Chapter 3 Class 6 Ganita Prakash - Number Play - MCQ Worksheet 1 by *teachoo*

Chapter: **Chapter 3 Class 6 Ganita Prakash - Number Play**

Name: _____

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1. In a team-building exercise, a group stands in a line. Each person gets a "support score" equal to the number of taller people standing immediately next to them. If you are standing at the very beginning of the line, what is the maximum support score you can have?

   a) 2

   b) 1

   c) 0

   d) Cannot be determined

2. A group of 7 robots, all of different heights, line up for a promotional photo in ascending order of height (shortest to tallest). What will be the sequence of their "Taller Neighbour" scores?

a) 1,0,0,0,0,0,0

b) 0,1,1,1,1,1,0

c) 1, 1, 1, 1, 1, 1, 1

d) 0,0,0,0,0,0,0

3. A game developer is placing a special "Area Boost" item (represented by the highest number, 9) on a 3×3 grid of power-ups (numbered 1-9). To ensure the Boost affects the maximum number of adjacent items, where should it be placed? (An item is affected if the Boost is a "supercell" relative to it).

a) In the center cell

b) In a corner cell

c) In a middle-edge cell

d) Its position doesn't matter.

4. A data series represents the daily profit/loss of a shop for a week. Can the day with the lowest profit (the smallest number) be considered a "local peak" (a supercell) in performance?

a) Yes, if it occurred at the end of the week.

b) No, because a local peak must be higher than its neighbours.

c) Yes, if the profits on adjacent days were even lower (i.e., larger losses).

d) Only if all profits were negative.

5. A data validation algorithm uses the Kaprekar process. If it receives the input 3333 , how should the algorithm respond?

a) It should output 6174 .

b) It should output θ.

c) It should report an error because the process requires at least two different digits.

d) It should enter an infinite loop.

6. A software generates palindromic registration keys. It starts with the number 87 and uses the reverse-and-add process. What is the first palindromic key it will generate?

   a) 165

   b) 726

   c) 1331

   d) 484

7. A Mars rover synchronizes its clock with Earth. Which of the following 24-hour timestamps represents a palindromic moment?

   a) 15:51

   b) 23:32

   c) 20:50

   d) Both a) and b)

8. A network routing algorithm uses the Collatz process to determine the next hop for a data packet. If the packet's initial size is a power of 2 (e.g., 64 bytes), the algorithm will:

   a) Immediately reroute it to an 'odd' processing channel.

   b) Consistently halve the packet size in each step until it reaches 1 byte.

   c) Increase the packet size first to handle overhead.

   d) Get stuck in a loop, causing a network timeout.

9. You are designing a 5-digit product ID with a "checksum" (digit sum) of 4. To make the ID number as large as possible for easier sorting, what should the ID be?

   a) 11110

   b) 40000

   c) 10021

   d) 22000

10. In the game of " 21 ", a player who understands the strategy can almost always win. The strategy revolves around landing on specific numbers to control the game. Which number is the most critical to secure just before the final move?

a) 19

b) 18

c) 20

d) 17