

# A Level Economics

**YEAR 12 INITIAL NUMERACY  
ASSESSMENT**

## Test 2

Name

# A Level Economics

## Initial Numeracy Assessment (Test 2)

ANSWER ALL THE QUESTIONS IN THIS PAPER

- 1 Simon owns a small juice bar. His two most popular juices are 'red juice' and 'green juice'. Each juice has different ingredients. The cost of ingredients for 'red juice' is 60p per juice. The cost of ingredients for 'green juice' is 40p per juice. Simon sells 50 'red juices' and 80 'green juices' per day.

**Calculate the daily cost of making the two juices.**

Show your workings here:

- 2 The price of each juice drink is £2.30. Assuming Simon sells the quantities stated in Q1,
- Calculate how much revenue Simon earns in one day from selling 'red juice and 'green juice'.** (revenue = price x quantity)
  - Using your answer from Q1, then calculate the profit Simon makes** (profit = revenue – costs).

Show your workings here:

- 3 Simon decides to increase the price of his juice drinks by 20%. Sales of 'red juice' fall by 10% and sales of 'green juice' fall by 5%.

**Calculate Simon's new level of revenue.**

- 4 Income tax in the UK is applied in bands. Nobody pays tax on the first £11,850 that they earn. People pay 20% tax on the next £34,500 earned **above** £11,850. People pay 40% tax on the next £103,659 after that.

**If Evelyn earns £60,000 per year as a lawyer, prove that she has to pay £12,360 in income tax.**

Show your workings here:

- 5 If the top rate of tax increases to 50%, calculate
- how much tax Evelyn pays now
  - how much income she has left over after paying her income tax

**Assume that Evelyn's income does not change and the other tax bands remain the same.**

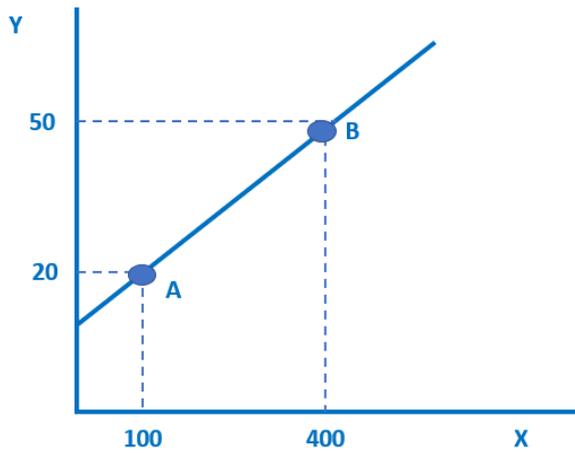
Show your workings here:

- 6 Nomo takes a loan from a payday company. Nomo takes a £300 loan at 0.8% per day.

**How much will Nomo owe the lender after a week.**

Show your workings here:

7

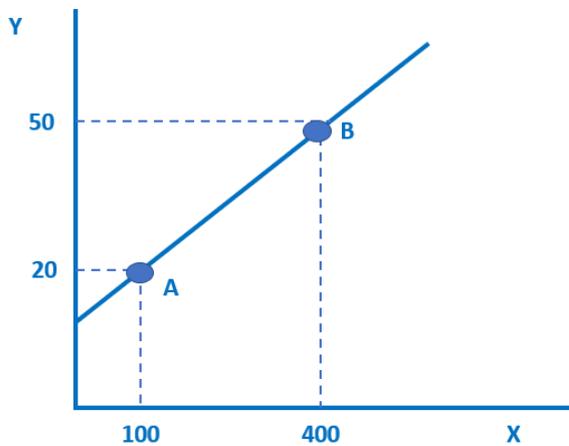


A and B are two points on a straight line.

If we move from A to B, how many Y units do we gain and how many X units do we lose?

Show your workings here:

8



The gradient does not change but the relationship between Y and X changes. For every value of Y there are now 50 fewer units of X.

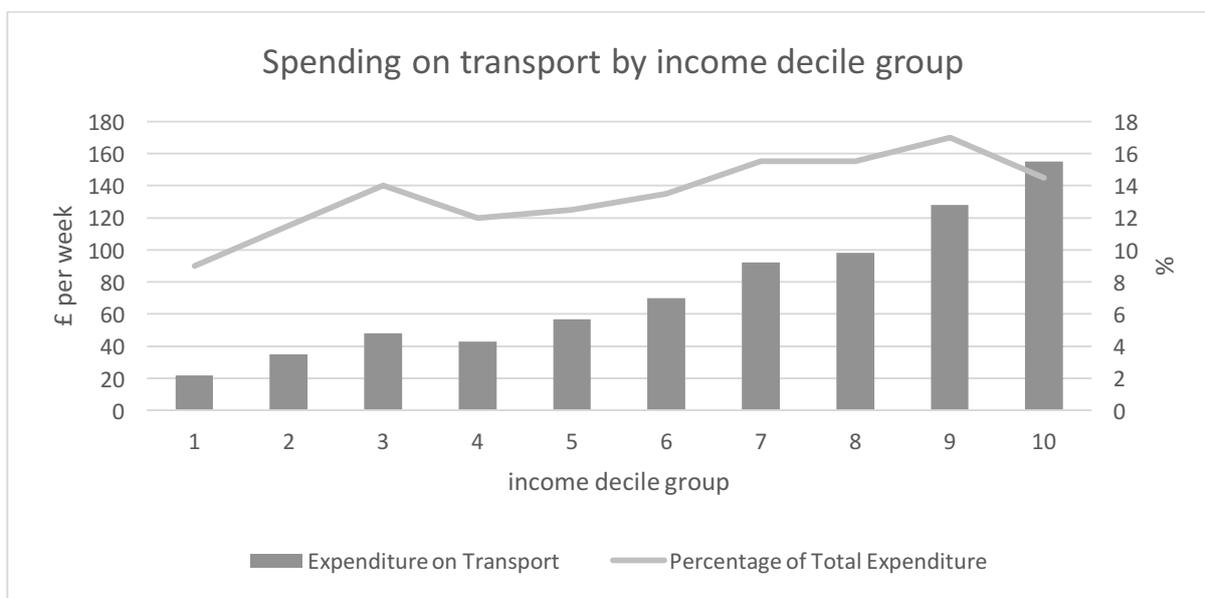
**Adapt the diagram above to illustrate the change.**

