Name:

Exam Style Questions

Multiples
Factors
Prime Numbers

Corbettmaths

Equipment needed: Ruler, pencil and pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Videos 216, 220, 225

Answers and Video Solutions

1. Write down **five** multiples of 3

3 6 9 12 15

(2)

2. From the list of numbers

7 9 12 21 23 30 36 45

(a) write down the multiples of 7

7, 21

(2)

(b) write down the multiples of 5

30, 45

(2)

(c) write down the multiples of 12

12, 36

(2)

3. (a) Write down two multiples of 4

4 and 8

(1)

(b) Write down two multiples of 9

9 and 18

(1)

(c) Write down a number which is a multiple of both 4 and 9

4 8 12 16 20 24 28 32 36

9 18 27 36

36

(1)

4. Write down all the factors of 16

1 x 16
4 x 4
2 x 8

1, 2, 4, 8, 16

(2)

5. Write down all the factors of 26

1 x 26
2 x 13

1, 2, 13, 26

(2)

6. From the list of numbers

3 5 7 9 11 15 24

(a) Write down a factor of 12

3

(1)

(b) Write down a factor of 28

7

(1)

(c) Write down a factor of 81

9 (or 3)

(1)

7. Write down all the prime numbers between 10 and 20.

11, 13, 17, 19

(2)

8. Write down four different factors of 56

1 x 56
2 x 28

1 2 28 56

or 4, 7, 8 or 14

(2)

9. Frank says "all prime numbers are odd".

Gemma says "1 is a prime number".

Give a reason why each child is wrong.

Frank: 2 is a prime number and it is even.

Gemma: Prime numbers have two factors, 1 and itself. 1 is not prime.

(2)

10. A football team wear shirts numbered from 1 to 11.

What fraction of the team wear a shirt with a number that is prime?

1 2✓ 3✓ 4 5✓ 6 7✓ 8 9 10 11✓

$\frac{5}{11}$

(2)

11. Here is a list of numbers

✗	✗	✓	✗
80	95	135	185

One of these numbers is a multiple of 45

Write down which number.

45
90
135
180

135

.....

(1)

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12. Write down a prime number between 50 and 60

53 or 59

.....

(1)

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13. Here is a list of numbers

6 10 11 16 24 30 40

(a) Write down a multiple of 20

40

.....

(1)

(b) Write down a factor of 12

6

.....

(1)

(c) Write down a prime number

11

.....

(1)

14. Here is a list of 8 numbers.

15 16 17 18 20 22 24 29

(a) Write down a prime number.

17 (or 29)

.....

(1)

(b) Write down a factor of 30

15

.....

(1)

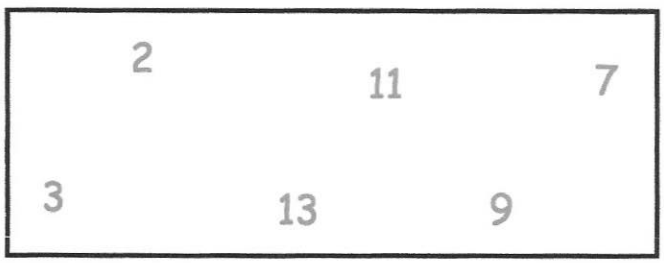
(c) Write down a multiple of 3, which is even.

18 (or 24)

.....

(1)

15.



From the numbers in the rectangle,

(a) write down a factor of 35

7

.....

(1)

(b) write down the number which is **not prime**

9

.....

(1)

16. Circle the number that is a multiple of 6 and a multiple of 10

50	66	100	120
X	X	X	

(1)

17. Write down a factor of 80 between 11 and 19

factors of 80: 1, 2, 4, 5, 8, 10, 16, 20, 40 and 80

1 × 80
2 × 40
4 × 20
5 × 16
8 × 10

16

(1)

18. Beth writes down two numbers.

The numbers are factors of 42 and have a difference of 15

Write down the two numbers.

