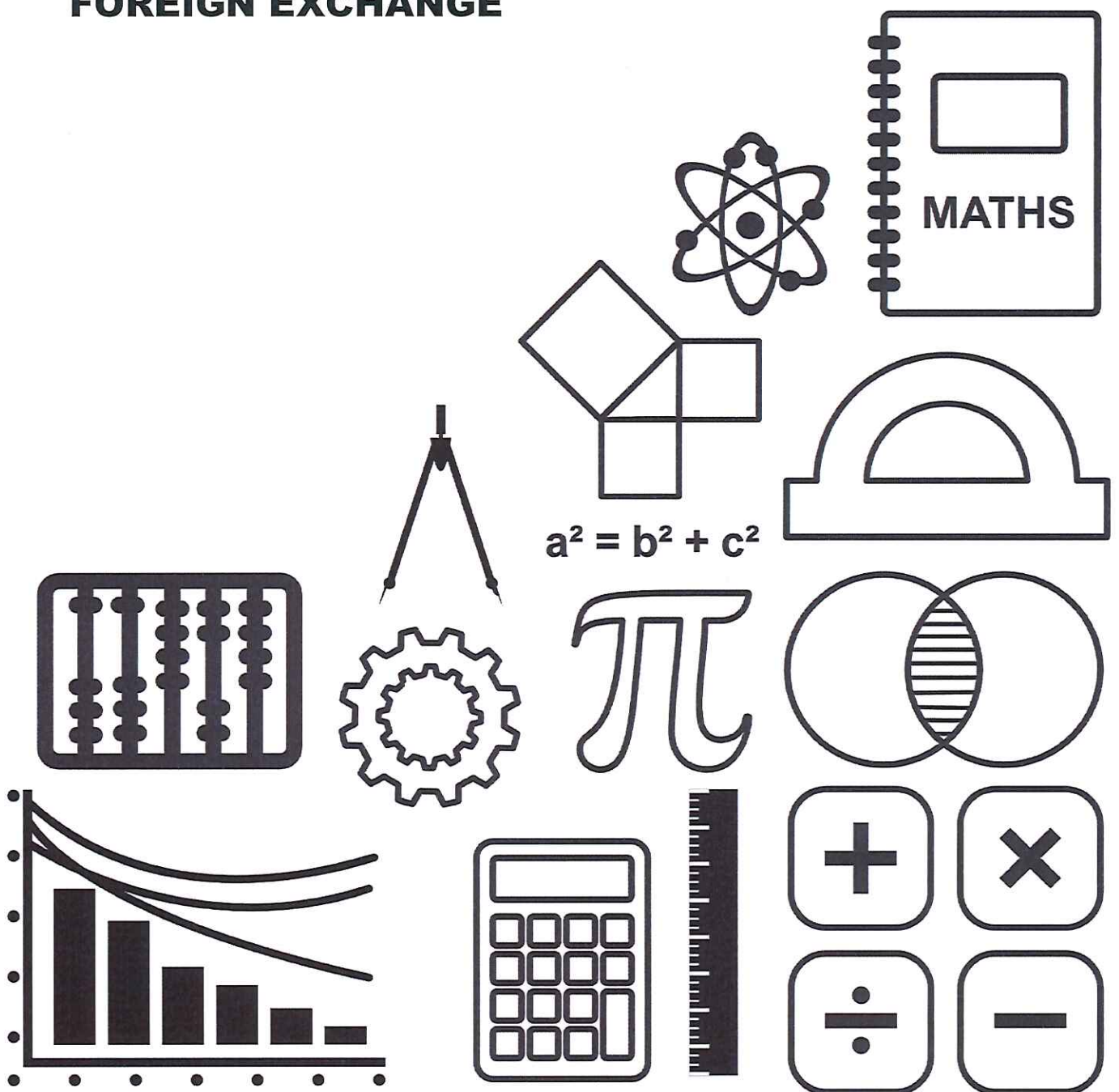


SOLUTIONS

GCSE TOPIC BOOKLET FOREIGN EXCHANGE



1.

Sofia had planned to exchange £300 for euros during a visit to the local town one Saturday. She had checked the exchange rate for that day, and found it to be £1 = 1.20 euros.

Unfortunately, she had to cancel her visit to town that day, and it was not until the following Saturday that she was able to exchange her £300 for euros. By this date the exchange rate was £1 = 1.17 euros.

How many fewer euros did she receive due to this delay?

What percentage loss was caused by this delay?

[4]

$$\begin{aligned} & (300 \times 1.2) - (300 \times 1.17) \\ & = 360 - 351 \\ & = 9 \text{ euros} \end{aligned}$$

$$\% \text{ loss} = \frac{\text{change}}{\text{original}} \times 100$$

$$= \frac{9}{360} \times 100$$

$$= 2.5\%$$

2.

