Name	Date

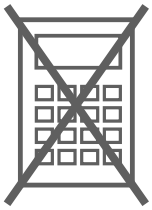
GCSE Mathematics 9-1

Factors, Multiples and Primes

(Non-Calculator)

Exam-Style Topic Paper	Total Marks
Time: 1 hour	**/ 52**

Instructions



- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name and date number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may **not** be used.

Information

- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

1 Explain what is meant by a **prime number**.

.....

.....

[1 mark]

2 Explain what is meant by a **multiple** of a number.

.....

.....

[1 mark]

3 Explain what is meant by a **factor** of a number.

.....

.....

[1 mark]

4 Write down an even number between 30 and 40

.....

[1 mark]

5 Is 57 an odd number or an even number?
Explain your answer.

.....

.....

[1 mark]

6 Here is a list of numbers.

12 17 25 30 41 48

Write down all the even numbers in the list.

.....

[2 marks]

7 Here is a list of numbers.

9 15 21 23 27 29

Write down all the prime numbers in the list.

.....

[2 marks]

8 Write down all the factors of 18

.....

[2 marks]

9 Write down all the factors of 30

.....

[2 marks]

10 Write down all the factors of 24

.....

[2 marks]

11 Write down the first five multiples of 7

.....

[2 marks]

12 Write down all the prime numbers between 10 and 30

.....

[2 marks]

13 Write down all the prime numbers less than 20

.....

[2 marks]

14 Write down all the numbers that are factors of both 12 and 20

.....

[2 marks]

15 Is 1 a prime number?
Explain your answer.

.....

.....

[1 mark]

16 Amy says, "All prime numbers are odd."
Is Amy correct?
Explain your answer.

.....

.....

[1 mark]

17 Tom says, "51 is a prime number."
Is Tom correct?
You must show your working.

.....

.....

[2 marks]

18 Here is a list of numbers.

2 9 14 16 21 25 31 36

(a) From the list, write down a multiple of 7

.....

[1 mark]

(b) From the list, write down a factor of 48

.....

[1 mark]

(c) From the list, write down the two prime numbers.

.....

[1 mark]

(d) From the list, write down an odd number that is **not** a prime number.

.....

[1 mark]

---

19 Write down two prime numbers that add together to make 16

.....

[2 marks]

---

20 I am thinking of a number between 20 and 30
It is a multiple of 4
It is also a multiple of 6
What is my number?

.....

[2 marks]

---

21 Here is a list of numbers.

3 8 11 15 20 27 40

(a) From the list, write down all the factors of 60

.....

[1 mark]

(b) From the list, write down all the multiples of 5

.....

[1 mark]

(c) From the list, write down all the prime numbers.

.....

[1 mark]

---

22 I am thinking of a prime number between 30 and 40
Its digits add up to 4
What is my number?

.....

[2 marks]

---

23 I am thinking of a number.
It is a factor of 36
It is an odd number.
It is greater than 5
What is my number?

.....

[2 marks]

---

24 I am thinking of an even number less than 15
It is a factor of 20
It is a multiple of 5
What is my number?

.....

[2 marks]

25 Eggs are sold in boxes of 6
Sam has 40 eggs.
Can Sam fill all his boxes with no eggs left over?
You must show your working.

.....

.....

[2 marks]

26 Priya shares 24 sweets equally between some friends with none left over.
There are between 2 and 10 friends.
Write down all the possible numbers of friends.

.....

[2 marks]

27 A bus leaves the bus station every 8 minutes, starting at 9:00 am.
Does a bus leave at 9:36 am?
You must show your working.

.....

.....

[2 marks]

28 Leo makes a rectangle using exactly 12 squares.
Write down all the possible lengths and widths of his rectangle.

.....

[2 marks]