10 Play with Patterns

0325CH10

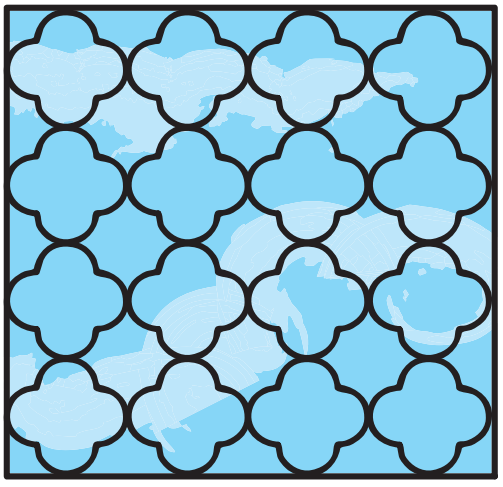
Patterns Around Us

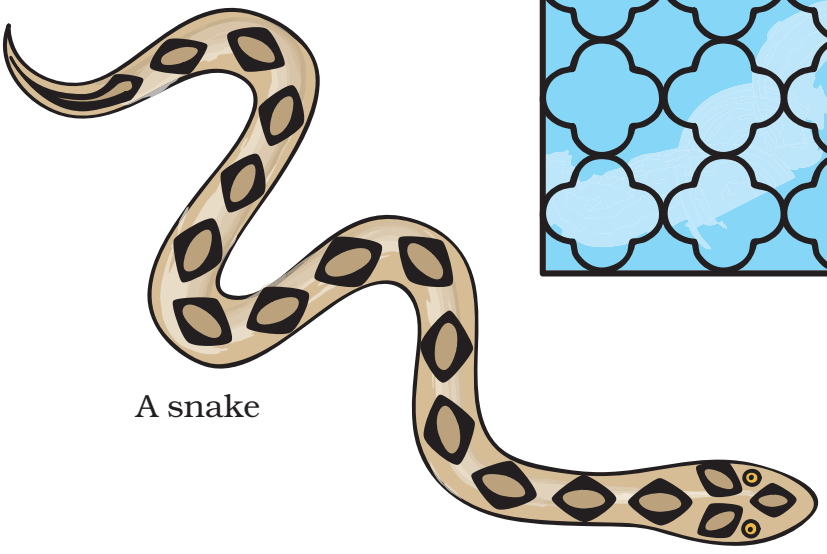
In everyday life, we see many patterns.

For example, we see:

Barbed wire

Grills of a window





A snake

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

Draw some patterns which you have found around yourself.

