

Multiples, Factors and Primes Practice Questions

Instructions

Answer all questions. Show your working where appropriate. These exercises will help you practise identifying multiples, factors, and prime numbers.

Problem Solving and Exercises

1. List all the factors of 36.
2. Find the first five multiples of 14.
3. Is 53 a prime number? Justify your answer.
4. Write down all the prime numbers between 40 and 60.
5. What is the greatest common factor (GCF) of 24 and 36?
6. What is the least common multiple (LCM) of 8 and 12?
7. If a number is divisible by both 3 and 5, what is the smallest such number greater than 20?
8. A number has exactly three factors: 1, 7, and itself. What is the number?
9. List all of the factors of 45 and classify each as either prime or composite.
10. Two numbers have an LCM of 60 and a GCF of 5. If one of the numbers is 15, what is the other number?
11. Without using a calculator, determine if 91 is a prime number. Show your reasoning.
12. Write down the next three prime numbers after 31.
13. Find all pairs of prime numbers that add up to 36.
14. A number between 50 and 60 is divisible by 2, 3, and 5. What is the number?
15. If n is a multiple of both 6 and 8, what is the smallest possible value of n greater than 40?

1. 1, 2, 3, 4, 6, 9, 12, 18, 36
2. 14, 28, 42, 56, 70
3. Yes, 53 is a prime number because it has no divisors other than 1 and itself.
4. 41, 43, 47, 53, 59
5. 12
6. 24
7. 30
8. 7
9. Factors: 1 (neither), 3 (prime), 5 (prime), 9 (composite), 15 (composite), 45 (composite)
10. 20
11. No, 91 is not a prime number because $91 = 7 \times 13$.
12. 37, 41, 43
13. 5 and 31; 17 and 19
14. 60 (but 60 is not between 50 and 60, so the number is 60; if restricted to between 50 and 60, no such number exists)
15. 48