1. Find out the parity of the following:
   a) Sum of an even number and odd number
   b) Sum of 3 even numbers and 2 odd numbers
   c) Sum of 8 odd numbers
   d) Sum of 5 even numbers
2. What is the 20th even number in the sequence 2,4,6, 8,…..
3. What is the 30th number in the sequence 1,3,5,7,…..
4. Meera has 5 boxes and odd number cards (1,3, 5,….) Can she pick 5 cards that add to 50
5. Write any 4 consecutive numbers and find their sum. Is the sum even or odd? Also find its parity
6. Find the parity of the number of small squares in these grids without calculating them
   a) 23× 35
   b) 17× 42
   c) 12× 38
7. Write the parity of the given expressions:
   a) 3n + 4
   b) 6n − 2
   c) 2n − 1
   d) 4n
8. Create a 3×3 magic square using the given 9 consecutive numbers
   a) 3 to11   b) 9 to 17
9. Fill the missing numbers in the a3×3 magic square so that the sum of every row, column and diagonal is 15

		6
	5	
4		

10. Create a magic square whose magic sum is 45
11. Create a magic square whose magic sum is 72

12. If each number of a 3×3 magic square increased by 5, then is the resulting grid also a magic square? How does the magic sum change in this case

13. In a 3×3 magic square with centre number 10, what is the magic sum?

14. Write the number 8 as 10 different ways as the sum of 1s and 2s

15. Two consecutive numbers in the Virahanka sequence are 377 and 610. What are the next 2 numbers in the sequence? Also find the previous 2 numbers in the sequence.

16. A door is initially closed. Adil pushes and pulls the door handle 65 times. Will the door be open or closed at the end? Explain why?

17. Solve the following cryptarithms:

A B + B —— A B	D O + G O —— O N	D O + T O —— N O T	A I + A I —— O O H
B O W + W O W —— D O G	M O O + M O O —— G O W	T T + T T —— L T C	D I D D I D + I N N —— N O I D

Answers:

1. a) odd   b) even   c) even   d) even
2. 40
3. 59
4. No
5. Even, even parity
6. a) odd   b) even   c) even
7. a) odd & even   b) even   c) odd   d) even
8. a)

6	11	4
5	7	9
10	3	8

12	17	10
11	13	15
16	9	14

9.

2	7	6
9	5	1
4	3	8

10.

12	27	6
9	15	21
24	3	18

11.

36	8	28
16	24	32
20	40	12

12. The resultant square is also a magic square, and its magic sum increases by 15

13. 30

14. Do self

15. Next two numbers: 987,1597, Previous numbers: 233,144

16. Open

17.

a) A = 1, B = 9

b) D = 1, O =5, G = 3, N =0

c) D = 6, O =4, T =8, N = 1

d) A =5, I = 6, O = 1, H = 2

e) B =1, O = 9, W = 6, D = 8, G = 2

f) M = 3, O =9, G =7, W = 8

g) T = 9, L = 1, C = 8

h) D = 2, I = 3, N = 1, O =7

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