Money – Level Two

How to Guide - ANSWERS

Make sure you have put the pound sign (£) or the appropriate currency on all of your answers.

You must show all of the working out. For example, in question one you need to attempt to find the price of all the options.

Question 1

Jay hires a carpet cleaner. He wants it for Friday and Saturday and wants to clean four rooms with it. Which company will be the cheapest? **Company B is the cheapest.**

All the companies charge the same price for carpet detergent: £9.99 for a 1 litre bottle, which is enough to clean up to two rooms.

Company A 22.99 for 24 hours and £28.99 for 48 hours

Company B 1ST DAY £16.95   EXTRA DAY £8.48   WEEKEND £21.19

Company C

	First 24hrs	Next 24hr	Weekend	Week
inc. VAT	£34.44	£17.22	£48.22	£68.88
Offer - price includes two bottles of detergent				

Will need two bottles of cleaner as he wants to clean 4 rooms

Company A 28.99 for the 2 days plus 2 bottles of detergent 28.99 + 9.99 + 9.99 = **£48.97**

Company B 1 day at 16.95 plus an extra day at 8.48 plus 2 bottles of detergent

16.95 + 8.48 + 9.99 + 9.99 = **£45.41**

Company C 34.44 for first day plus 17.22 for the second day. Detergent is included.

34.44 + 17.22 = **£51.66**

Question 2

a) Ameena sees a job advertised at £32,000 on a pro rata basis. She knows a full-time employee would do 40 hours per week and the job asks for 15 hours per week. How much would she be paid **per month**? **Approx £1000 (allow up to £2 either side of £1000)**

$32000 \div 12 = 2667$ per month

$2667 \div 4 = 666.75$ per week

$666.75 \div 40 = 16.67$ per hour

The job is 15 hours so $16.67 \times 15 = 250.05$ per week

$250.05 \times 4 = 1000.20$ per month

OR

$\frac{15}{40}$ represents the hours worked as a fraction. If you find $\frac{15}{40}$ of the salary you will have the answer

$32000 \div 40 = 800$

$800 \times 15 = 12000$ per year

You could also simplify $\frac{15}{40}$ to $\frac{3}{8}$ if you wished

Divide by 12 to get the salary per month $12000 \div 12 = 1000$

b) A couple have a holiday home in Spain which they rent out. They employ a local cleaning company who charge them £95 per week. In June, July, August and September they charge a monthly supplement of £300. What is the annual fee they pay? **£6140**

52 weeks in a year. 52 x 95 = 4940

4 months at an additional 300 → 300 x 4 = 1200

4940 + 1200 = 6140

c) A small business paid £600 in tax in the first quarter of the year. What was their average tax per week? **£50**

Each quarter represents 3 months

600 ÷ 3 = 200 per month

200 ÷ 4 = 50 per week

OR

3 months is 3 x 4 = 12 weeks

600 ÷ 12 = 50 per week

d) Jake used a plumber for a repair to his heating system.

The job took 3.5 hours and he paid £185. He wanted to know if he could have hired a cheaper plumber so he compared the price to the information from three different plumbers.

Dave said, "I charge a £60 callout fee plus £45 per hour on a pro rata basis.

Raj said, "Work is carried out based on our hourly rate of £55. There is a minimum charge of one hour and then you are charged at 15 min increments thereafter."

Susan quoted, "I charge £120 for the first hour with a one-hour minimum charge and thereafter £12 in 15 minute units."

Would one of the other plumbers have been cheaper? **No, they are all more expensive**

Dave is 60 fixed plus 45 per hour so 3.5 x 45 = 157.5

157.5 + 60 = **£217.50**

Raj is 55 per hour so 3 x 55 = 165 for the full hours plus two lots of 15 to make the half hour

55 ÷ 4 = 13.75 for each 15 min then 13.75 x 2 = 27.5 for 30 mins or 55 ÷ 2 = 27.5 for half an hour

165 + 27.5 = **£192.50**

Susan 120 for hour one then £12 for each 15 mins. 3.5 hours – 1 hour = 2.5 hours

2.5 hours is made up of 10 lots of 15 mins (4 per hour)

12 x 10 = 120

120 + 120 = **£240**

e) A hotel rent out a meeting room for £65 per hour. They charge in increments of 30 minutes. After three hours, the charge goes down to £40 per hour. How much would it cost to rent the room for 5 hours? **£275**

65 x 3 = 195

40 x 2 = 80

195 + 80 = £275

Question 3

£1 = $1.34

a) What would £42 be in dollars?

42 x 1.34 = **$56.28**

b) What would $89 be in pounds?