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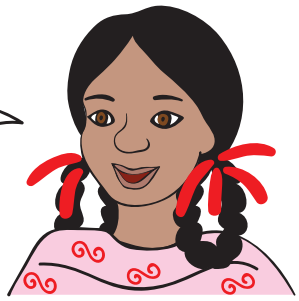
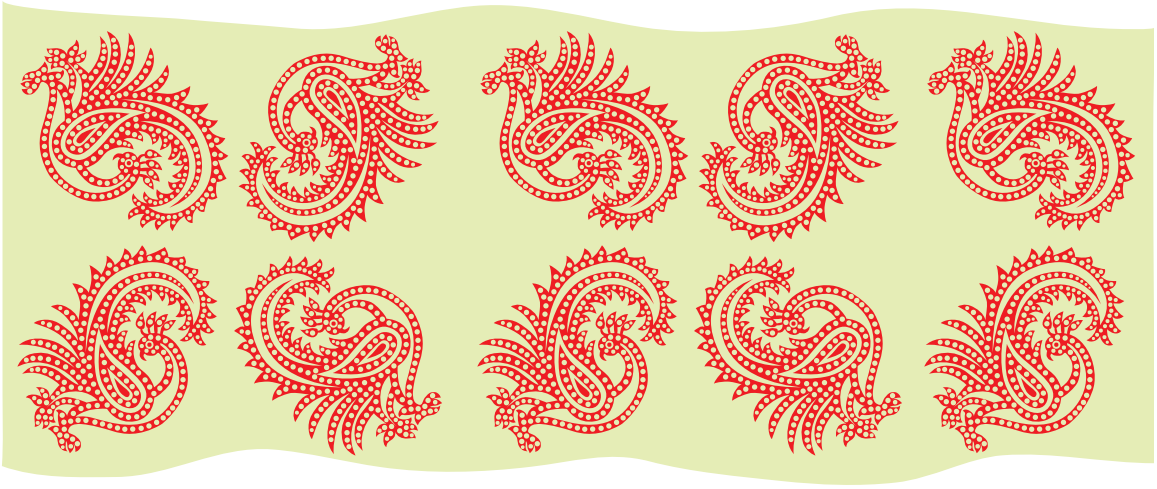
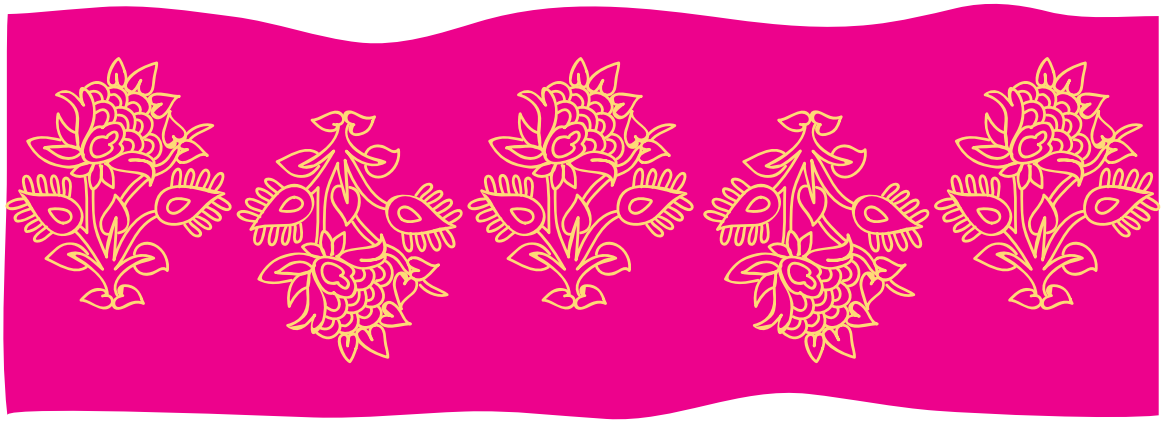
Hello! I am Pallavi. I live in Jaipur. My city is known for clothes with block prints. Have a look at some of the block print designs made by my mother.





She makes these designs by using blocks again and again. One day I got hold of the blocks and made a beautiful design.



You will see that 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?

