



G3.13 | EXTENDING NUMBER PATTERNS (1-100)

Number Operations Concepts - NCERT Chapter 3: Give and Take (sum upto 999)

Students will be able to identify the rule of a number pattern and extend it

40- 50 min

PRE REQUISITES:

G2.16 Know forward and backward skip counting

TLM

None

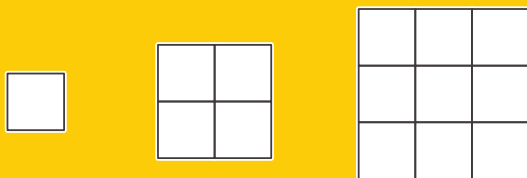
MISCONCEPTIONS

None

KEY VOCABULARY

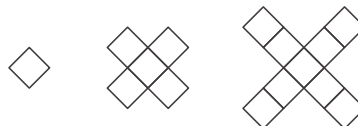
None

PLAY



Understanding growing number pattern using growing geometric patterns

Draw a growing pattern as shown

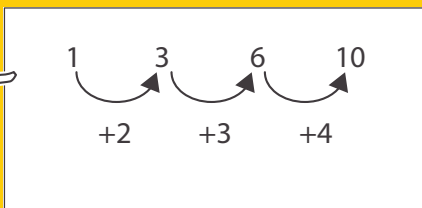


Ask students to count the number of small squares in each of the three shapes

Ask students to draw the next shape in this sequence and count the number of small squares in that shape

Repeat the activity with other geometric shapes. Another example is shown below

PROCESS



Identifying the next number in a growing number pattern

Write numbers 1, 3, 6, 10 on the blackboard. Point to 3 and explain that it is 2 more than 1

Point to 6 and explain that it is 3 more than 3. Point to 10 and explain that it is 4 more than 6

Tell difference between any pair of no.s in this sequence is 1 more than difference between the previous pair of no.s

Explain that the next number in the sequence can be calculated by adding 5 to 10. Write $10+5 = 15$

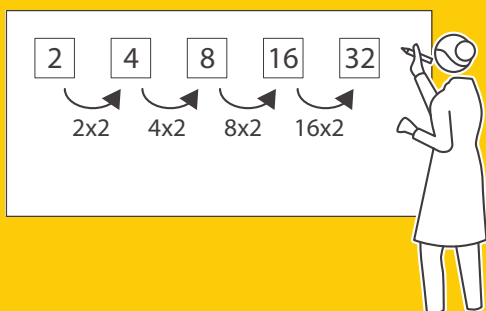
Write 12 A, 14 B, 14 C, 18 D. Tell the students that 14 is 2 more than 12, 16 is 2 more than 14, and so on

Point to the alphabets of the sequence and tell that alphabets in the sequence are following the alphabetical order

Tell that all no. patterns follow some rules. Each no. is either more than its previous one by some no. or is lesser

Explain that once we identify the rule we can extend the pattern

PRACTICE



Write the numbers on the black board and ask the student to extend the pattern

Help the students solve question 2 from the worksheet. Write the numbers on the board and ask the students to find the next number in the sequence

2, 4, 6, 8, 10, 12, __
5, 10, 15, 20, 25, __

Encourage the students to first describe the pattern in their own words and then identify the next number in the sequence

Allow students to reach conclusions like, "the pattern has even numbers", "the numbers are increasing from left to right" etc

Emphasize that number patterns need not always have addition or subtraction rules. They can also have multiplication or division rules

① SOLVED EXAMPLE : Write the next number in the sequence

a.

21	31	41	51	61
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b.

23A	25B	27C	___	___
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② Make a number pattern where each number is three times the previous number

2				
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 $\times 3$


 $\times 3$


 $\times 3$


 $\times 3$

③ Write the next number in this number pattern

2	4	8	___	___
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④ Write the next number in this pattern

2	3	6	11	18	___	___	___
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⑤ Write the next number in this pattern

1	2,2	3,3,3	4,4,4,4	_____
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 6 Write any 2 number patterns that start with 1