Catrin went on holiday to Brazil.

- (a) She changed £850 into Brazilian Real (R\$) when the exchange rate was £1 = 5.44 R\$. How many Brazilian Real (R\$) did she receive? [2]

$$850 \times 5.44 = 4624 \text{ R\$}$$

- (b) Whilst on holiday, she went on a tour which cost 500 R\$. What was the cost of the tour in pounds? [2]

$$500 \div 5.44 = \underline{\underline{£92}}$$

3.

Ewan is going on holiday to India.
He has saved £450 to exchange for Indian rupees.

- (a) The exchange rate on the internet last week was £1 = 99.40 rupees.
Had Ewan been going on holiday last week, how many rupees could he have bought?

[2]

$$450 \times 99.40 = 44,730 \text{ rupees}$$

- (b) Ewan exchanges his money on arrival in India.
The exchange rate is now £1 = 99.72 rupees.

The exchange bureau only has 500 rupee notes.
Ewan wants to buy as many rupees as possible with his £450 savings.

How much of his £450 will Ewan spend buying rupees?
Give your answer correct to the nearest penny.
You must show all your working.

[4]

$$450 \times 99.72 = 44,874 \text{ rupees}$$

Only has 500 rupee notes

∴ Ewan buys 44,500

$$= 44,500 \div 500 = 89 \text{ (500 rupee notes)}$$

$$44,500 \div 99.72 = \underline{\underline{£446.25}} \text{ (nearest penny)}$$

4.

Use the exchange rate £1 = 1.52 US dollars to answer the following questions.

- (a) Gareth exchanges £300 into US dollars.
How many US dollars will he receive?

[2]

$$300 \times 1.52 = \underline{\underline{456 \text{ US dollars}}}$$

- (b) Adrienne wants to exchange 585 US dollars into pounds (£).
Estimate how many pounds Adrienne is likely to receive.
You must show your working.

[3]

$$585 \text{ dollars} \approx 600 \text{ dollars}$$

$$\begin{aligned} \text{exchange rate } £1 &= 1.52 \text{ US dollars} \\ &\approx £1 \approx 1.5 \text{ US dollars} \end{aligned}$$

$$600 \div 1.5 = 600 \div \frac{3}{2}$$

$$= 600 \times \frac{2}{3}$$

$$= \frac{1200}{3} \approx \underline{\underline{£400}}$$

5.

Lois lives in Llandudno.
She is changing some pounds into other currencies before going on holiday in Europe.

The exchange rates are displayed below.

Exchange £1 for	
1.48 SF	Swiss francs
1.20 €	euros
5.04 Zł	Polish zloty

(a) Calculate how much Lois would receive in exchanging each of the following.

(i) £450 exchanged for Swiss francs. [2]

$$450 \times 1.48$$

666

Swiss francs

(ii) £300 exchanged for Polish zloty. [2]

$$300 \times 5.04$$

1512

Polish zloty

(b) How many pounds will Lois have to exchange to receive 363.60 euros? [2]

$$363.60 \div 1.20$$

£ 303

6.

Dewi is going on holiday to China.

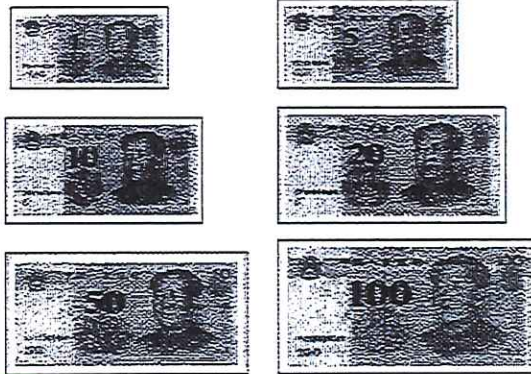
He has found the following rates for exchanging pounds sterling (£) and Chinese yuan (CYN), at a local exchange bureau.

Buying Chinese yuan (CYN)	£1 buys 9.28 CYN
Selling Chinese yuan (CYN)	9.42 CYN buys £1

The exchange bureau has all the possible sterling coins and notes.

Dewi knows that the exchange bureau only sells and buys CYN notes and that no coins are available or accepted.

The bureau has many of the following CYN notes.



- (a) Dewi has £460 to buy Chinese yuan.

Calculate

- the maximum number of CYN Dewi can buy, and
- how much, to the nearest penny, this will cost him.

You must show all your working.

[5]

$$460 \times 9.28 = 4268.8 \text{ CYN}$$

but, no coins, so can only buy 4268 CYN

$$4268 \div 9.28 = \underline{\underline{459.91}} \text{ (Dewi pays nearest penny)}$$

- (b) It would cost Dewi £100 to buy 928 CYN.
Dewi states that he will lose money when he changes any CYN notes that he buys back into pounds.
How much would Dewi lose in changing 928 CYN back into pounds? [3]

$$928 \div 9.42 = £98.51 \text{ (nearest penny)}$$

$$£100 - £98.51 = £1.49$$

Dewi will lose £1.49

7.