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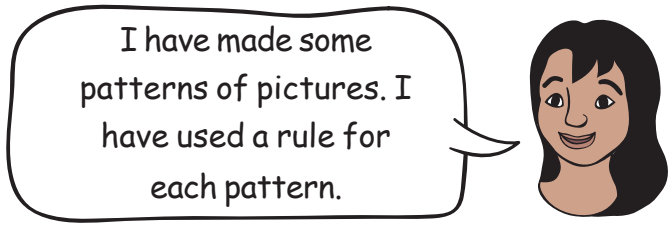
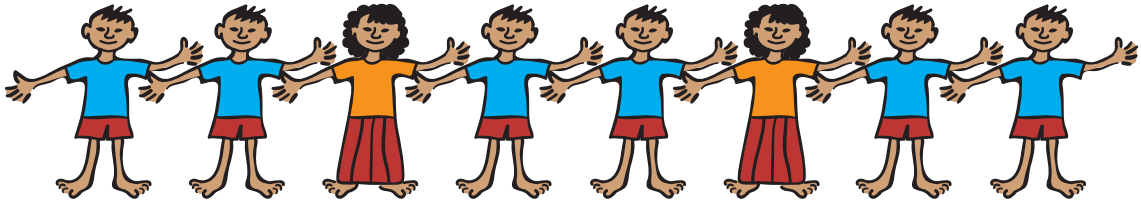
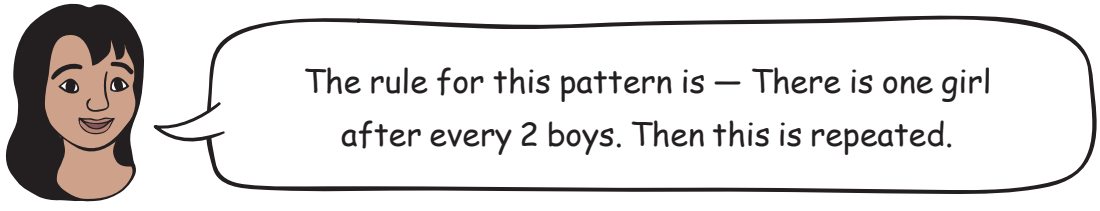
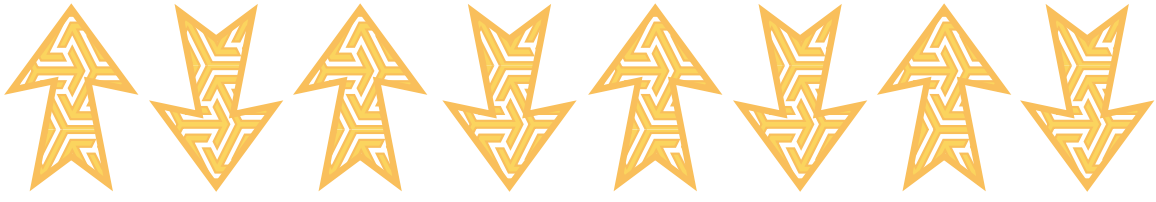
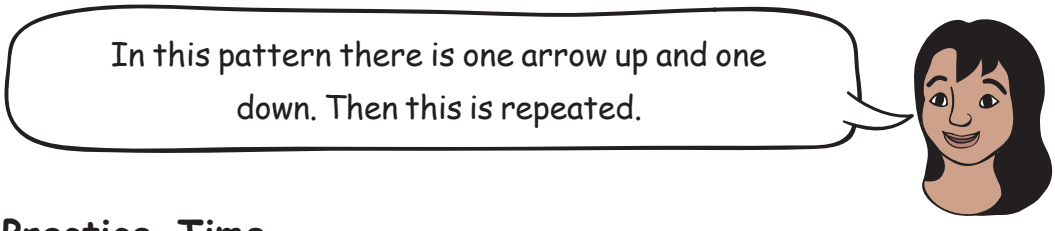
Pictures in a Pattern







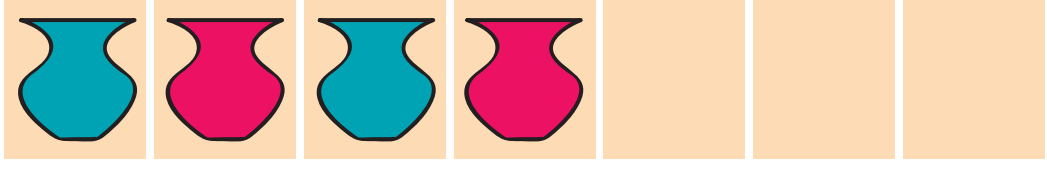




Practice Time

◆ Given below are some patterns.

