3.9 Exchange Rates: Test Pack

EDEXCEL 1MA1 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Write down the amount in euros. £1 = 1.17 euros. How many euros will you get for £5?

(Total for Question 1 is 1 mark)

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2 A souvenir costs 75 euros. Work out the price in pounds. Use the exchange rate 1 GBP = 1.25 EUR.

(Total for Question 2 is 1 mark)

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3 £1 = 1.35 US dollars.
A hotel room costs £80 per night in the UK. The same type of room abroad costs $81.00 per night.
Which is cheaper, and by how much in pounds? You must show your working.

(Total for Question 3 is 4 marks)

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4 £1 = 10.5 Turkish lira.
A holiday costs TL 1260.00. Work out the cost in pounds.

(Total for Question 4 is 2 marks)

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5 Zara changes £400 into US dollars at £1 = 1.26 US dollars. On holiday she spends $485.70. She then changes the rest of her US dollars back into pounds at £1 = 1.22 US dollars. How much does she get back?

(Total for Question 5 is 4 marks)

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6 Show that £625 converts to 556.25 EUR. Use the rate 1 GBP = 0.89 EUR and show your method.

(Total for Question 6 is 2 marks)

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7 Compare two shops. Shop A gives the rate £1 = 1.10 euros. Shop B gives the rate £1 = 1.12 euros but charges a fixed £2 fee per transaction. A customer wants to change £100. Which shop gives the customer more euros? Show your working.

(Total for Question 7 is 3 marks)

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8 An exchange bureau quotes: buy USD at 1 GBP = 1.28 USD and sell USD at 1 GBP = 1.22 USD. A customer buys $640 from the bureau. How many pounds will the customer pay? Give your answer to 2 decimal places.

(Total for Question 8 is 2 marks)

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9 If 450 EUR costs £390, find the exchange rate in the form 1 GBP = x EUR. Give x to 3 decimal places.

(Total for Question 9 is 2 marks)

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10 A holidaymaker changes £350 to euros at 1 GBP = 1.12 EUR. Later they change those euros back to pounds at 1 GBP = 1.18 EUR. Work out how many pounds they get back and the amount of money lost or gained. Give answers to 2 decimal places.

(Total for Question 10 is 4 marks)

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11 A bank changes its rate from £1 = 1.25 euros to £1 = 1.18 euros.
Calculate the percentage decrease in the number of euros you get for each pound. Give your answer to 2 decimal places.

(Total for Question 11 is 4 marks)

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12 Show that if the exchange rate from pounds to x-currency is R x per pound and from x-currency to y-currency is S y per x-unit, then the direct rate from pounds to y-currency is R * S y per pound.

Use algebra to demonstrate this and give a short numerical example with R = 1.6 and S = 0.7 to illustrate.

(Total for Question 12 is 6 marks)

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13 Kwame is planning a trip to Canada. He estimates he will spend 1,450 Canadian dollars (CAD). The quoted rate is £1 = 1.72 CAD.

He can pre-buy CAD now or wait, but the travel company charges an additional fixed fee of £12 if he waits and buys at the airport rate which is £1 = 1.66 CAD.

(a) How many pounds to buy 1,450 CAD now at 1.72 CAD per pound? Give your answer to 2 dp. **(3)**

(b) How many pounds if he waits and buys at 1.66 CAD per pound with an extra £12 fee? Which option is cheaper and by how many pounds? Give your answer to 2 dp. **(5)**

(Total for Question 13 is 8 marks)

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Mark scheme · 3.9 Exchange Rates: Test Pack

Question 1

5 * 1.17 = 5.85 euros cao	**B1**

Answer: 5.85 euros (cao)

Question 2

75 ÷ 1.25 = 60.00 cao	**B1**

Answer: £60

Question 3

81 / 1.35	**M1**
£60 found	**A1**
compares in the same currency	**M1**
abroad by £20	**A1**

Answer: abroad by £20

Question 4

1260 / 10.5	**M1**
£120	**A1**

Answer: £120

Question 5

400 x 1.26 = 504	**M1**
504 - 485.7 = 18.3	**M1**
18.3 / 1.22	**M1**
£15.00	**A1**

Answer: £15.00

Question 6

Multiply: 625 × 0.89	**M1**
556.25 cso	**A1**

Answer: 556.25 EUR

Question 7

calculate euros from Shop A: 100 * 1.10 = 110	**M1**
calculate euros from Shop B after fee: (100 - 2) * 1.12 = 98 * 1.12	**M1**
Shop A gives more: Shop A 110 euros, Shop B 109.76 euros cao	**A1**

Answer: Shop A gives more. Shop A: 110 euros. Shop B: (100 - 2) * 1.12 = 109.76 euros.

Question 8

Use sell rate: 1 GBP = 1.22 USD so divide 640 by 1.22	**M1**
524.59 awrt (to 2 dp)	**A1**

Answer: £524.59 awrt

Question 9

Set up ratio: x = 450 ÷ 390	**M1**
1.154 awrt (to 3 dp)	**A1**

Answer: 1 GBP = 1.154 EUR awrt

Question 10

Convert £350 to euros: 350 × 1.12 = 392 EUR	**M1**
Convert 392 EUR back to pounds at 1 GBP = 1.18 EUR: 392 ÷ 1.18	**M1**
332.20 awrt (final pounds to 2 dp)	**A1**
Loss = 350.00 - 332.20 = 17.80 awrt	**A1**

Answer: Gets back £332.20; loss £17.80

Question 11

find decrease 1.25 - 1.18 = 0.07 or show correct percentage method	**M1**
method to find percentage: 0.07 / 1.25	**M1**
5.6% (or 5.60%) to 2 dp	**A1**
answer given to 2 dp: 5.60% cao	**B1**

Answer: 5.60% decrease. Working: decrease = 0.07; percentage = 0.07/1.25 = 0.056 = 5.60%.

Question 12

use of algebra: £1 = R x-units, then R x-units = R * S y-units	**dM1**
conclude direct rate is R * S y per pound	**M1**
numerical substitution with R = 1.6 and S = 0.7: compute 1.6 * 0.7	**M1**
1.12 y per pound cao (numerical result correct)	**A1**
give a clear worked example showing conversion e.g. £10 -> 10*1.6 = 16 x-units -> 16*0.7 = 11.2 y-units	**M1**
final example values correct and consistent: £10 = 11.2 y	**A1**

Answer: Algebra: £1 = R x; 1 x = S y so £1 = R * S y. Numerical: R* S = 1.6 * 0.7 = 1.12. Example: £10 -> 10*1.6 = 16 x -> 16*0.7 = 11.2 y. Shown: £1 = 1.12 y.

Question 13

(a) method: divide 1,450 by 1.72	**M1**
(a) calculate 1,450 / 1.72	**M1**
(a) £843.02 to 2 dp cao	**A1**

(a) Answer: £843.02

(b) method: compute pounds for CAD at airport rate 1,450 / 1.66	**M1**
(b) add £12 fee	**M1**
(b) subtract pre-buy cost from airport total to find difference	**M1**
(b) airport total £885.49 to 2 dp	**A1**
(b) state cheaper option: pre-buy cheaper by £42.47 to 2 dp cao	**A1**

(b) Answer: If waiting: 1,450 / 1.66 = 873.4939759 -> 873.49 plus 12 = £885.49. Pre-buy cost 843.02, so pre-buy is cheaper by £42.47. Final to 2 dp: airport total £885.49; pre-buy cheaper by £42.47.

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