



GCSE Foundation 08

Number



155 minutes



148 marks

Calculation

Q1. Work out 321 – 123

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Answer

(Total 2 marks)

Q2. Mr and Mrs Jones and their two children go to the cinema.

Ticket Prices		
Single tickets	Adult	£9.25
	Child	£5.50
Family ticket	2 adults and 2 children	£25.00

Mr Jones buys the family ticket instead of single tickets.

How much does he save?

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Answer £

(Total 4 marks)

- Q3.** Two numbers add up to 200.
The difference between the numbers is 30.

Work out the numbers.

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Answer and

(Total 2 marks)

- Q4.** Here are six number cards.



Sort the cards into three pairs so that each pair has the same total.

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(Total 2 marks)

- Q5.** Use your calculator to change $\frac{27}{64}$ to a decimal.

(a) Write down your full calculator display.

Answer

(1)

- (b) Give your answer to part (a) to 3 decimal places.

Answer

(1)
(Total 2 marks)

- Q6.** The stem-and-leaf diagram shows the number of visitors to a castle over 15 days.

Key: 7 | 0 represents 70 visitors

6		0	4	8	9		
7		0	5	5	6	7	8
8		1	2	3			
9		2	4				

- (a) How many days had more than 80 visitors?

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Answer

(1)

- (b) Work out the range.

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Answer

(2)
(Total 3 marks)

- Q7.** Estimate the value of 29.6×5.2

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Answer

(Total 2 marks)

Q8. Write a number in each box to make the calculation correct.

(a)

$$\boxed{} + 28 = 45$$

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(1)

(b)

$$100 - \boxed{} = 45$$

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(1)

(c)

$$5 \times \boxed{} = 45$$

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(1)

(d)

$$\boxed{} \div 4 = 45$$

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(1)

(Total 4 marks)

- Q9.** Paul earns £3000 per month.
He can afford to pay up to 15% of this on rent.

Can he afford to rent a flat that costs £420 a month?
You **must** show your working.

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(Total 4 marks)

- Q10.** (a) Write the number 3840 in words.

Answer.....

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(1)

- (b) Write the number five thousand and twelve in figures.

Answer

(1)

- (c) What is the value of the digit 4 in the number 8462?

Answer

(1)

- (d) Write the number 2684 correct to the nearest 1000.

Answer

(1)

- (e) Work out $500 - 358$

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Answer

(2)

(Total 6 marks)

Q11. (a) Show clearly that the value of $17 - 5 \div 2 + 4$ is $18\frac{1}{2}$

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(1)

(b) Use **one** pair of brackets to make this statement correct.

$$17 - 5 \div 2 + 4 = 10$$

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(1)

(c) Use **two** pairs of brackets to make this statement correct.

$$17 - 5 \div 2 + 1 \times 4 = 16$$

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(1)

(Total 3 marks)

Q12. A school shop can buy pens at £2.40 for a pack of 10.
The shop sells pens at 50% profit.
The school wants to raise a total of £72 from the sale of pens.

How many packs of pens should the shop buy?

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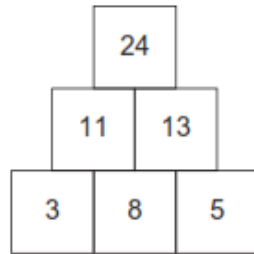
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Answer

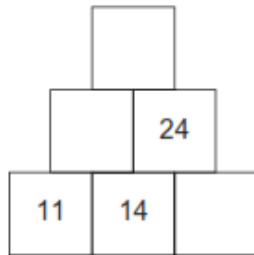
(Total 4 marks)

Q13. Here is a number pyramid.



Each number is found by adding the two numbers directly below.
 For example $8 + 5 = 13$

(a) Complete this number pyramid.

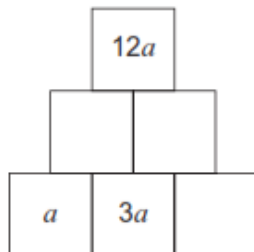


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(2)

(b) Complete this algebra pyramid.



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(3)

(Total 5 marks)

Q14. Here is a set of four number cards.



The cards show the number 5472.

- (a) Write down the number 5472 in words.

Answer

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(1)

- (b) Write down the smallest number you can make using all four cards.

.....

Answer

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(1)

- (c) Write down the largest **odd** number you can make using all four cards.

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Answer

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(2)

- (d) Write the number 5472 to the nearest hundred.

