3.9 Exchange Rates: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 120 euros in pounds. Use the exchange rate 1 GBP = 1.20 EUR.

(Total for Question 1 is 1 mark)

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2 Work out £88 in Canadian dollars. Use the exchange rate 1 GBP = 1.68 CAD.

(Total for Question 2 is 1 mark)

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3 Convert the amount. £1 = 1.30 US dollars. How many US dollars is £8? Give your answer to the nearest cent.

(Total for Question 3 is 2 marks)

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4 Zara changes £200 into US dollars at £1 = 1.25 US dollars. On holiday she spends $216.72. She then changes the rest of her US dollars back into pounds at £1 = 1.28 US dollars. How much does she get back?

(Total for Question 4 is 4 marks)

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5 Reverse the conversion. The rate is 1 euro = £0.88. How many euros would you get for £44? Give your answer to 2 decimal places.

(Total for Question 5 is 4 marks)

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6 Problem solving: Priya has 500 US dollars and is going to change them to pounds. The rate is £1 = 1.25 US dollars. The exchange office offers an additional promotion: if you change more than 400 US dollars you get an extra £3 bonus. How many pounds will Priya receive in total? Show your working.

(Total for Question 6 is 6 marks)

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7 An online trader spots an arbitrage opportunity between three currencies. The rates are:
£1 = 1.45 euros,
1 euro = 130 Japanese yen (JPY),
1 JPY = £0.0068.
Start with £10,000 and exchange pounds -> euros -> JPY -> pounds using the rates above. Calculate the final amount of pounds received. Is there a profit or loss? Give your answer to 2 decimal places and state the percentage gain or loss relative to the starting £10,000 to 2 dp.

(Total for Question 7 is 6 marks)

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Mark scheme · 3.9 Exchange Rates: 30-minute Pack

Question 1

120 ÷ 1.20 = 100.00 cao	**B1**

Answer: £100

Question 2

88 × 1.68 = 147.84 cao	**B1**

Answer: 147.84 CAD

Question 3

multiply 8 by 1.30 or identify method 8 * 1.30	**M1**
10.40 dollars cao (to nearest cent)	**A1**

Answer: 10.40 US dollars

Question 4

200 x 1.25 = 250	**M1**
250 - 216.72 = 33.28	**M1**
33.28 / 1.28	**M1**
£26.00	**A1**

Answer: £26.00

Question 5

find euros per pound by dividing 1 by 0.88 or set up division 44 / 0.88	**M1**
calculate 44 / 0.88 = 50	**M1**
50.00 euros cao	**A1**
answer given to 2 decimal places	**A1**

Answer: 50.00 euros

Question 6

convert dollars to pounds using 1.25 dollars = £1: 500 / 1.25	**M1**
calculate 500 / 1.25 = £400	**M1**
apply promotion because 500 > 400 dollars, so add £3	**M1**
compute total 400 + 3 = 403	**M1**
£403 cao	**A1**
clear method shown and justification that promotion applies (quality of written communication)	**C1**

Answer: £403

Question 7

convert £10,000 to euros: 10,000 * 1.45	**M1**
convert euros to JPY: previous result * 130	**M1**
convert JPY to pounds: previous result * 0.0068	**M1**
final pounds value computed correctly to 2 dp	**A1**
compute profit/loss and show sign	**M1**
percentage gain/loss relative to 10,000 given to 2 dp	**A1**

Answer: Start: £10,000 -> euros = 10,000 * 1.45 = 14,500 euros. -> JPY = 14,500 * 130 = 1,885,000 JPY. -> pounds = 1,885,000 * 0.0068 = £12,818.00. Profit = 12,818.00 - 10,000 = £2,818.00. Percentage gain = (2,818 / 10,000) * 100 = 28.18% gain (to 2 dp).

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