GCSE MATHEMATICS

WORKED SOLUTIONS

Money

Calculator exam questions

Foundation tier

Please write clearly in block capitals.

Name

Class **Teacher**

Time allowed: 60 minutes

Materials

For this booklet you need a black pen, a pencil, a ruler, a rubber and a calculator.

Instructions

- Use black ink or black ballpoint pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions in the spaces provided.
- You may use a calculator.
- Do all rough work in this booklet. Cross through any work you do not want marked.

Information

- The marks for each question are shown in brackets.
- The maximum mark for this booklet is 53.

Advice

- Read each question carefully.
- In all calculations, show clearly how you work out your answer.

For teacher's use

Question	Mark
1	3
2	3
3	4
4	3
5	3
6	3
7	4
8	4
9	4
10	3
11	4
12	6
13	5
14	4
TOTAL	53

Do not write outside the box

1 Paper cups are sold in packs of 40
Each pack costs £2.35

A school needs 2 cups for each of the 315 people at its summer fair.

Work out how much the cups will cost.

315 × 2 = 630 cups
630 ÷ 40 = 15.75 (1)
16 packs, 16 × 2.35 (1)

Answer £ 37.60 (1)

[3 marks]

2 A laptop costs £549
Rhea can pay all of it now.
Or she can pay a deposit of £60 and then 12 monthly payments of £43.75

How much more does Rhea pay altogether if she pays monthly?

12 × 43.75 = £525 (1)
60 + 525 = £585
585 – 549 (1)

Answer £ 36.00 (1)

[3 marks]

Do not write outside the box

3 Petrol costs 145.9p for each litre.

(a) Bilal puts 38.6 litres of petrol in his car.
How much does he pay?
Give your answer in pounds, to the nearest penny.

38.6 × 145.9 = 5631.74p (1)
÷ 100 = £56.3174

Answer £ 56.32 (1)

[2 marks]

(b) The next week the price is the same.
Bilal stops the pump when it shows £50.00
How many litres of petrol has he bought?
Give your answer to 1 decimal place.

5000 ÷ 145.9 = 34.27... (1)

Answer 34.3 (1) litres

[2 marks]

4 Esme wants to buy a digital piano that costs £389.99
She has already saved £85
She saves £17.50 each week.

How many more weeks must she save before she can buy the digital piano?

389.99 – 85 = £304.99 (1)
304.99 ÷ 17.50 = 17.4... (1)
17 weeks is not enough

Answer 18 (1) weeks

[3 marks]

Do not write outside the box

5 Lewis works at a sports centre.
On weekdays he is paid £11.90 for each hour he works.
On Saturdays he is paid time and a half: 1.5 times his weekday rate.

Here are the hours he works this week.

Monday	Wednesday	Saturday
6 hours	4½ hours	8 hours

Work out his pay for the week.

6 + 4.5 = 10.5 hours
10.5 × 11.90 = £124.95 (1)
11.90 × 1.5 = 17.85, × 8 = £142.80 (1)
124.95 + 142.80

Answer £ 267.75 (1)

[3 marks]

6 Two jobs are advertised.

Job A	Job B
£23 868 a year	£12.45 an hour 37 hours a week

Zara would work 52 weeks a year in either job.

Which job pays more in a year, and by how much?
You must show your working.

B: 12.45 × 37 = £460.65 a week (1)
460.65 × 52 = £23 953.80 (1)
23 953.80 – 23 868 = £85.80

Answer Job B, by £85.80 (1)

[3 marks]

7 Here is some information about an electricity bill.

Meter reading at the start	23 617 kWh
Meter reading at the end	24 509 kWh
Price for each kWh used	26.38p
Standing charge	48.7p each day
Number of days	91

The bill is the cost of the electricity used plus the standing charge for each day.

Work out the total cost of the bill.
Give your answer in pounds, to the nearest penny.

24 509 – 23 617 = 892 kWh (1)
892 × 26.38 = 23 530.96p
91 × 48.7 = 4431.7p (1)
23 530.96 + 4431.7 = 27 962.66p
÷ 100 = £279.6266 (1)

Answer £ 279.63 (1)

[4 marks]

Do not write outside the box

Do not write outside the box

8 Owain is filling 5 raised beds in his garden with compost.
Each bed needs 170 litres of compost.

Compost is sold in 60 litre bags.
Each bag costs £7.40
He also needs a spade that costs £18.95

Owain has £125 to spend.