89 ÷ 1.34 = **£66.42**

c) What would £150 be in dollars?

150 x 1.34 **= $201**

d) What would $763 be in pounds?

763 ÷ 1.34 = **£569.40**

e) Suzanne is travelling from the UK to China and then from China to Japan. She decides to exchange £800 into Chinese Yen and then when she leaves China for Japan, she will change any money leftover into Japanese Yen.

One pound can be exchanged for 8.2 Chinese Yen.

One Chinese Yen is worth 15.5 Japanese Yen.

i) How many Chinese Yen does Suzanne take? **6560 Chinese Yen**

800 x 8.2 = 6560

ii) She spends 4356 Chinese Yen and converts what she has leftover into Japanese Yen. How many Japanese Yen does she get? **34,162 Japanese Yen**

6560 − 4356 = 2204

2204 x 15.5 = 34162

f) Istvan wants to buy some video editing software for his computer. He sees two similar products.

Edittasia	
Individual	Organisation
£148 per annum	£568 per annum

Video Magic	
1 Licence	Business Licence
$14 per month	$68 per month

$1 = £0.76

Istvan wants to buy a single user licence and wants the cheapest option. Which one should he get? **Video Magic is cheaper.**

Compare like for like, so convert them to both to either a monthly or annual fee

£148 for one person for 1 year

$14 x 12 = $168 for 1 year. 168 x 0.76 = **£127.68**

NOTE: in order for the pounds value to be smaller than the dollars we multiply here because the value we are multiplying by is less than 1.

OR

148 ÷ 12 = **£12.33 per month**

$14 x 0.76 = **£10.64 per month**

g) Trey is going backpacking. He is given £400 for his birthday and decides to convert half into American dollars and half into Argentinian Pesos. How much of each currency will he get? $**246.91 and 14800 pesos**

$1 = £0.81

£1 = 74 pesos

400 divided by 2 = £200

$1 = £0.81 the dollars numbers should be bigger than 200

As the pounds value is less than 1, we actually divide by 0.81 to make the number bigger

200 ÷ 0.81 = $246.91

£1 = 74 pesos

£200 x 74 = 14800 pesos

Question 4

a) Shaun has to decide which new mobile phone contract to choose. He wants to know which option below works out cheapest in the long term. Show how much each option will have cost him after the two years have finished. **Option 1 is cheapest.**

Option 1 = Upfront cost £99.99 then £49.99 for 24 months

Option 2 = Upfront cost £29.99 then £54.99 for 24 months

Option 3 = £9 in advance £54 per month for 24 months

Option 1 49 x 24 = 1176. Added to upfront cost 1176 + 99.99 **= £1275.99**

Option 2 54.99 x 24 = 1319.76 added to upfront cost 1319.76 + 29.99 **= £1349.75**

Option 3 54 x 24 = 1296 added to upfront cost 1296 + 9 **= £1305**

b) These are the prices for the Waterpark at Alton Towers.

Theme Park Tickets

One Day Ticket	On the day	5+ Days in advance
Adults (12+ years)	£58	£34
Children (3-11 years)	£48	£28.50
Groups 7+ (per person)	£56	£32
Children (under 3 years)	£0	£0

Waterpark Tickets

One Day Ticket	On the day	Online
Adults (+12 years)	£18	£16
Children (3-11 years)	£14	£12
Family (min of 3)	£14.50	£12.50
Children (under 3 years)	£0	£0
Merlin Annual Pass Holder	20% off	20% off

The Merlin pass costs £179 per person and allows free entry into the theme park.

John thinks he will go with his partner and their two children (8 and 11) about 6 times during the year to the theme park and twice to the waterpark. He wants to know if it is better value to buy a Merlin pass or buy the tickets online/in advance before each visit. **It is cheaper to buy a Merlin pass as it is £805.60 in total compared to £862 for buying tickets for each visit.**

Theme park – advance tickets

For one visit it will cost 2 adults + 2 children → 34 + 34 + 28.50 + 28.50 = 125

125 x 6 for three visits = £750

Waterpark – online tickets

For one visit it will cost 2 adults + 2 children → 16 + 16 + 12 + 12 = £56

56 x 2 = £112

750 + 112 = **£862**

Merlin pass

179 x 4 = £716

Water park is 20% off of the cost for two visits of £112

112 x 0.8 = £89.60

0.8 because you have taken the 20% off of 100% to make 80% and divided it by 100 to turn it into a decimal

OR

112 x 20 = 2240

 2240 ÷ 100 = 22.4

112 - 22.4 = £89.60

716 + 89.60 = **£805.60**

Mixed Questions

a) Kacey wants to find out how much she spends on household bills over the year. She notes down what she spends:

£243 on car insurance annually, £21.50 on water direct debits every month, gas and electric was £78 per month until September when the payments went up to £84, house insurance was a one off payment of £289, council tax is a direct debit of £151 per month.

