

ANSWER KEY

Ch1 - Number Systems - Test 01

IBRAIN | Class 5 — Mathematics

MCQ Quick Reference (1-Mark Questions)

Q1. (A)	Q2. (C)	Q3. (A)	Q4. (D)
Q5. (B)	Q6. (A)	Q7. (B)	Q8. (B)
Q9. (B)	Q10. (C)	Q11. (B)	Q12. (A)
Q13. (D)	Q14. (B)	Q15. (A)	Q16. (A)
Q17. (A)	Q18. (C)	Q19. (D)	Q20. (B)

Detailed solutions on next pages

DETAILED SOLUTIONS

Ch1 - Number Systems - Test 01

Section A

Q1. A pair of twin prime number between 70 and 100 is:

Answer: (A) 71, 73

Explanation: Twin primes are prime numbers that differ by 2. Between 70 and 100, 71 and 73 are both prime and differ by 2.

Q2. All natural numbers and 0 are called as _____ Numbers.

Answer: (C) Whole

Explanation: The set of Whole numbers is formed by including 0 to the set of natural (counting) numbers.

Q3. Which of the numbers are twin prime?

Answer: (A) (5, 7)

Explanation: Twin primes are prime numbers with a difference of 2. $7 - 5 = 2$, and both 5 and 7 are prime.

Q4. The smallest natural number is:

Answer: (D) 1

Explanation: Natural numbers begin at 1 (1, 2, 3...). Therefore, 1 is the smallest natural number.

Q5. Which of the following numbers are co-prime?

Answer: (B) (18, 25)

Explanation: Co-prime numbers share no common factor other than 1. 18 and 25 share no common prime factors ($18 = 2 \times 3^2$, $25 = 5^2$).

Q6. Which is the smallest number that must be added to 432 to make it a multiple of 10?

Answer: (A) 8

Explanation: The next multiple of 10 after 432 is 440. Number to be added = $440 - 432 = 8$.

Q7. How many even numbers are there from 1 to 100?

Answer: (B) 50

Explanation: Half of the numbers in any even-ending sequence starting from 1 are even. $100 \div 2 = 50$.

Q8. Sumit reads 15 pages of a book every day. The book has 195 pages. In how many days will he finish reading the book?

Answer: (B) 13

Explanation: Total days = $195 \div 15 = 13$ days.

Q9. If you multiply the largest 2-digit number by the smallest 2-digit prime number, what is the product?

Answer: (B) 1089

Explanation: Largest 2-digit = 99. Smallest 2-digit prime = 11. Product = $99 \times 11 = 1089$.

Q10. A square garden has a perimeter of 200 m. What is the length of one side of the garden?

Answer: (C) 50 m

Explanation: Perimeter = $4 \times \text{side}$. Side = $200 \div 4 = 50$ m.

Q11. Find the largest number which can be formed by rearranging the digits 3, 8, 7, 9.

Answer: (B) 9873

Explanation: To form the largest number, place the digits in descending order from left to right: 9, then 8, then 7, then 3. Result: 9873.

Q12. What is the next prime number strictly after 100?

Answer: (A) 101

Explanation: Checking numbers after 100: 101 has no factors other than 1 and 101. It is not divisible by 2, 3, 5, 7 (as $\sqrt{101} \approx 10$). Therefore, 101 is prime.

Q13. Evaluate the highest common factor (HCF) of 24 and 32.

Answer: (D) 8

Explanation: Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. Factors of 32: 1, 2, 4, 8, 16, 32. The highest common factor in both sets is 8.

Q14. The smallest number of four digits whose each digit is different is:

Answer: (B) 1023

Explanation: We need 4 digits. Smallest non-zero is 1. Next smallest is 0, then 2, then 3. Arranging them: 1023.

Q15. The difference between the greatest and the least number that can be written using the digits 6, 2, 7, 4, 3, each only once, is evaluated as:

Answer: (A) 52965

Explanation: Greatest = 76432. Least = 23467. Difference = $76432 - 23467 = 52965$.

Q16. Find a 4-digit number, formed by different digits, in which 9 is specifically located at the tens place, and the number is the smallest possible.

Answer: (A) 1092

Explanation: For the smallest number, thousands place should be 1, hundreds place should be 0. Tens place is forced to be 9. Units place must be the smallest unused digit, which is 2. Result: 1092.

Q17. There are XC students in Class 8th. XL students are absent today. Evaluate how many students are present (in Roman numerals).

Answer: (A) L

Explanation: $XC = 90$. $XL = 40$. Present = $90 - 40 = 50$. In Roman numerals, $50 = L$.

Q18. If the sum of its digits is subtracted from a number, the resulting number will always be completely divisible by:

Answer: (C) 9

Explanation: Let the number be $10x + y$. Subtracting digit sum: $(10x + y) - (x + y) = 9x$. The result is always a multiple of 9.

Q19. Ram, Rahul, and Rohit shared a bag of marbles equally. The bag had 272 marbles. How many marbles were left over?

Answer: (D) 2

Explanation: Three people sharing equally means dividing by 3. $272 \div 3 = 90$ with a remainder of 2. Therefore, 2 marbles are left over.

Q20. The predecessor of 10,001 evaluates to:

Answer: (B) 10,000

Explanation: Predecessor means the number just before it (subtract 1). $10,001 - 1 = 10,000$.