Does Owain have enough money?
You must show your working.

5 × 170 = 850 litres
850 ÷ 60 = 14.16... (1)
15 bags: 15 × 7.40 = £111 (1)
111 + 18.95 = £129.95 (1)
£129.95 is more than £125

Answer No (1)

[4 marks]

9 Sam travels to college by train 5 days a week, for 38 weeks of the year.
Here are three ways to pay.

Day return	Weekly ticket	Yearly pass
£3.80 each day	£16.50 each week	£570 for the year

Which is the cheapest way for Sam to pay, and how much cheaper is it than the next cheapest way?

Day: 3.80 × 5 × 38 = £722 (1)
Weekly: 16.50 × 38 = £627 (1)
Yearly: £570
627 − 570 = £57 (1)

Answer Yearly pass, by £57 (1)

[4 marks]

10 Maya is paid £12.76 for each hour she works.
Here are the amounts taken from her pay this week.

Taken from her pay	Amount
Income tax	£52.40
National Insurance	£21.96
Pension	£14.46

After these amounts are taken, Maya gets £389.68

How many hours did Maya work this week?

52.40 + 21.96 + 14.46 = £88.82 (1)
389.68 + 88.82 = £478.50
478.50 ÷ 12.76 (1)

Answer 37.5 (1) hours

[3 marks]

11 The prom committee is planning a prom for 128 students.

Item	Cost
Hire of the venue	£1450
DJ	£285
Food	£14.75 for each student

Every student pays the same price for a ticket.
The ticket price must be a whole number of pounds.

What is the lowest ticket price that will cover all the costs?
You must show your working.

128 × 14.75 = £1888 (1)
1450 + 285 + 1888 = £3623 (1)
3623 ÷ 128 = 28.30... (1)
£28 is not enough, round up

Answer £ 29 (1)

[4 marks]

12 Kai does a sponsored swim for a hospice.
His gran gives 75p for each length he swims.
His uncle gives £1.20 for each length he swims.
14 friends each give £2.50, however far he swims.

(a) Kai swims 46 lengths.
How much money does he raise?

0.75 + 1.20 = 1.95, 46 × 1.95 = £89.70 (1)
14 × 2.50 = £35 (1)
89.70 + 35

Answer £ 124.70 (1)

[3 marks]

(b) Next year Kai swims 46 lengths again.
His gran and his friends give the same amounts as before.
His uncle wants Kai to raise £150 altogether.
How much should his uncle give for each length?

150 − 35 − 46 × 0.75 = £80.50 (1)
80.50 ÷ 46 (1)

Answer £ 1.75 (1)

[3 marks]

Do not write outside the box

Do not write outside the box

13 Ana makes bars of soap to sell at a craft fair.
It costs her £32 to hire a stall for the day.
Each bar of soap costs her £1.85 to make.
She sells each bar for £4.50

Ana makes 40 bars of soap for the fair. She sells 33 of them.

(a) Work out Ana's profit for the fair.

$33 \times 4.50 = £148.50$ (1)

$32 + 40 \times 1.85 = 32 + 74 = £106$ (1)

$148.50 - 106$

Answer £ 42.50 (1)

[3 marks]

(b) Ana makes 40 bars again for the next fair. The costs and the price stay the same.
What is the least number of bars she needs to sell to make a profit?

$106 \div 4.50 = 23.5...$ (1)

$23 \times 4.50 = £103.50$, not enough

Answer 24 (1)

[2 marks]

14 A smoothie bar sells small smoothies for £3.40 and large smoothies for £4.65
On Saturday it sold 214 smoothies.
It took £835.10 for these smoothies.

How many large smoothies did it sell on Saturday?
You must show your working.

$214 \times 3.40 = £727.60$ (1)

$835.10 - 727.60 = £107.50$ (1)

$4.65 - 3.40 = 1.25$ more for a large

$107.50 \div 1.25$ (1)

Check: $128 \times 3.40 + 86 \times 4.65 = 835.10$

Answer 86 (1)

[4 marks]

END OF QUESTIONS

The Maths Habit