1. What does a child say when both neighbours standing beside them are taller?
   A. 0
   B. 1
   C. 2
   D. 3   (C)

   Explanation : A child says '2' when both children standing next to them are taller.

2. Which of the following is a palindromic number?
   A. 1241
   B. 53035
   C. 1523
   D. 2562   (B)

   Explanation : A palindromic number reads the same forward and backward, like 53035.

3. In a supercell grid, a number becomes a supercell when it is:
   A. Smaller than its adjacent numbers
   B. Greater than all its adjacent numbers
   C. Equal to its neighbours
   D. At the corner of the table   (B)

   Explanation : A supercell is a number greater than all of its adjacent neighbours.

4. The Kaprekar constant is always reached from any 4-digit number (with at least two different digits) using the rule:
   A. A + B
   B. B – A
   C. A × B
   D. A – B   (D)

   Explanation : The rule involves subtracting the smallest number formed by the digits from the largest, repeatedly until 6174 is reached.

5. What is the digit sum of 176?
   A. 12
   B. 14
   C. 15
   D. 13   (B)

   Explanation : Digit sum = 1 + 7 + 6 = 14.

6. How many 1-digit numbers are there?
   A. 10
   B. 9
   C. 8
   D. 11   (B)

   Explanation : The 1-digit numbers range from 1 to 9, totaling 9 numbers.

7. Which number pattern always leads to 1 using the Collatz Conjecture rule?
   A. Odd → add 1
   B. Even → divide by 2
   C. Odd → ×3 and add 1; Even → divide by 2
   D. Even → ×2 and subtract 1   (C)

   Explanation : The Collatz rule is: if even, divide by 2; if odd, multiply by 3 and add 1.

8. Which of the following cannot be a supercell?
   A. Largest number in the table
   B. Smallest number in the table
   C. Number greater than all neighbours
   D. Centre cell with greater value   (B)

   Explanation : The smallest number in a table cannot be a supercell because it won't be greater than any neighbours.

9. What is a winning strategy in the Game of 21?
   A. Say even numbers only
   B. Always say '21' first
   C. Say a number that makes your opponent land on 17
   D. Reach 21 by planning steps ahead   (D)

   Explanation : By choosing numbers wisely, you can force the opponent into positions where you can reach 21 first.

10. What is the first palindromic time after 10:01?
    A. 10 : 10
    B. 10 : 11
    C. 10 : 20
    D. 10 : 02   (A)

    Explanation : 10 : 10 is the next time after 10:01 that reads the same forward and backward.