Helen travelled from the UK to Brussels before moving on to Hong Kong on business.
Before leaving the UK, she exchanged some pounds (£) into euros (€).

She noticed that the exchange rates offered at the time were

£1 $\equiv$ 1.31 euros and £1 $\equiv$ 11.62 Hong Kong dollars.

Before leaving Brussels for Hong Kong, Helen went to exchange 750 euros into Hong Kong dollars.

Using the exchange rates that she had noticed in the UK, Helen calculated how many Hong Kong dollars she expected to get for her 750 euros.

- (a) What would this amount have been in Hong Kong dollars? [4]

$$750 \text{ euros} = 750 \div 1.31 = 572.519... = £572.52 \text{ (nearest penny)}$$

$$£572.52 = 572.52 \times 11.62 = 6652.68... = \underline{\underline{6653 \text{ HK\$}}}$$

- (b) Helen received 200 Hong Kong dollars less than she had expected.
Calculate the exchange rate between euros and Hong Kong dollars that Helen was given in Brussels. [2]

$$\underline{\underline{1 \text{ euro}}} = \frac{6652.68 - 200}{750}$$

$$= \underline{\underline{8.6 \text{ HK\$}}} \text{ (1dp)}$$

8.

Jack has returned to the UK having been working in Europe.
He has 450 euros, which he wants to exchange into pounds.

The exchange rate he is offered at the bank for changing euros into pounds is £1 = 1.20 euros.

His sister Gillian is about to go on holiday to France and intends to exchange £400 into euros.
The exchange rate she is offered at the bank for changing pounds into euros is £1 = 1.08 euros.

Rather than going to the bank,

- Jack gives Gillian his 450 euros.
- Gillian gives Jack her £400.

Show how both Jack and Gillian save money by doing this.

Jack would receive from the bank

$$450 \div 1.2 = \underline{\underline{£375}}$$

Gillian would receive from the bank

$$400 \times 1.08 = \underline{\underline{432 \text{ euros}}}$$

Therefore, if they just exchange their cash with each other, Gillian will get 450 euros instead of 432, and Jack will get £400 instead of £375

[5]

9.

The currency in Brazil is known as the Brazilian Real, BRL.

		
Year	Pound (£)	Brazilian Real (BRL)
2010	1	2.86
2014	1	3.71

In 2010, Ava bought £3400 worth of Brazilian Real, BRL.

In 2014, Ava exchanged this money back into pounds.

Did Ava gain or lose money?

State how much money Ava gained or lost, giving your answer correct to the nearest pound.

[5]

2010 $3400 \times 2.86 = 9724 \text{ BRL}$

2014 $9724 \div 3.71 = £2621.0242...$
 $= £2621.02$ (nearest penny)

Ava makes a loss

$£3400 - £2621.02 = £778.98$
 (nearest penny)

Ava makes a loss of £779 (nearest £)

(must give answer to nearest £ as says so in question)

10.

A company had intended to send representatives to business conferences in the Far East. An amount of pounds (£) was exchanged for Hong Kong dollars (HK\$) for one employee. An equal amount of pounds was exchanged for Japanese yen (yen) for another employee.

Both conferences were cancelled and the money had to be exchanged back into £s. Data on the exchange values at that time is shown below.

	Hong Kong Dollars (HK\$)	Japanese yen (yen)
Conversion from pounds	£1 = 11.60\$	£1 = 127.2 yen
Conversion back to pounds	£1 = 12.20\$	£1 = 135.9 yen

Calculate on which of the two currency exchanges the company lost most money.

Pick an amount of money in £ - I'm choosing £100

HK\$ $£100 \times 11.6 = 1160 \text{ HK\$}$
 $1160 \text{ HK\$} \div 12.20 = \underline{£95.08}$ (nearest penny)

yen $£100 \times 127.2 = 12720 \text{ yen}$
 $12720 \text{ yen} \div 135.9 = \underline{£93.60}$ (nearest penny)

More money is lost on the yen

[4]

11.

(a) You will be assessed on the quality of your written communication in this part of the question.

Henry lives in France and is going on holiday to Iceland. The bank offers him an exchange rate of 1 euro to buy 154.18 Icelandic krona. Henry wants to exchange 300 euros, but no more than this, into Icelandic krona. The bank only has 20 krona notes. Calculate the maximum number of Icelandic krona that Henry can buy and also how much this is going to cost him in euros.

$300 \times 154.18 = \underline{46254 \text{ krona}}$

but the bank only has 20 krona notes

∴ Buy 46240 krona

$46240 \div 154.18 = \underline{299.91 \text{ euros}}$ (2dp)

[7]