

MCQs Part 2 ($10 \times 1 = 10$ marks)

11. Virhanka numbers are:

- a) 1,3,6,10..... b) 1,2,3,5,8..... c) 1,8,27,64,125..... d) 1,7,19,37.....

12. What is the next number in the sequence 1,4,9,16?

- a) 20 b) 24 c) 25 d) 30

13. How many sides does a hexagon have?

- a) 5 b) 6 c) 7 d) 8

14. If you start with the number 2 and keep adding 2, what sequence are you creating?

- a) Even numbers b) Prime numbers c) Odd numbers d) Square numbers

15. $1+2+3+\dots+99+100+99+\dots+3+2+1$ is

- (a) 1000 (b) 2000 (c) 10000 (d) 200

16..... is both a triangular number and a square number

- a) 25 b) 8 c) 36 d) 4

17. Square numbers are :

- a) 1,3,6,10... b) 1,4,9,16... c) 1,8,27,64..... d) 1,7,19,37.....

18. The missing term in the sequence 1,10,....,1000,10000

- a) 100000 b) 100 c) 1000000 d) 11

19. The pattern 1,3,5,7..... is sequence of

- a) Even numbers b) Odd numbers c) Consecutive numbers d) Prime numbers

20. The sum of two consecutive triangular numbers is

- a) Square numbers b) Triangular numbers c) Virahanka numbers d) Hexagonal numbers

WORKSHEET -2

Section B: Short Answer ($10 \times 2 = 20$ marks)

1. Write the sequence of triangular numbers.

2. Write the sequence of cube numbers

3. Write the sequence of Virhanka numbers

4. Write the sequence of hexagon numbers

5. Visulize the square number 64.

6. Represent hexagonal numbers pictorially.

7. Which sequence do you get when you start to add the All 1 's sequence up?

8. What is the pattern rule followed by the sequence 88, 77, 66, 55, 44, 33,...?

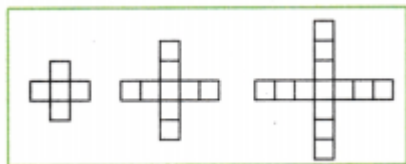
9 How many counters would come next?



10. Which number is missing in this pattern 41, 45, 49, ..., 57, 61, 65?

Section C: Short Answer ($6 \times 3 = 18$ marks)

11. How many cubes would be in the next shape?



12. Complete the dice pattern.



13. Alice used the rule 'double the number' to create the following pattern. 3, 6, 12, 24, _, Find the next two numbers.

14. What happens when you add up pairs of consecutive triangular numbers?

That is, take $1 + 3$, $3 + 6$, $6 + 10$, $10 + 15$, ... ?

Which sequence do you get? Explain it with a picture representation?

15. What happens when you multiply the triangular numbers by 6 and add 1? Which sequence do you get? Explain it with the help of picture.

16. Which sequence do you get when you start to add the counting numbers up? Give a smaller pictorial explanation?

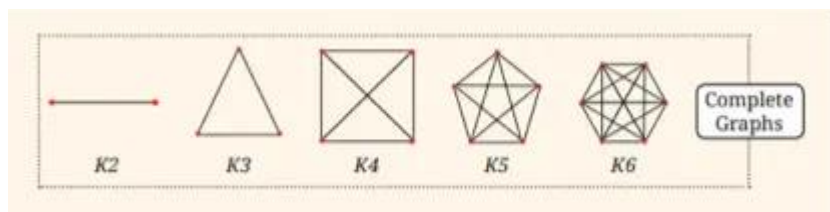
Section D: Long Answer ($4 \times 5 = 20$ marks)

17. If the first tower has 3 blocks, the second tower has 6 blocks and the third tower has 9 blocks, then how many blocks will the 8th tower have?

18. Draw the shape sequence of regular polygons.

19. Write the sequence when you start to add up powers of 3 starting with 1 i.e. $1, 1+3, 1+3+9, 1+3+9+27, \dots$

20. Count the number of lines in each shape in the sequence of Complete graph. Which number sequence do you get?



Case Study Based Questions ($2 \times 4 = 8$ marks)

21. Students of Sunrise school visit a plants nursery with their class teachers. In the nursery, they see that the plants are kept in rows where the number of plants in each row follows a pattern.

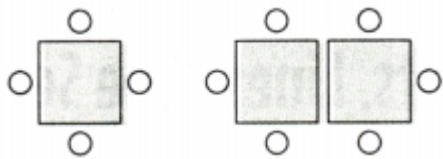


Based on the above information, answer the following questions.

(i) There are 3 plants in the first row, in the second row 6 and 9 plants in the third row. If the same pattern is followed, how many plants will be in the ninth row?

(ii) How many total plants would be there in the 25th row?

22. Mr. John is a professional table organiser. For today's event, he brought square tables. A single square table can seat 4 people, one at each side, as in the first picture below (each circle is a person). If Mr. John joins 2 tables along a side, as in the second picture below, he can seat 6 people.



(i) Draw and extend the pattern for next 2 steps

(ii) Write the number of persons if the number of tables are 5

Self Assessment:

I understood all the concepts

☐ Yes

☐ No

I need more practice

☐ Yes

☐ No

Name of Concepts having doubts/Not Cleared: _____

Parent's Assessment:

My ward understood all the concepts

☐ Yes

☐ No

He/She need more practice

☐ Yes

☐ No

Name of Concepts having doubts/Not Cleared: _____

Signature of Parent:

Teacher's Assessment

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Answers of Worksheet 1:

Q. No.	1	2	3	4	5	6	7	8	9	10
Answer	B	C	B	A	B	C	C	C	B	A
Q. No.	11	12	13	14	15	16	17	18	19	20
Answer	b	c	b	a	c	c	b	b	b	a

Answers of Worksheet 2:

Q.No.	1	2	3	4	5
Ans	1,3,6,10.....	1,8,27,64,.....	1,2,3,5,8.....	1,7,19,37	Do yourself
Q.No.	6	7	8	9	10
Ans	Do yourself	1,2,3,4	Subtract 11	9	53
Q.No.	11	12	13	14	15
Ans	17	Do yourself	48,96	4,9,16	7,19, 37
Q.No.	16	17	18	19	20
Ans	1,3,6,10	24	Draw yourself	1,4,13	1,36,10
Q.No.	21	22			
Ans	27,75	12			