



## Lite GCSE Maths

Money Problem Solving 1

Name: \_\_\_\_\_

Class: \_\_\_\_\_

# Solutions

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Author:

Date:

Time: 35

Marks: 27

Comments:

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- Q1. Greg goes shopping with £20.  
He spends £5.60 on his lunch.

He needs £1.30 for his bus fare.

He sees this advert for shoes.

Shoes
Normal Price £15
Sale price 10% off normal price

Lunch £5.60  
Bus £1.30 +  
£6.90

£20.00  
£6.90 -

Money left £13.10

Does he have enough money to buy them?

You **must** show your working

10% of £15 = £1.50

Sale Price £15 - £1.50 = £13.50

Cannot buy shoes as he has only £13.10  
which leaves him 40p short of amount required

(Total 4 marks)

- Q2. Salima sees an advert for a summer holiday.



## Summer Sun

### Fantastic deals with Sunbreaks Holidays



Dates	7 nights	14 nights
1 April – 30 April	£315	£575
1 May – 6 July	£220	£400

**Notes**

- Prices are for one adult (16 years and over)
- Children (less than 16 years) 75% of adult price
- 10% discount if booked online ([www.sunbreaks.co.uk](http://www.sunbreaks.co.uk))

Salima books a 7-night holiday in April for two adults.

The travel agent adds a percentage surcharge to the cost of the holiday for booking fees.

Salima's final bill is £642.60.

What was the percentage surcharge?

$$\text{Basic price for 2 adults in April for 7 nights} \\ = £315 \times 2 = £630$$

$$£642.60 \div £630 = 1.02$$

so 2% has been added on

Answer ..... 2 %

(Total 3 marks)

Q3. Here is part of a price list for a fruit and vegetable stall.

Price List		
<b>Fruit</b>		
Apples		30p each
Bananas		25p each
Oranges		20p each
<b>Vegetables</b>		
Broccoli		75p per 100g
Carrots		20p per 100g
Cauliflower		£1 per 100g

The Government says we should eat 5 portions of fruit and vegetables every day.

A portion is an item of fruit or 100 g of vegetables.

A 30  
B 25  
C 20  
B 75  
C 20  
170p  
170p x 7  
= £11.90  
Too Much!

Broccoli too expensive so have it  
once per week and on other 6 days  
have 2 lots of carrots

1 Day      6 Other Days

A 30  
B 25  
C 20  
B 75  
C 20  
170p

A 30  
B 25  
C 20  
C 20  
115 x 6 = 690p

Dita has £10 to spend on fruit and vegetables for one week.

She wants to buy at least two different fruits and two different vegetables.

Show **one** way of buying fruit and vegetables so that she has 5-a-day for one week.

$$\text{Total } 170 + 690 = 860p = \pounds 8.60$$

This is for Apple, Banana, Orange, Carrots every day. 5<sup>th</sup> portion is Broccoli one day and extra carrots the other 6 days

(Total 5 marks)

**Q4.** Barbara uses her car to work as a volunteer driver at her local hospital.

She is paid 40 p for every mile she drives.

On average she drives 2000 miles each month.

Here is some information about the running costs of Barbara's car.

Fuel consumption	50 miles per gallon
Other running costs	10 pence per mile

(a) Petrol costs £5 per gallon

Calculate Barbara's annual fuel bill.

$$\text{Annual Miles} = 2000 \times 12 = 24000 \text{ miles}$$

$$\text{Fuel consumption} = 24000 \div 50 = 480 \text{ gallons}$$

$$\text{Fuel bill} = 480 \times 5 = \pounds 2400$$

Answer £ 2,400

(2)

- (b) After paying for fuel and other running costs, Barbara saves the money left over. Barbara is planning to use this money for a holiday that will cost £3000.

Will Barbara have enough money after saving for one year?

$$\text{Other running costs} = 24000 \times 0.10 = \pounds 2400$$

$$\text{Total of fuel and other running costs} = \pounds 2400 + \pounds 2400 \\ = \pounds 4800$$

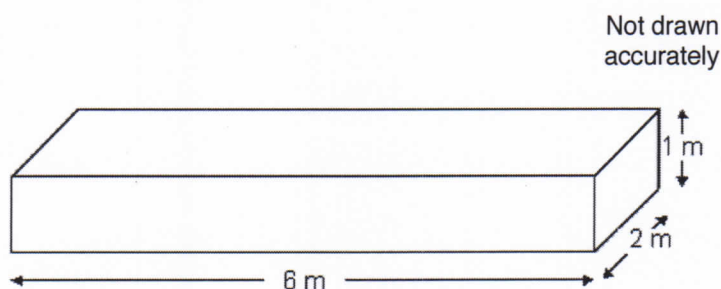
$$\text{Barbara receives } 24000 \times 40p = 960000p \\ = \pounds 9600$$

$$\text{Money left over} = \pounds 9600 - \pounds 4800 = \pounds 4800$$

So yes she can afford holiday for £3000

(4)  
(Total 6 marks)

- Q5. The shape of a flower bed is a cuboid as shown.



$1 \text{ m}^3$  of soil weighs 1.25 tonnes

A gardener wants to fill the flower bed with soil as cheaply as possible.

$$\text{Volume} = 6 \times 2 \times 1 = 12 \text{ m}^3$$

$$\text{Weight} = 12 \times 1.25 = 15 \text{ tonnes}$$



The table shows the costs for Company A and Company B.

Company A	£ 49.50 per tonne	Delivery £ 30
Company B	10 tonnes for £ 430 then £ 67.50 per extra tonne	Delivery free

Which company should she use and how much will it cost?

Company A

$$15 \times £49.50 + £30 = £772.50$$






Company B

$$£430 + 5 \times £67.50 = £767.50$$

Answer Company B  
£ 767.50

(Total 6 marks)

Q6. Mollie's Cookie Shop sells cookies individually or in bags of 5, 8, 13 or 18.

				
1 cookie	5 cookies	8 cookies	13 cookies	18 cookies
75p	£2.25	£2.99	£3.99	£4.99

Cost of  
1 cookie

75p

45p

37.4p

30.7p

27.7p

so the bigger the bag the cheaper per cookie

What is the cheapest way to buy exactly 50 cookies?  
You **must** show your working.

$3 \times 18 = 54$  which is too many

$$2 \times 18 = 36$$

$$2 \times £4.99 = £9.98$$

$$1 \times 13 = 13$$

$$1 \times £3.99 = £3.99$$

$$1 \times 1 = 1$$

$$1 \times £0.75 = £0.75 +$$

50 cookies

Answer £ 14.72

(Total 3 marks)