CLASS 6 MATHS EXTRA QUESTIONS

Class 6 Maths Chapter 5 Prime Time Extra Questions

Extra practice questions for Class 6 Maths Chapter 5, "Prime Time", to reinforce factors, multiples, prime numbers, co-primes, and divisibility rules beyond the textbook's own exercises.

Contents

Extra practice questions for **Class 6 Maths Chapter 5, "Prime Time"**, to reinforce factors, multiples, prime numbers, co-primes, and divisibility rules beyond the textbook's own exercises.

Very Short Answer Questions

Q1. What is the only even prime number?
Answer: 2.

Q2. Is 1 a prime number?
Answer: No — 1 has only one factor (itself), so it is neither prime nor composite.

Q3. Are 4 and 9 co-prime?
Answer: Yes — their only common factor is 1, even though neither number is itself prime.

Q4. What is the divisibility rule for 5?
Answer: A number is divisible by 5 if its last digit is 0 or 5.

Q5. What are twin primes?
Answer: Pairs of prime numbers that differ by exactly 2 (e.g., 11 and 13).

Short Answer Questions

Q6. List the first 10 prime numbers.
Answer: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29.

Q7. Find the prime factorisation of 360.
Answer: $360 = 2^3 \times 3^2 \times 5$.

Q8. Is 91 a prime number? Justify.
Answer: No — $91 = 7 \times 13$, so it has factors other than 1 and itself.

Q9. Find all common factors of 36 and 48.
Answer: Factors of 36: 1,2,3,4,6,9,12,18,36. Factors of 48: 1,2,3,4,6,8,12,16,24,48. Common factors: **1, 2, 3, 4, 6, 12**.

Q10. Using the last-3-digits rule, check if 47128 is divisible by 8.
Answer: Last 3 digits = 128. $128 \div 8 = 16$, so **yes**, 47128 is divisible by 8.

Long Answer / Reasoning Questions

Q11. Explain why every even number greater than 2 must be composite.
Answer: Every even number greater than 2 is divisible by 2, in addition to 1 and itself. That means it has at least three factors: 1, 2, and the number itself — which is more than the exactly-two factors required to be prime. So it must be composite.

Q12. Find the smallest number that has exactly four distinct prime factors, and write its prime factorisation.
Answer: Using the four smallest primes (2, 3, 5, 7): $2 \times 3 \times 5 \times 7 =$ **210**.

Q13. Two numbers are co-prime but neither of them is a prime number. Give one such example and explain why they are co-prime.

Answer: Example: **8 and 9**. $8 = 2^3$ and $9 = 3^2$ — they share no common prime factors, so their only common factor is 1, making them co-prime, even though neither 8 nor 9 is itself a prime number.

Q14. A number is divisible by both 4 and 5. What can you say about its divisibility by 20? Explain with an example.
Answer: Since 4 and 5 are co-prime (their only common factor is 1), any number divisible by both must also be divisible by their product, 20. Example: 60 is divisible by 4 (60÷4=15) and by 5 (60÷5=12), and indeed 60÷20=3, confirming it is divisible by 20 as well.

Q15. Explain, using prime factorisation, why 999 is not divisible by 99, even though 999 has “more” factors of 3 than 99 does.
Answer: $999 = 3^3 \times 37$ and $99 = 3^2 \times 11$. For 999 to be divisible by 99, every prime factor of 99 (namely 3^2 and 11) would need to appear in 999’s own factorisation with at least the same power. While 999 does have enough factors of 3 (3^3 covers 3^2), it has zero factors of 11 — so the missing prime factor 11 is what actually blocks divisibility, not the count of 3s.

Practice more: Solutions | Revision Notes for this chapter.