Figure out the rule for each and continue the pattern.

a) 

b) A A B A A B

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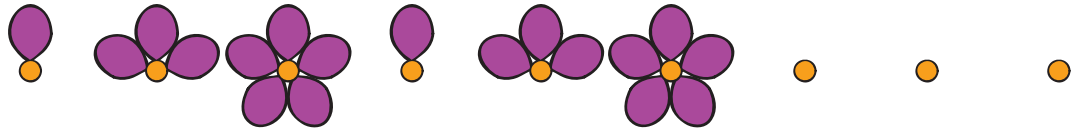
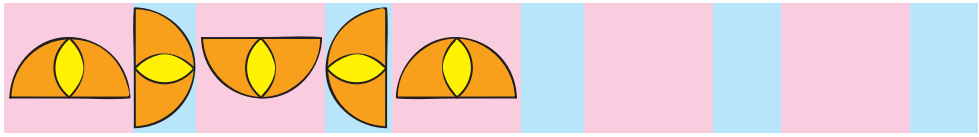
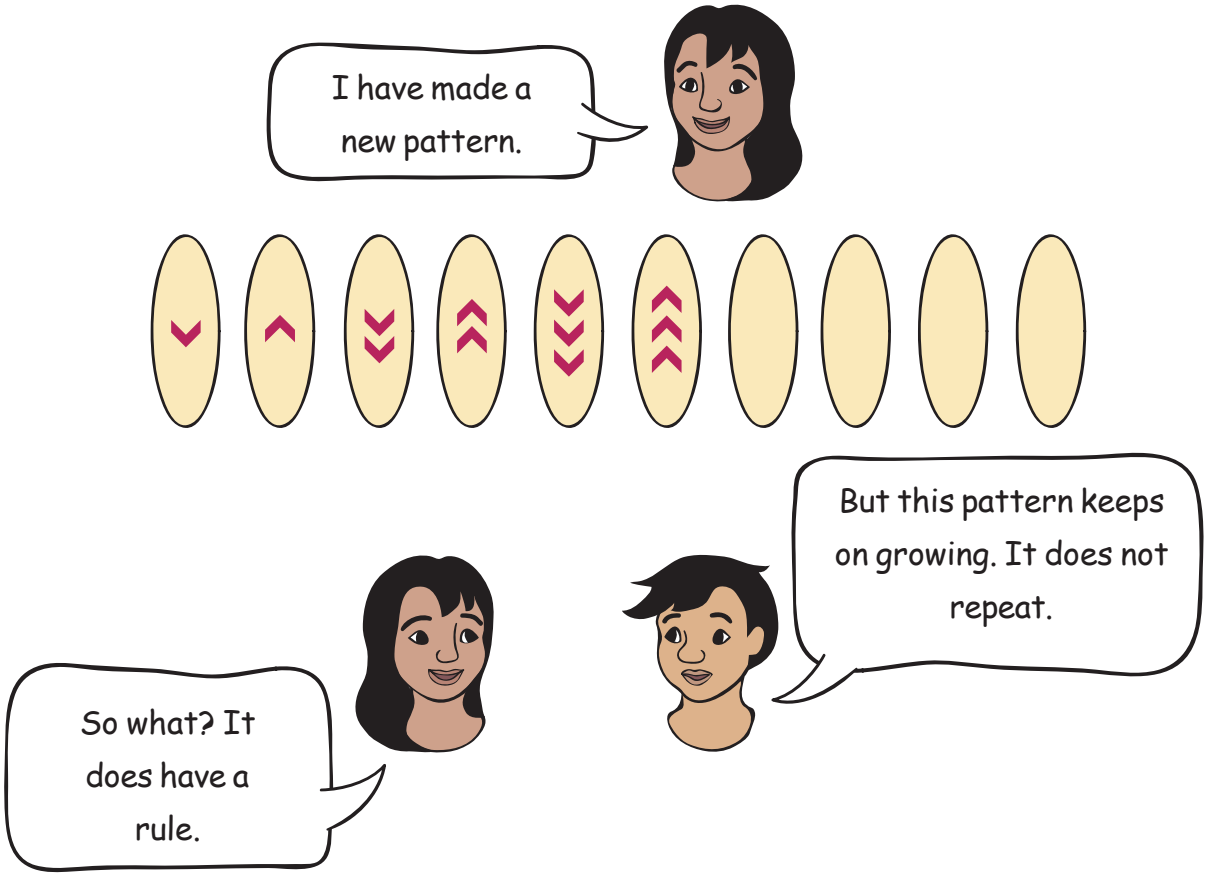
c) 

d)

e) 

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

Growing Patterns



Can you see the rule and continue the pattern?

