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**CBSE Class 3 Mathematics**  
**NCERT Solutions**  
**Chapter 10**  
**PLAY WITH PATTERNS**

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

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

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**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.

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**Practice Time**

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

**(a)**



**Ans.**



**(b)**



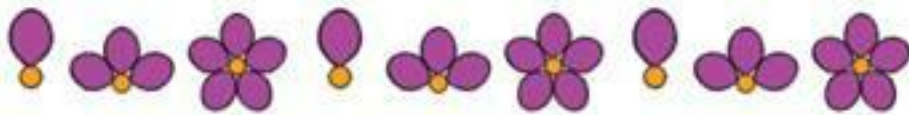
Ans.



(c)



Ans.



(d)



Ans.



(e)



Ans.



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

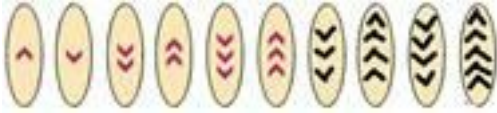
Ans. Morning, afternoon, evening, night, morning, afternoon, evening, night.

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## Growing Patterns

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 2<sup>nd</sup> 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:



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## Number Patterns

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 and 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, \_\_\_\_\_

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**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, \_\_\_\_\_

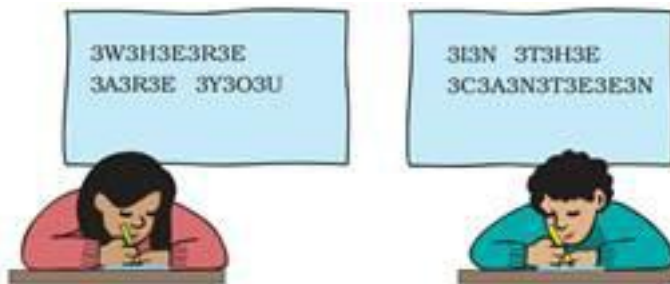
**Ans.** 2, 3, 6, 11, 18, 27, 38, 51.

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### Secret Message

**6. Amrita and Paritosh are writing secret message.**



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

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**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.

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### Even And Odd Number Patterns

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**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.

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**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.

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**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.

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

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

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

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

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**13. If we add 1 to any odd number we get an \_\_\_\_ number.**

**Ans.** Even number.

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**14. If we add 1 to any even number we get an \_\_\_\_ number.**

**Ans.** Odd number.

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