

Factors, Multiples and Primes Exam Practice



Factors of Numbers

Q1. Write down all the factors of 36

1, 36
2, 18
3, 12
4, 9
6, 6

Answer: 1, 2, 3, 4, 6, 9, 12, 18, 36
(2 marks)

Q2. Which of these is *not* a factor of 60?

2, 3, 5, (8), 10, 12, 20, 30

Answer: 8
(1 mark)

Q3. List all the factors of 11

1, 11

Answer: 1, 11
(1 mark)



Q4. Circle all the numbers in the list below which are a factor of 140

(1), (2), 3, (5), (7), 12, 15, (20), 30, (35), 45, (70)

(2 mark)

Q5. Write down all the factors of 85

1, 85
5, 17

Answer: 1, 5, 17, 85

(2 marks)

Q6. Joy is thinking of a number. Given that 8 is a factor of this number, use this information to write down 3 more factors of the number she is thinking of.

1, 2, 4 (other factors of 8)

Answer: 1, 2, 4

(3 marks)

Multiples of Numbers



Q7. Write down a multiple of 6 bigger than 30 but lower than 40.

Answer: 36

(1 mark)

Q8. List all the multiples of 15 under 70

Answer: 15, 30, 45, 60

(2 marks)

Q9. Which of these numbers is *not* a multiple of 12:

12, 48, 84, 112, 132, 1200

Answer: 112

(1 mark)



Q10. Write down the next multiple of 14 after 182.

First check 182 is a multiple of 14

$$\frac{182}{14} = 13 \quad \checkmark \quad (\text{It is})$$

$$182 + 14 = 196$$

Answer: 196

(1 mark)

Q11. List the first five multiples of 7.

Answer: 7, 14, 21, 28, 35

(1 mark)

Q12. Write down the first number larger than 444 which is not a multiple of 4.

Clearly a multiple of 4 since each individual number is a multiple of 4

Answer: 445

(1 mark)



Prime Numbers

Q13. Write down all the prime numbers between 30 and 40

Answer: 31, 37

(2 marks)

Q14. List two prime numbers whose sum is 20

Answer: 17, 3 or 13, 7

(1 mark)

Q15. Circle all the numbers in the list below which are *not* prime numbers:

1, 3, (9), 13, 17, (49), 53, (91), (208)

7 × 13 (Tricky)

(1 mark)



Q16. List two prime numbers whose sum is a square number

$$7 + 2 = 9$$
$$11 + 5 = 16$$

Answer: 7, 2 or 11, 5

(1 mark)

Q17. You are given that 1151 is prime.
List all the factors of this number.

Answer: 1, 1151

(2 marks)

Q18. List all the prime numbers which are smaller than 20

Answer: 2, 3, 5, 7, 11, 13, 17, 19

(1 mark)

Mixed Problems



Q19. Here is a list of numbers

3, 4, 5, 10, 22, 28, 48, 47, 51

From the numbers on the list:

(i) write down a factor of 16

Answer: 4
(1 mark)

(ii) write down a multiple of 7

Answer: 28
(1 mark)

(iii) write down all of the prime numbers on the list

Answer: 3, 5, 47
(1 mark)

Q20. Find a number which is a multiple of 8 and 7

$$8 \times 7 = 56$$

Answer: 56
(1 mark)



Q21. Peter is thinking of a number.

It is a multiple of 20 and also a square number.

Write down two of the possible numbers which Peter could be thinking of.

Any two of 100, 160, 400, 1600. ...

Answer: _____

(2 marks)

Q22. Mike says, "all prime numbers are odd". Do you agree?

You must explain your answer.

No, 2 is even

(1 mark)

Q23. Ray says, "45 is a prime number". Do you agree?

You must explain your answer.

No, $9 \times 5 = 45$

(1 mark)



Q24. Here is a list of numbers

2, 4, 5, 10, 12, 27, 36, 43, 47, 57

From the numbers on the list:

(i) write down the cube number

Answer: 27
(1 mark)

(ii) write down all the multiples of 12

Answer: 12, 36
(1 mark)

(iii) write down all of the prime numbers on the list

Answer: 2, 5, 43, 47, 57
(1 mark)

Q25. Sarah says, "the sum of any two prime numbers is even".

Do you agree? You must explain your answer.

2 + any other prime is odd

e.g. $2 + 3 = 5$

So I disagree

(1 mark)



Q26. John is thinking of an odd number.
It is a factor of 63 and it is a multiple of 7.

Write down one of the possible numbers he is thinking of.

Answer: 7 or 2

(1 mark)

Q27. Matt is thinking of a pair of prime numbers.
The difference between them is a factor of 10.
List all the possible pairs.

1

17, 7

13, 3

7, 5

5, 3

3, 2

(1 mark)

Q28. A number is a multiple of 8, and has 25 as one of its factors.
Find the smallest such number.

25, 50, 75, 100, 125, 150, 175, 200
x x x x x x x ✓

Answer: 200

(1 mark)