

#### SESSION : 2 CLASS : 3 SUBJECT : MATHEMATICS CHAPTER NUMBER: 11 CHAPTER NAME : PATTERNS SUBTOPIC : RULES OF PATTERNS, NUMBER PATTERNS

#### **CHANGING YOUR TOMORROW**

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## **Children will**

- \* Have ideas of different rules to follow the pattern.
- \* Understand the presence of patterns in day-to-day life.
- \* Understand and construct simple number patterns.



LETS RECAPITULATE

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#### LETS RECAPITULATE











LETS RECAPITULATE







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## RULES OF PATTERNS

1) The fixed order in which a growing pattern increases is called its rule.

2) A pattern in math is a repeating sequence based on a rule.

3) To find the rule of a pattern, observe how the pattern increases as it moves from one sequence to the next.



## NUMBER PATTERN

Number pattern is a pattern or sequence in a series of numbers. This pattern generally establishes a common relationship between all numbers.

There are two types of number patterns:

**1. Arithmetic Sequences** 

**2. Geometric Sequences** 



**Types of Number Patterns** 

There are two common number sequence patterns:1. Arithmetic Sequences2. Geometric Sequences

#### **Arithmetic Sequence**

Arithmetic sequences are sequences of numbers with constant differences between consecutive terms. Ex. - 1, 4, 7, 10, 13, 16, ..... is an arithmetic sequence because the difference between consecutive terms is 3.

#### **Geometric Sequences**

The geometric progression is a relation between two non-zero numbers in which, the difference between consecutive terms is not a constant. Ex. - 1, 4, 8, 11, 15, 18, .....is a Geometric sequence because the difference between

consecutive terms is not even.





\* Here, we get the numbers in the pattern by skip counting by 5. Given are the steps to identify a number pattern.

\* To solve the problems of number pattern, we need first to find the rule being followed in the pattern.

\* To find out the rule, we need to see the first few numbers in the series. \* Try to see the difference between consecutive numbers, it will help us understand the relationship between the numbers.







## A. Complete the following letter patterns. Start at B, skip one letter each time 1. B, D, F, H, J <u>L</u>, <u>N</u>, <u>P</u> 2. A, C, E, G, I, K <u>M</u>, <u>O</u>, <u>Q</u> Start at A, skip one letter each time 3. aA, bB, cC, dD <u>eE</u>, <u>fF</u>, <u>g</u>G

PATTERNS

**RULES OF PATTERNS, NUMBER PATTERNS** 

Small letter followed by capital letter



## 4. AbB, CdD, EfF, GhH <u>ljJ</u>, <u>KIL</u>, <u>MnN</u>

Start at AB, seperated by small letter of the second alphabet followed in sequence.

#### 5. AbC, DeF, GhI, JkL MnO, PqR, StU

English letters, three at a time, starting from A, but the middle alphabet in small.



B. Complete the following number patterns and write the rule in the blank space.

- 1. 5, 10, 15, 20, 25 <u>30</u>, <u>35</u>, <u>40</u> Start at 5 and add 5 each time
- 2. 10, 20, 30, 40, 50 <u>60</u>, <u>70</u>, <u>80</u> Start at 10 and add 10 each time
- 3. 125, 150, 175, 200 225 , 250 , 275

Start at 125 and add 25 each time



#### 4. 900, 800, 700, 600 <u>500</u>, <u>400</u>, <u>300</u>

#### Start at 900 and subtract 100 each time

5. 950, 900, 850, 800 <u>750</u>, <u>700</u>, <u>650</u>

Start at 950 and subtract 50 each time



Class Work : Exercise-11 Q. No A and B in the notebook

Home Work : Practice classwork



## Children will be able to have ideas of different rules to follow the pattern. Understand the presence of patterns in day-to-day life and construct simple number patterns.



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