

Name: _____

GCSE (1 – 9)

Factors, Multiples and Primes

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

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.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 Write down a multiple of 7 that is between 20 and 30

21 [or 28]

(Total for question 1 is 1 mark)

2 Write down the first even multiple of 9

18

(Total for question 2 is 1 mark)

3 Write down a multiple of 9 that is between 30 and 50

36, 45

36 [or 45]

(Total for question 3 is 1 mark)

4 Write down a prime number between 25 and 35

29 [or 31]

(Total for question 4 is 1 mark)

5 Write down two factors of 18

1, 18

2, 9

3, 6

(Any 2)

3 and 9

(Total for question 5 is 2 marks)

6 Write down all the prime numbers between 20 and 30

23 and 29
(Total for question 6 is 2 marks)

7 Write down two multiples of 10

10, 20, 30, 40, 50...

10 , 20
(Total for question 7 is 2 marks)

8 Here is a list of numbers.

15 19 25 31 35 39 40

From the numbers on the list,

(a) write down an even number

40
(1)

(b) write down a multiple of 7

35
(1)

(Total for question 8 is 2 marks)

9 Write down two multiples of 8

8, 16, 24, 32, 40...

8 , 16
(Total for question 9 is 2 marks)

10 Write down all the factors of 14

1, 14
2, 7

1, 2, 7 and 14
(Total for question 10 is 2 marks)

11 Write down all the factors of 20

1, 20
2, 10
4, 5

1, 2, 4, 5, 10 and 20
(Total for question 11 is 2 marks)

12 Here is a list of numbers.

30 31 32 33 34 35 36 37 38 39

From the numbers on the list,

(a) write down a square number

36
(1)

(b) write down a multiple of 8

32
(1)

(c) write down all of the prime numbers on the list.

31 and 37
(1)

(Total for question 12 is 3 marks)

13 Here is a list of numbers.

2 9 11 15 18 31 32

From the numbers on the list,

(a) write down a factor of 8

2

(1)

(b) write down a multiple of 6

18

(1)

(c) write down all of the prime numbers on the list.

2, 11 and 31

(1)

(Total for question 13 is 3 marks)

14 Write down all of the prime numbers between between 10 and 20

11, 13, 17 and 19

(Total for question 14 is 2 marks)

15 Write down two multiples of 20

20, 40, 60, 80, 100...

20, 40

(Total for question 15 is 2 marks)

16 Write down all the factors of 16

1, 16

2, 8

4

1, 2, 4, 8 and 16

(Total for question 16 is 2 marks)

17 Ian says: "21 is a prime number"

Is Ian correct?

You must give a reason for your answer.

1, 21

3, 7

No 21 has four factors - prime numbers have only two factors

(Total for question 17 is 1 mark)

18 Here is a list of numbers.

3 5 9 16 19 27 28

From the numbers on the list,

(a) write down a factor of 12

3

(1)

(b) write down a multiple of 7

28

(1)

(c) write down all of the prime numbers on the list.

3, 5 and 19

(1)

(Total for question 18 is 3 marks)

19 Gary is thinking of a number.

He says,

"My number is prime and it is a factor of 36"

There are two possible numbers Gary can be thinking of.

Write down these two numbers.

1, 36

2, 18

3, 12

4, 9

6

2

3

(Total for question 19 is 2 marks)

20 Write down two prime numbers that have a sum of 30

Prime numbers : 2, 3, 5, 7, 11, 13, 17, 19
23, 29

7 and 23
11 and 19

13 and 17

..... 7 , 23

(Total for question 20 is 2 marks)

21 Write down two prime numbers that have a sum of 19

..... 2 , 17

(Total for question 21 is 2 marks)

22 Here is a list of numbers.

8 12 15 17 23 27 32

From the numbers on the list,

(a) write down a factor of 16

8
(1)

(b) write down a multiple of 9

27
(1)

(c) write down all of the prime numbers on the list.

17 and 23
(1)

(Total for question 22 is 3 marks)

23 Barry is thinking of a number.
He says,

“My number is even. It is a factor of 30 and a multiple of 5”

There are two possible numbers Barry can be thinking of.

Write down these two numbers.

1, 30
2, 15
3, 10
5, 6

10 30

(Total for question 23 is 3 marks)

24 Paul is thinking of a number.
He says,

“My number is odd. It is a factor of 18 and a multiple of 3”

There are two possible numbers Paul can be thinking of.

Write down these two numbers.

1, 18
2, 9
3, 6

3 9

(Total for question 24 is 3 marks)