



eClassroom

GCSE Mathematics

Exchange Rates & Best Value

Questions

Pearson Edexcel GCSE & iGCSE Mathematics



Section A — Foundation

Worked Examples

[Fluency]

£1 = €1.17. Convert £350 to euros.

$$£350 \times 1.17 = \text{€}409.50$$

[Reasoning]

Best value: 400 g for £1.60 or 650 g for £2.47?

$$400\text{g}: 1.60/400 = 0.40\text{p/g} \quad 650\text{g}: 2.47/650 = 0.38\text{p/g}$$

650 g pack is **better value**.

[Problem Solving]

£1 = €1.17. A phone costs €468 in France and £390 in the UK. Where is cheaper?

$$\text{Convert euros to pounds: } 468 \div 1.17 = \text{£}400$$

£390 < £400, so the UK is cheaper.

[Fluency]

1. £1 = €1.17. Convert £250 to euros.

(1 mark)

[Fluency]

2. £1 = €1.17. Convert €351 to pounds.

(1 mark)

[Fluency]

3. Which is better value: 400 g for £1.60 or 650 g for £2.47? Show your working.

(2 marks)

[Fluency]

4. Which is better value: 6 pens for £2.40 or 10 pens for £3.70? Show your working.

(2 marks)

[Fluency]

5. £1 = ¥185. A holiday costs ¥74 000. Find the cost in pounds.

(2 marks)

[Reasoning]

6. €1 = £0.86. A dress costs €45 in France and £40 in the UK.

In which country is the dress cheaper? Show all your working.

(3 marks)

**[Reasoning]**

7. Three deals on the same juice: 3 for £2.19 5 for £3.45 8 for £5.52

Which deal offers the best value per bottle? Show your working.

(3 marks)

[Reasoning]

8. The exchange rate was £1 = \$1.25 USD. It has now changed to £1 = \$1.18.

A British tourist planned to spend \$500 on their holiday.

How many more pounds does this now cost compared to before?

(3 marks)

[Problem Solving]

9. Three sizes of shampoo are available in a supermarket:

Size A: 1.5 litres for £1.08 Size B: 2 litres for £1.36 Size C: 500 ml for £0.45

Find the best value and justify your answer.

(3 marks)

[Problem Solving]

10. Convert 75 miles per hour to kilometres per hour.

Use the fact that 1 mile = 1.609 km.

(2 marks)



Section B — Higher

Worked Examples

[Fluency]

£1 = 1.28 CAD and \$1 CAD = 0.73 EUR. Convert £500 to euros.

$$£500 \times 1.28 = \$640 \text{ CAD} \rightarrow 640 \times 0.73 = \text{€}467.20$$

[Reasoning]

Two phone tariffs: A: £25/month + 5p/min. B: £18/month + 12p/min. For how many minutes per month is A cheaper?

$$25 + 0.05n < 18 + 0.12n \rightarrow 7 < 0.07n \rightarrow n > 100$$

A is cheaper when using **more than 100 minutes** per month.

[Problem Solving]

Buy for £240 ex-VAT, sell for £336 inc 20% VAT. Find profit margin as % of cost.

$$\text{Sell price ex-VAT} = 336 / 1.20 = £280$$

$$\text{Profit} = £280 - £240 = £40$$

$$\text{Margin} = 40 / 240 \times 100 = 16.67\%$$

[Fluency]

1. £1 = 1.28 CAD. \$1 CAD = 0.73 EUR.

Convert £500 to euros. Show your working.

(3 marks)

[Reasoning]

2. The exchange rate USD/GBP is 1.35. It then falls by 4%.

(a) Find the new exchange rate. (1)

(b) How much less does a British tourist get for £200? (2)

(3 marks)

[Fluency]

3. Three sizes of pasta: 2 kg for £3.60, 750 g for £1.40, 5 kg for £8.75.

Which is the best value? Show all your working.

(3 marks)

[Reasoning]

4. A British family wants to buy euros for a holiday. The exchange rate is £1 = €1.20.

They need €1800, but have to buy the euros 3 months in advance when the rate was £1 = €1.15.

How much extra do they spend buying early? Give your answer in pounds.

(3 marks)

**[Reasoning]**

5. Two phone tariffs:

Plan A: £25 per month + 5p per minute for calls.

Plan B: £18 per month + 12p per minute for calls.

For what number of minutes per month is Plan A cheaper?

Show your method clearly.

(3 marks)

[Problem Solving]

6. A shop buys items for £240 excluding VAT. It sells them for £336 including VAT at 20%.

Find the profit as a percentage of the cost price.

(3 marks)

[Problem Solving]

7. The euro is expected to strengthen by 3% against the pound. Currently £1 = €1.18.

A tourist has €2000. How many pounds will they receive after the strengthening?

(3 marks)

[Problem Solving]

8. A pair of jeans costs £65 in the UK, \$79 in the USA and €74 in France.

Exchange rates: £1 = \$1.28 and £1 = €1.17.

In which country are the jeans cheapest? Show all working.

(4 marks)

[Problem Solving]

9. UK inflation is 3% per year. Eurozone inflation is 2.5% per year.

An item costs £1000 in the UK and €1170 in Europe today (equivalent).

Find the cost in each region after 3 years.

(3 marks)

[Problem Solving]

10. The Purchasing Power Parity (PPP) theory says exchange rates adjust so identical goods cost the same internationally.

A Big Mac costs £3.99 in the UK and \$5.15 in the USA.

(a) Find the implied PPP exchange rate (£1 = \$?). (2)

(b) The actual rate is £1=\$1.28. Is the pound overvalued or undervalued according to PPP?

Explain. (2)

(4 marks)