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CLASS: 3A, B

SUBJECT: MATHEMATICS

TOPIC : PLAY WITH PATTERNS

MONTH: DECEMBER

NOTES

CHAPTER 10

PLAY WITH PATTERNS

1. Look around you and list three in which you find some pattern.

Ans. Necklace, clothes with design, tiger or anything with pattern.

2. You will see these designs have been made by using the same block in different ways.

Can you see a pattern in the way each block is repeated?

Ans. The rule for this pattern is there is one block upward and one downward. Then this is repeated.

3. Given below are some pattern. Figure out the rule for each and continue the pattern.

(a)



Ans.



(b)



Ans.



(c)



Ans.



(d)



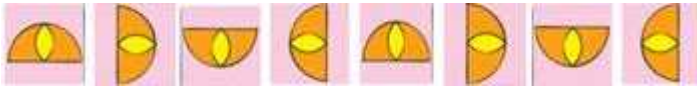
Ans.



(e)



Ans.

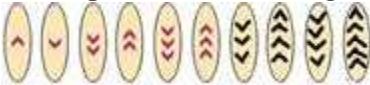


(f) Morning, afternoon, evening, night, morning,

Ans. Morning, afternoon, evening, night, morning, afternoon, evening, night.

4. Can you see the rule and continue the pattern.

Ans. The rule for this pattern is that it is growing and does not repeat. In the first V appears once but downwards, in the 2nd V appears once but upwards. In the third and fourth twice first down then upwards. That is V goes on growing. The continued pattern as under:



5. We have made some pattern with pictures. We can make patterns with numbers too. Like 21, 41, 61, 81, 101, 121. You know the next number, don't you? This is a growing pattern. It can go on. 21, 41, 61, 81, 101, 121, 141, 161, 181.

(a) Look for the rules and continue these growing patterns:

Ans. Continuing with the growing patterns, we have:

(1) 51, 56, 61, 66, 71, 76, 81

(2) 7, 14, 21, 28, 35, 42, 49, 56

(3) 2, 4, 8, 16, 32, 64, 128, 256

(4) 12A, 13B, 14C, 15D, 16E.

(b) Look at these growing patterns. Find out what to add to each number to get the next one:

(i) 1, 3, 6, 10, _____

Ans. 1, 3, 6, 10, 15, 21, 28, 36, 45.

(ii) 0, 2, 6, 12, _____

Ans. 0, 2, 6, 12, 20, 30, 42, 56.

(iii) 1, 3, 7, 13, _____

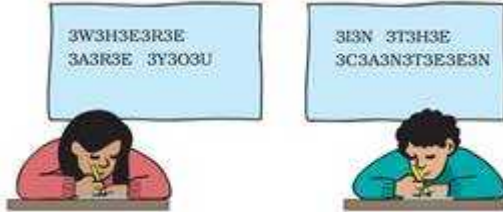
Ans. 1, 3, 7, 13, 21, 31, 43, 57.

(iv) 2, 3, 6, 11, 18, _____

Ans. 2, 3, 6, 11, 18, 27, 38, 51.

SECRET MESSAGES

6. Amrita and Paritosh are writing secret messages.



Ans. The secret messages are: Where are you? In the canteen.

7. There are two secret messages. Look for the patterns and find the hidden sentences.



Ans. Hidden sentences are:
I LOVE YOU, THIS BOOK IS FUN.

8. Half these numbers are in yellow. What patterns do you see in these numbers? Continue the pattern and fill in the blanks

Ans. 99, 101, 103, 105, 107, 109, 111, 113.

EVEN AND ODD NUMBERS

Even and Odd Number Patterns

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

9. What do the numbers in blue end with?

Ans. These numbers that end with 1, 3, 5, 7 or 9 are called odd numbers.

10. What do you get if you add an even number to an odd number?

Ans. On adding an even number to an odd number, we get an odd number.

11. Write all the odd numbers between 400 and 410.

Ans. 401, 403, 405, 407, 409.

12. Write all the even numbers between 155 and 165.

Ans. 156, 158, 160, 162, 164.

13. If we add 1 to any odd number we get an ____ number.

Ans. Even number.

14. If we add 1 to any even number we get an _____ number.

Ans. Odd number.