Answer

(1)

(Total 5 marks)

Q15. Here are the monthly charges for Mark's mobile phone.

Monthly charge £15
100 free minutes then 12 p per minute
200 free texts then 10 p per text

During one month, Mark makes 150 minutes of calls and sends 285 texts.

Work out the total charge for the month.

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Answer £

(Total 5 marks)

Q16. The table shows the size of population for five Derbyshire villages.

Village	Population
Ashover	1796
Bamford	1184
Clowne	7447
Darley Dale	5167
Eckington	16684

(a) Write the population of Darley Dale in words.

Answer

.....

(1)

(b) Write the population of Clowne correct to the nearest 100.

Answer

(1)

- (c) Write the population of Eckington to the nearest 1000.

Answer

(1)

- (d) How many more people live in Eckington than Bamford?

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(2)

(Total 5 marks)

- Q17.** (a) Work out $1058 - 374$

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Answer

(1)

- (b) Estimate the value of $99.9 \div 25.17$

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.....

Answer

(2)

(Total 3 marks)

- Q18.** Susan is choosing pairs of numbers from this list.

6 23 24 51 108

- (a) She multiplies two numbers together.

Which **two** numbers should she choose to get an answer between 200 and 300?

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.....

Answer and

(2)

- (b) She divides one number by another number.

What is the **largest** possible answer?

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.....

Answer

(2)
(Total 4 marks)

- Q19.** (a) Work out $352 + 352$

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.....
.....

Answer

(1)

- (b) Given that $748 + 748 + 748 + 748 = 2992$

complete the following.

(i) $748 \times \boxed{} = 2992$

(1)

(ii) $74.8 \times \boxed{} = 29920$

(1)
(Total 3 marks)

- Q20.** (a) A shopkeeper uses this method to work out VAT.

Write down the price before VAT
Divide by 10
Divide your answer by 4
Multiply your new answer by 7
The answer is the VAT

Use this method to work out the VAT for an item with a price of £120 before VAT.

You **must** show your working.

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.....

Answer £

(4)

(b) A different shopkeeper uses a table to work out the price of items including VAT.

Price excluding VAT	£1	£5	£10	£20	£50
Price including VAT	£1.18	£5.88	£11.75	£23.50	£58.75

Use the table to work out the price including VAT of an item that costs £61 excluding VAT.

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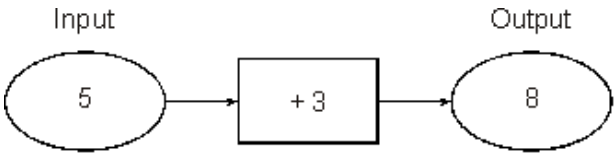
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Answer £

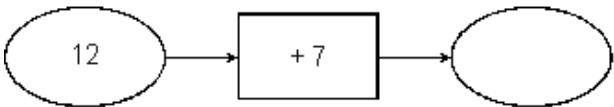
(3)
(Total 7 marks)

Q21. Here are some number machines.

Fill in the missing numbers.
The first one is done for you.

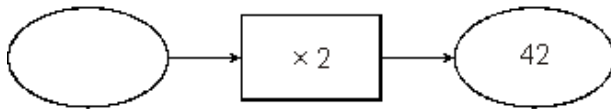


(a)



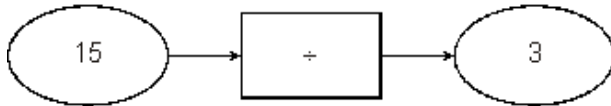
(1)

(b)



(1)

(c)



(1)

(Total 3 marks)

Q22. The area of a square is 387.5cm^2 .

- (a) Work out the length of one side of the square.
Give **all** the figures on your calculator display.

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.....

Answer cm

(2)

- (b) Give your answer to 1 decimal place.

.....

Answer cm

(1)

(Total 3 marks)

Q23. (a) A plant costs £4.99

How many of these plants can be bought for £50?

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.....
.....

Answer

(2)

(b) Jill writes $\pounds 4.99 \times 20 = \pounds 998$

Is she correct?

Explain your answer.

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.....

(2)
(Total 4 marks)

Q24. Two whole numbers multiply together to give an answer of 1000.
Neither of the numbers contains the digit zero.

What are the two numbers?

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Answer and

(Total 2 marks)

Q25. (a) Work out $300 - 124$

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Answer

(2)

(b) (i) Work out $95 \div 5$

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.....