Show any workings you need to do here:

- 9 A currency investor thinks that she can make a profit by buying Russian Roubles. She exchanges £10,000 to Roubles when the exchange rate is £1 = 96 Roubles. Later in the year, the exchange rate changes to £1 = 55 Roubles and she changes her Roubles back to Pounds.  
**How much profit did she make?**  
 Show your workings here:

- 10 George likes to spend his income in the same way every month; 20% savings; 40% necessities and household bills, 10% on watching football, 30% on luxuries.  
**If George earns £28,000 a year (after tax), calculate how much he spends on these 4 areas per year.**  
 Show your workings here:

11



Income decile group is a way of splitting up the population for statistical analysis: imagine lining up the population from poorest to richest; income decile group 1 would contain the poorest 10% of people, income decile group 2 would contain the next poorest 10%, and so on.

- i) Calculate the mean average expenditure on transport of the lowest 3 income deciles.
- ii) Calculate the mean average expenditure on transport of the highest 3 income deciles.

Show your workings here:

- 12 The table below shows the total output figures for a firm as it adds more workers to its production process.  
**Fill in the right-hand column.**

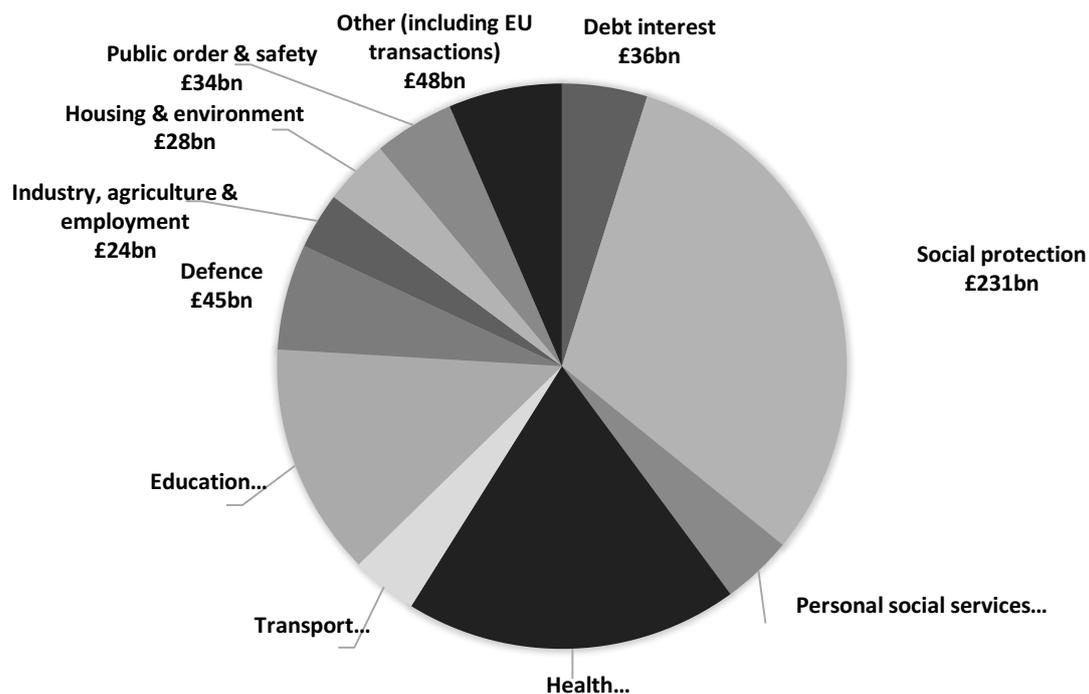
Workers	Total Output	Output per worker
1	18	
2	24	
3	36	
4	44	
5	48	

Show your workings here:

- 13 Gunter brews beer. He brews 100 pints of beer per week. Rosa makes wine. She bottles 125 bottles of wine per week. However, Gunter likes wine and Rosa likes beer. So, they agree to trade. They trade at a ratio of 5 beers: 2 wine. Every week Gunter trades 20 pints of beer for bottles of wine.  
**After 4 weeks, how many pints of beer and bottles of wine does Gunter have.**  
 Show your workings here:

- 14 Canada has a population of 36.2 million people. Canada has a total national income of \$1.6 billion.  
**Calculate the average income per person.**  
 Show your workings here:

15 The chart below shows Government spending by area 2015/16:



Total Government spending in the 2015/16 financial year was £722bn.

Calculate the % of Government spent on Social Protection, Health and Education in that year.

Show your workings here:

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