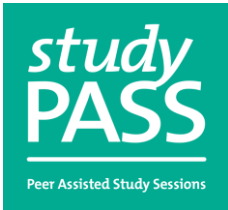
Sally and Tom are neighbours. Sally loves growing her hedges big and tall, but they block Tom's view of the river.

Trees	10	20	30	40	50	60
Total cost to tom	3	12	26	45	70	110
Total benefit to Sally	20	37	51	61	67	69

- Determine the socially optimal number of trees for sally to grow.
- Suppose Sally has the right to grow as many trees as she likes but that she can accept payments from Tom to chop them down. How many trees should Sally have and how much money would change hands?
- Suppose Tom has the right to his view but it is legal for him to accept payments to give up this right. How many trees would Sally have and how much money would change hands?



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## Week 13 – Revision and Public Goods

1. Fill in the following tables

Dependant Variable	Independent Variable	Type of Elasticity
Quantity demanded	Price	
	Income	Income Elasticity
Quantity demanded		Cross Price Elasticity
Quantity Supplied	Price	

Scarcity	
Opportunity Cost	
Cost Benefit	
Sunk Cost	

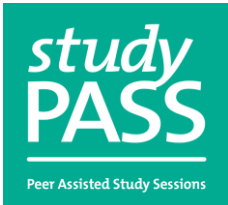


## Peer Assisted Study Sessions for BEA111 2017

Pareto inefficient/efficient	
Characteristics of a perfectly competitive market	
Three changes that would make a shift in demand	
Three changes that would make a shift in Supply	
equilibrium	

Utility	
Diminishing marginal return	
Consumer surplus	
Short run/Long run	
ATC	
AVC	
AFC	
MC/MB	
At what point does a monopolist produce at?	

Dominant strategy	
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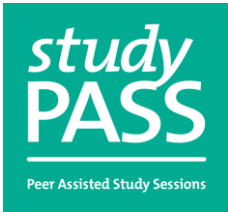
# Peer Assisted Study Sessions for BEA111 2017

Prisoner's dilemma	
Nash equilibrium	
externality	
Market failure	
Public good	
Common resource	
When would two players be likely to cooperate in a game? When would they be likely to cheat?	

Rival	Private goods	Common Resources
Non-rival	Natural Monopolies	Public goods
	Excludable	Non-excludable

2. Sort the following industries/products into private goods, common goods, collective goods and public goods.

iPhone  
Air-conditioning  
Art  
National defence



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Utas Wifi  
Law enforcement  
A burger  
Education  
Empty public transport  
Full public transport  
Outer space

## 3. Common & public goods

a)

Villagers can either invest in property with a 10% return or buy a sheep for \$100 to sell after one years of grazing on the village green. The following shows the return to each villager from a sheep.

Sheep	Sale price after 1 year (\$)
1	200
2	175
3	160
4	150
5	142
6	135
7	130

If each villager decides on their own how may sheep will be bought and graze on the commons?

What if the village decides as a group? How can they do this and enforce the decision?

b)

Two firms both fish in southern Tasmanian waters. Each firm can choose to send out either all or half of their boats. If both firms fish send out all their boats each day they earn \$800, If Firm A sends out half their boats and Firm B sends out all their boats, A gets \$500 and B gets \$1000. If A sends out all their boats and B sends out half, A gets \$1000 and B gets \$500. If both send out half their boats, each gets \$1500.

Present this situation in a payoff matrix.

If the Tasmanian government notices this, how can they bring the market to a socially efficient outcome?

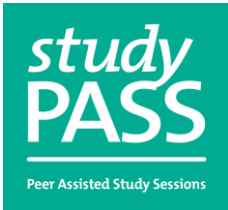
## 4. Elasticity summary sheet

### Cross price elasticity

If  $CPeD > 0$  then the two goods are:

If  $CPeD = 0$  then the two goods are:

If  $CPeD < 0$  then the two goods are:



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If the price of good X falls by 15% and the demand for good Y increases by 30%, what is the cross price elasticity of demand for good Y with respect to good X?

A company is producing both televisions and remotes separately. If they sell a TV for \$1100, they sell 150 TVs and 140 remotes. If they sell a TV for \$1300 they can sell 125 and 115 remotes. Calculate the price elasticity for demand of TVs and the cross price elasticity of demand for remotes with respect to TVs. If the company can sell each remote for \$20, at which price should they sell the TVs?

## Price elasticity of supply

If  $PeS > 0$  then the two goods are:

If  $PeS = 0$  then the two goods are:

If  $PeS < 0$  then the two goods are:

## Price elasticity of demand

If  $PeD > 0$  then the two goods are:

If  $PeD = 0$  then the two goods are:

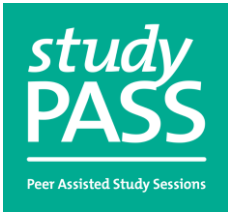
If  $PeD < 0$  then the two goods are:

## Income elasticity of demand

If  $PeI > 0$  then the two goods are:

If  $PeI = 0$  then the two goods are:

If  $PeI < 0$  then the two goods are:



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