Answer

(1)

(ii) Work out $\frac{2}{5}$ of 95

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.....

Answer

(2)

(c) Work out 0.1×0.9

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Answer

(1)

(Total 6 marks)

Q26. Jack buys 1.5 kilograms of oranges at 98 pence per kilogram.
He also buys some bananas at 85 pence per kilogram.
His total bill is £2.49
What is the weight of the bananas that he buys?

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Answer kg

(Total 4 marks)

Q27. The cost of a holiday is made up of three parts.
accommodation + insurance + travel

City break to Paris

3 nights

Total cost of £ 245

The accommodation for this holiday costs £52 each night.
 The insurance costs £26.
 How much does the travel cost?

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Answer £.....

(Total 4 marks)

Q28. (a) Write these decimals in order, smallest first.

0.4 0.308 0.35

Answer

(1)

(b) Write 15.2864 to 2 decimal places.

Answer

(1)

(c) Work out

(i) $\frac{1}{12.5}$

.....

Answer

(1)

(ii) $\frac{4.5}{0.6^2}$

.....

.....

Answer

(1)

(d) Hassan says



When you square a positive number the answer is **always** bigger than the original number.

For example

$$2.5^2 = 6.25 \quad \text{and} \quad 6.25 \text{ is bigger than } 2.5$$

Find an example to show that Hassan is wrong.
You **must** show your working.

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(2)
(Total 6 marks)

Q29. The table shows some exchange rates.

£1 is worth 1.82
American dollars

£1 is worth 194
Japanese yen

Joanne buys a camera in America and pays 200 dollars.
Jack buys a similar camera in Japan and pays 20 370 yen.

In which country is the camera cheaper and by how much?

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Answer Country

Amount

(Total 4 marks)

Q30. (a) Calculate $2.7^2 + \sqrt{3.5}$

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Answer

(1)

(b) Calculate the cube of 4.2

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Answer

(1)

(c) A drink in Japan costs 374 yen.
The exchange rate is £1 = 189 yen.
What is the cost in pounds?

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.....

Answer £

(2)

(Total 4 marks)

Q31. This is part of Sari's electricity bill.

OHM Electricity Company	
Present reading	7466 units
Last reading	6942 units
Each unit costs 4.5p	

How much does she pay?

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Answer £

(Total 4 marks)

Q32. (a) The entry prices at a theme park are

Adults £5.25 each
Children £3.40 each

Find the cost for 2 adults and 4 children to visit the theme park.

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Answer £.....

(2)

(b) The entry prices for a group are

Adults £5.00 each
Children £3.00 each

- (i) A group of adults and children goes to the theme park for a cost of £44.
There are 4 adults in the group.
How many children are in the group?

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Answer children

(2)

- (ii) Another group also pays £44.
Find a different answer for the number of adults and children.

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Answer adult(s) children

(2)

(c) The temperature, in °C, at midday at the theme park on 6 winter days was recorded.

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Temperature	– 3	–2	0	–4	–1	1

- (i) Which day was the warmest at midday?

Answer

(1)

- (ii) Which day was the coldest at midday?

Answer

(1)

- (d) The temperature, in °C, at midday at the theme park on 6 summer days was recorded.

21 17 25 30 21 18

Work out the mean temperature at midday for these 6 days.

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Answer °C

(3)
(Total 11 marks)

- Q33.** 350 people go on a coach holiday.
Each coach will seat 53 people.

- (a) How many coaches are needed?

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Answer

(1)

- (b) How many seats will be empty?

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Answer

(2)
(Total 3 marks)

Q34. In a quiz there are ten questions.
Each correct answer gains five points.
Each wrong answer loses two points.

- (a) Liz gave ten correct answers.

How many points did she get altogether?

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Answer

(1)

- (b) Glen gave seven correct answers and three wrong answers.

How many points did he get altogether?

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Answer

(3)

- (c) Iqbal answered all ten questions.

Explain how Iqbal could get 43 points altogether.

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(2)

(Total 6 marks)

Q35. In a quiz there are ten questions.
Each correct answer gains five points.
Each wrong answer loses two points.

- (a) Liz gave ten correct answers.

How many points did she get altogether?

.....
.....

Answer

(1)

- (b) Glen gave seven correct answers and three wrong answers.

How many points did he get altogether?

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Answer

(3)

- (c) Iqbal answered all ten questions.

Explain how Iqbal could get 43 points altogether.

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(2)

(Total 6 marks)

