Brain International School

Vikas Puri, New Delhi

ASSIGNMENT NO. 3

SUBJECT: MATHS **CLASS-VI** **JULY,2025**

NUMBER PLAY

Q1. Find the difference between the largest and smallest number formed using the digits 3, 5, 7 and 9.

Q2. In the supercell activity, a cell becomes a supercell if:

a) it is the largest number in the table.

b) it is greater than all its neighbouring cells.

c) it is an even number.

d) it is in the centre of the table.

Q3. The Kaprekar constant for 4-digit number is:

a) 1089 b) 6174 c) 4321 d) 9999

Q4. Which of these is a palindromic time on a 12-hour clock?

a) 12:34 b) 10:10 c) 11:11 d) 09:15

Q5) In the Collatz conjecture, if a number is odd, we"

a) Divide it by 2
b) Multiply it by 2
c) Multiply by 3 and add 1
d) Subtract 1

Q6) How many 2-digit numbers are there?

Q7) What is the smallest 4-digit palindrome?

Q8) What is the digit sum of 6382?

Q9) Find the smallest 4-digit number whose digit sum is 10?

Q10) How many 3-digit palindromes are there?

Q11) Starting from 15, how many steps does it take to reach 1 using the Collatz conjecture?

Q12) In a 3x3 supercell grid, what is the maximum number of supercells possible?

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ASSIGNMENT NO. 4

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DATA HANDLING AND PRESENTATION

Q1) Fill in the blanks:

a) Any collection of observations, measures and numbers that convey the information is called _____.

b) The number of times an observation occurs in the given data, is called the _____ of the observation.

c) _____ is a representation of numerical data through pictures or objects.

d) A _____ is a pictorial representation of the numerical data by number of bars of uniform width.

e) Pictographs use _____ to represent data visually.

Q2) Given below are the age (in years) of 26 students of class VI in a school. Prepare discrete frequency distribution.

18, 15, 16, 16, 14, 17, 17, 16, 15, 15, 16, 16, 18

17, 15, 16, 16, 14, 15, 14, 15, 16, 16, 15, 14, 15

Answer the questions:

a) In which age group there are 4 students?

b) How many students are there of age 17 years?

c) How many students have minimum age?

Q3) Represent the given data in the form of a bar graph:

Activity	Dance	Drama	Singing	Painting	Sports
Boys	75	60	80	45	95
Girls	95	75	70	65	85

Q4) In a pictograph, if one symbol represents 10 students, how many symbols are needed to represent 50 students?

a) 2 b) 3 c) 5 d) 10

Q5) In a bar graph, what does the height of each bar represent?

a) The colour of the data
b) The frequency of the given data
c) The width of the graph
d) The length of the graph

Q6) What is one advantage of using pictographs?

a) They are difficult to understand
b) They require advanced software
c) They provide a quick visual understanding
d) They show bars to represent the data.

Q7) Assertion – Reason based questions:

1. Assertion: Pictographs can be misleading if not properly scaled.
   Reason: Pictographs use symbols that can represent multiple units.

2. Assertion: Bar graphs are more suitable than pictographs for large data sets.
   Reason: Bar graphs can represent exact frequencies with varying bar lengths.

3. Assertion: Organising data in ascending order helps in identifying patterns easily.
   Reason: Ascending order arranges data from smallest to largest.

4. Assertion: Tally marks are used to simplify data collection.
   Reason: Tally marks allow quick counting by grouping in fives.

(a) Both Assertion and Reason are correct and Reason is the correct explanation of Assertion.
(b) Both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.
(c) Assertion is correct but Reason is incorrect.
(d) Assertion is incorrect but Reason is correct.