Can you work out what Kacey's average monthly spend was? **£296.83**

Split all the annual amounts into monthly amounts.

243 ÷ 12 = 20.25

289 ÷ 12 = 24.08

Find a monthly amount for gas and electric

Sept to Dec is 4 months 4 x 84 = 336

8 months at 78 so 78 x 8 = 624

336 + 624 = 960 per year. 960 ÷ 12 = 80 per month

Add up all the monthly amounts – there are five items so check you have the right amount of figures.

20.25 + 21.50 + 24.08 + 80 + 151 = 296.83 per month

b) Julia and Tim are going on holiday. The total cost is £2400. They have already paid a deposit of £425 and are saving for the remainder. They want to save an equal amount every month for the next six months. How much do they need to save per month? **£329.17**

2400 − 425 = 1975 to split into six monthly payments

1975 ÷ 6 = 329.17

c) Jack is going to run the London Marathon (26 miles). Two of his colleagues decide to sponsor him. Jan sponsors him for £80 and Darren sponsors him for £4 per mile. Jack completes the marathon. How much money did he collect from Jan and Darren? **£184**

4 x 26 = 104

104 + 80 = £184

d) A small business is going to advertise using Google Ads. They set a daily limit of £20 and only want to advertise on weekdays. They have a maximum budget of £3450. How many weeks can the ads run for? **34 weeks**

3450 ÷ 20 = 172.5 so 172 days (we can't round up here as we don't have enough money for 173 days)

172 ÷ 5 = 34.4 weeks

e) Alison runs a training business. She charges £65 per person for a day of training. If you book between 10 and 14 places, you get one free. If you book 15 places, you get two free. If you book a date in July, you get 10% off the price. A company books a course for 9 people on June 10th, for 12 people on July 4th and for 15 people on August 20th. She sends an invoice for all of the courses. How much does Alison charge? **£2073.50**

9 people at £65 per person in June → 9 x 65 = 585

12 people means paying for 11 people at £65 in July → 11 x 65 = 715 with 10% off

715 x 0.9 = 643.50

OR

715 x 10 = 7150 divide by 100 = 71.5

715 − 71.5 = 643.50

15 people means paying for 13 at £65 in August → 13 x 65 = 845

Total 845 + 643.5 + 585 = 2073.5

f) An office is doing a refurbishment. They have a budget of £1200 for new equipment. The office administrator draws up a list of possible items. Can they buy all the equipment within their budget? **Yes, they can. It will cost £1056.99**

Office Equipment		
Item	Cost per Item	Quantity
Desk Chairs	£89.00	6
Filing cabinet	£135	3
Stationery	£56.50	1
Whiteboard	£18.99	1
Coat stand	£42.50	1

89 x 6 = 534

135 x 3 = 405

534 + 405 + 56.5 + 18.99 + 42.5 = 1056.99

g) Farha is buying food for her cat. She wants to find the cheapest option to buy at least 150 pouches.

Amazon: box of 84 pouches for £20.99 plus free delivery

PetsRUs: a box of 40 sachets for £11.00. Buy three boxes and get a fourth half price. £2.99 delivery

Pets at Home: box of 48 pouches for £19.49. Farha has a voucher for 20% off and free delivery

Amazon: need two boxes (giving 168 pouches) 20.99 x 2 = **£41.98**

PetsRUs: 150 ÷ 40 = 3.75 boxes so 4 boxes

11 x 3 at full price = 33

4th box is 11 ÷ 2 = 5.5 total 33 + 5.5 = 38.50 plus 2.99 delivery = **£41.49**

Pets at Home: 150 ÷ 48 = 3.125 so she needs to buy 4 boxes

19.49 x 4 = 77.96 with 20% off

77.96 x 0.8 = 62.368

OR

77.96 x 20 = 1559.2 divide by 100 = 15.592

77.96 – 15.592 = 62.368

£62.37

PetsRUs is cheapest

h) One Australian dollar is worth 50p. How many Australian dollars would you get for £600? **$1200**

$1 = £0.50

The dollar amount is bigger so we need to make 600 larger.

To do that we need to divide 600 by 0.5 because dividing by a number less than 1 makes it bigger

$600 \div 0.5 = 1200$

OR

When you work with two amounts with the same unit, you divide so 600 pounds and 0.5 pounds you divide.