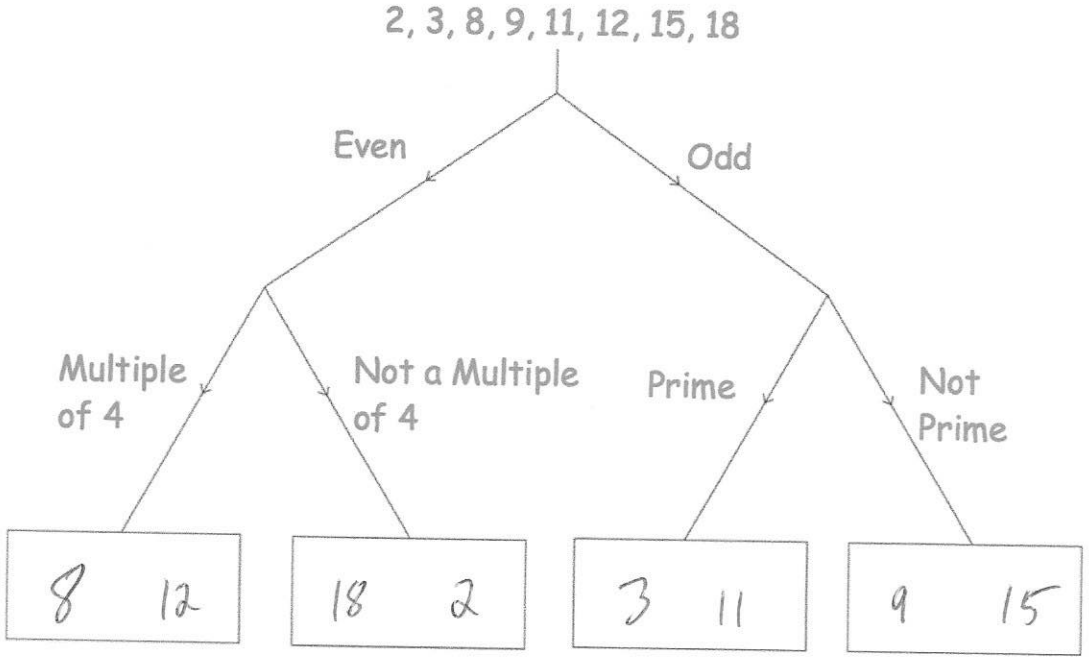
1 × 42
2 × 21
3 × 14
6 × 7

1, 2, 3, 6, 7, 14, 21, 42

6 and 21

(3)

19. Sort **all** the numbers into the correct boxes.



(3)

20. A bus to Belfast leaves Antrim Bus Station every 25 minutes.
The first bus each day leaves at 7am.
Darren wants to get a bus after 8am.

What time is the first suitable bus?

25 50 (75)

1 hour 15 minutes

8:15 am

.....

(2)

21. Harry writes down a four digit number.
All four digits are positive and different.

The first digit is a factor of 15 1 3 5 15
The second digit is a factor of 21 1 3 7 21
The third digit is a factor of 11 1 11
The fourth digit is a factor of 25 1 5 25

What number did Harry write down?

3715

(3)

22. A blue light flashes every 8 seconds.
A red light flashes every 12 seconds.

Both lights have just flashed together.

After how many seconds will both lights flash together?

8 16 24
12 24

24

(2)

23. Kelly is organising a barbecue.
She needs bread rolls and burgers.

Bread rolls are sold in packs of 20.
Burgers are sold in packs of 12.

Kelly buys exactly the same number of bread rolls as burgers.

What is the least number of each pack that Kelly buys?

20 40 60

12 24 36 48 60

3 ..... packs of bread rolls

5 ..... packs of burgers

(3)

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24. Find three different prime numbers with a sum of 40.

2 3 5 7 11 13 17 19 23 29 31 37

2 ..... 7 ..... 31 .....

(2)

25. Georgie wrote down three positive whole numbers.

One of the numbers is a factor of 38. 1 2 19 38 ×
The other two numbers are both even and are equal.

The sum of the three numbers is 31

Write down the three numbers.

Factor of 38	Other 2 numbers 1st	2nd	Sum	Comment
1	15	15	31	not even
2	14.5	14.5	31	not whole
19	6	6	31	✓
38	–	–	not possible positives needed	

19, 6, 6

(3)

26. Write down a number with exactly four factors.

38

1 × 38
2 × 19

38

or 6, 10, 14, 15, 21 etc

(2)

27. Theo thinks of a four digit number less than 7000
The number is a multiple of 9

Write down a possible number that Theo could have thought of.

e.g. 1476 ÷ 9 = 164

1476

(2)

28. Jessica says that there are more prime numbers between 30 and 40 than there are between 40 and 50.

Is Jessica correct?
Explain your answer.

30 & 40 : 31 and 37 → 2
40 & 50 : 41, 43 and 47 → 3

No, there are more primes between 40 & 50 (3) than 30 & 40 (2)

(2)

29. Peter says

"all even numbers greater than two, can be written as the sum of two prime numbers"

Give **three** examples that show that Peter is correct.

40 = 17 + 23
22 = 3 + 19
8 = 3 + 5

17 + 23 = 40

3 + 19 = 22

3 + 5 = 8

(3)