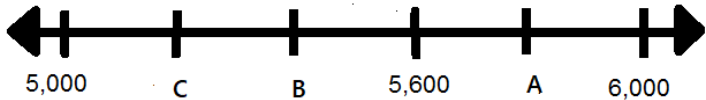


INDIAN SCHOOL AL WADI AL KABIR
Class VI, Mathematics
WORKSHEET (2026-27)
NUMBER PLAY

Multiple Choice Questions

Q.1	Which of the following is a palindromic time on a 24-hour clock?													
	A	10:10	B	21:12	C	13:13	D	20:20						
Q.2	The supercell in the given table is													
	<table><tr><td>34</td><td>94</td><td>86</td><td>56</td><td>43</td><td>20</td></tr></table>								34	94	86	56	43	20
34	94	86	56	43	20									
	A	56	B	43	C	94	D	86						
Q.3	Which of the following is the Kaprekar constant?													
	A	6174	B	7614	C	4176	D	1476						
Q.4	The largest 4-digit number, using any one digit twice, from digits 4, 7, 3 and 1 is .													
	A	7431	B	7743	C	74431	D	7731						
Q.5	The smallest four-digit palindrome number is ?													
	A	1010	B	1100	C	1001	D	1011						
Q.6	According to the Collatz rule, what is the next term after 11?													
	A	22	B	34	C	33	D	12						
Q.7	The smallest 4-digit number only using the digits 9,0,4,1 is:													
	A	4019	B	4109	C	1409	D	1049						
Q.8.	The number exactly halfway between 7,890 and 7,910 is													
	A	7,900	B	7,905	C	7,895	D	7,915						
Q.9	Which of the following dates is palindromic ?													

	A	12-02-2021	B	15-08-2023	C	22-02-2022	D	01-01-2024
Q.10	Which mathematician discovered the number 6174?							
	A	Srinivasa Ramanujan	B	Aryabhata	C	Bhaskara II	D	D. R. Kaprekar
	LONG ANSWER QUESTIONS:							
Q.11	Identify the numbers marked by A, B, and C. 							
Q.12	Write any 4 palindrome numbers using the digits 4,5,7.							
Q.13	Write smallest and greatest 5 – digit number using the digits 7,0,3,2,5. Also find its sum and difference.							
Q.14	a) write the greatest 4-digit number whose digit sum is 28 b) write the smallest 4-digit number whose digit sum is 18							
Q.15	Write any three examples for palindromic date.							
Q 16.	Check if the Collatz Conjecture holds for the number 22. (Show the proper steps)							
Q17.	A mathematician chooses the number 9831 and applies Kaprekar routine. 1. Arrange the digits in descending and ascending order. 2. Find their difference. 3. Repeat until 6174 is obtained. 4. How many steps did it take?							
Q.18	Case Study: During a National Mathematics Camp, three students—Arjun, Meera, and Rahul—participated in a special challenge called "The Journey of a Number ".The organizers gave them the 4-digit number 6336 and asked them to explore it using three mathematical ideas: Palindromic Numbers, Kaprekar Constant, and the Collatz Conjecture. 1. Apply Kaprekar routine on 6336 2. Write two 4-digit palindromic number by using the digit 3,6(other than 6336) 3. Check if the Collatz Conjecture holds for the number 36.							

ANSWERS

1.	B	2.	C	3.	A	4.	B	5.	C	6.	B	7.	
8.	A	9.	C	10.	D	1	A-5800 B-5400 C-5200	12.	4554 4774 5445 5775	13.	1.20357 2.75320 3.95677 4.54963	14.	
15.	02-02- 2020 12-02- 2021 22-02- 2022	16.	22 , 11 , 34, 17 , 52 , 26 , 13 , 40 ,20 ,10 , 5 , 16 , 8 , 4 , 2 ,1.	17.	Descending: 9831 Ascending: 1389 It took 7 steps to reach Kaprekar Constant, 6174.			18. 3663 3333 , 6666.					