

GCSE QUESTIONS

Q1. NON-CALCULATOR

Here is a list of numbers.

1 2 4 5 7 11 13 14 15 17

From the list, write down **three different** prime numbers that add together to make 20

.....

(Total for Question is 3 marks)

Q2. NON-CALCULATOR

Write down three different factors of 18 that add together to give a prime number.

.....

(Total for question = 2 marks)

Q3. NON-CALCULATOR

Nidah writes down two different prime numbers.

She adds together her two numbers. Her answer is a square number less than 30

Find two prime numbers that Nidah could have written down.

..... ,

(Total for question = 2 marks)

Q4. NON-CALCULATOR

Express 56 as the product of its prime factors.

.....

(Total for question = 2 marks)

Q5. NON-CALCULATOR

Express 180 as a product of its prime factors.

.....

(Total for Question is 3 marks)

Q6. NON-CALCULATOR

Write 36 as a product of its prime factors.

.....
(Total for question = 2 marks)

Q7. NON-CALCULATOR

Write 525 as a product of its prime factors.

.....
(Total for Question is 3 marks)

Q8. NON-CALCULATOR

(a) Write 168 as a product of its prime factors.
You must show your working.

.....
(3)

(b) Find the highest common factor (HCF) of 168 and 180

.....
(2)
(Total for question = 5 marks)

Q9. NON-CALCULATOR

Matt and Dan cycle around a cycle track.

Each lap Matt cycles takes him 50 seconds. Each lap Dan cycles takes him 80 seconds.

Dan and Matt start cycling at the same time at the start line.

Work out how many laps they will each have cycled when they are next at the start line together.

(Total for Question is 3 marks)

Q10. NON-CALCULATOR

Buses to Ashby leave a bus station every 24 minutes.

Buses to Barford leave the same bus station every 20 minutes.

A bus to Ashby and a bus to Barford both leave the bus station at 7 30 am.

When will a bus to Ashby and a bus to Barford next leave the bus station at the same time?

.....
(Total for question = 3 marks)

Q11. NON-CALCULATOR

Liz buys packets of coloured buttons.

There are 8 red buttons in each packet of red buttons.

There are 6 silver buttons in each packet of silver buttons.

There are 5 gold buttons in each packet of gold buttons.

Liz buys equal numbers of red buttons, silver buttons and gold buttons.

How many packets of each colour of buttons did Liz buy?

..... packets of red buttons

..... packets of silver buttons

..... packets of gold buttons

(Total for question = 3 marks)

Q12. NON-CALCULATOR

Rita is going to make some cheeseburgers for a party.

She buys some packets of cheese slices and some boxes of burgers.

There are 20 cheese slices in each packet. There are 12 burgers in each box.

Rita buys exactly the same number of cheese slices and burgers.

(i) How many packets of cheese slices and how many boxes of burgers does she buy?

..... packets of cheese slices

..... boxes of burgers

Rita wants to put one cheese slice and one burger into each bread roll. She wants to use all the cheese slices and all the burgers.

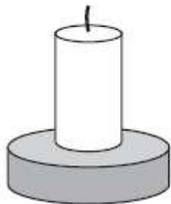
(ii) How many bread rolls does Rita need?

..... bread rolls

(Total for Question is 4 marks)

Q13. NON-CALCULATOR

Caroline is making some table decorations. Each decoration is made from a candle and a holder.



candle and holder

Caroline buys some candles and some holders each in packs.

There are 30 candles in a pack of candles.

There are 18 holders in a pack of holders.

Caroline buys exactly the same number of candles and holders.

(i) How many packs of candles and how many packs of holders does Caroline buy?

..... packs of candles

..... packs of holders

Caroline uses all her candles and all her holders.

(ii) How many table decorations does Caroline make?

..... table decorations

(Total for question = 5 marks)

Q14. NON-CALCULATOR

Veena bought some food for a barbecue.
She is going to make some hot dogs.
She needs a bread roll and a sausage for each hot dog.

There are 40 bread rolls in a pack. There are 24 sausages in a pack.

Veena bought exactly the same number of bread rolls and sausages.

(i) How many packs of bread rolls and packs of sausages did she buy?

..... packs of bread rolls

..... packs of sausages.

(ii) How many hot dogs can she make?

.....

(Total for Question is 5 marks)

Q15. NON-CALCULATOR

Shelley sells books.

On Saturday she is going to give a free book mark and a free dust cover with each book she sells.
All the books are the same size.

Shelley needs to buy the book marks and the dust covers.

Book marks come in boxes. Each box contains 24 book marks.

Dust covers come in packs. Each pack contains 36 dust covers.

Shelley wants to have enough book marks and dust covers for 250 books.

She buys exactly the same number of book marks and dust covers.

Work out the number of boxes of book marks and the number of packs of dust covers she buys.
You must show all your working.

..... boxes of book marks

..... packs of dust covers

(Total for question = 4 marks)

Q16. NON-CALCULATOR

Miss Paisley is organising games for the children in her class.
She is going to put the children into teams.

If she puts the children into teams of 4, there will be 2 children left out.

If she puts the children into teams of 5, there will be 3 children left out.

Work out the smallest possible number of children in Miss Paisley's class.

.....
(Total for question = 3 marks)