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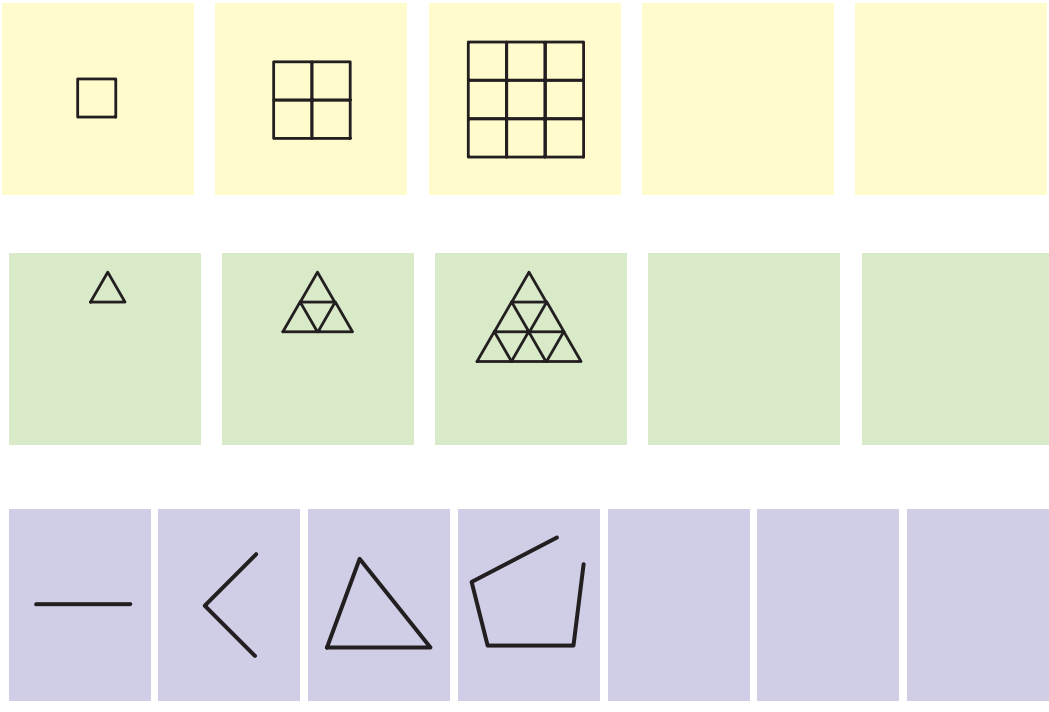
Try these also.



My Own Patterns

◆ Here is your space to make your own patterns:

i)

ii)

iii)

iv)

◆ Ask your friends to continue the patterns made by you.

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Number Patterns

We have made some patterns with pictures. We can make patterns with numbers too. Like 21, 41, 61, 81, 101, ...

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, ...

A. Look for the rules and continue these growing patterns:

a) 51, 56, 61, 66, _____, _____ .....

b) 7, _____, 21, 28, 35, _____, _____ .....

c) 2, 4, 8, 16, 32, _____, _____, _____

d) 12A, 13B, 14C, _____, _____.

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

a) 1, 3, 6, 10, _____, _____, _____, _____, _____

b) 0, 2, 6, 12, _____, _____, _____, _____, _____

c) 1, 3, 7, 13, _____, _____, _____, _____, _____

d) 2, 3, 6, 11, 18, _____, _____, _____, _____, _____

This chapter helps children observe and understand patterns around them. They can be given more examples of repeating or growing patterns to recognise the motif or basic unit which generates the patterns. Making secret messages or codes also helps pattern recognition. As their algebraic thinking develops, they will realise that the pattern created by the rule **boy boy girl** is the same as **A A B** or ↑↑↓. Some interesting and important number patterns that relate to mathematical operations are given.

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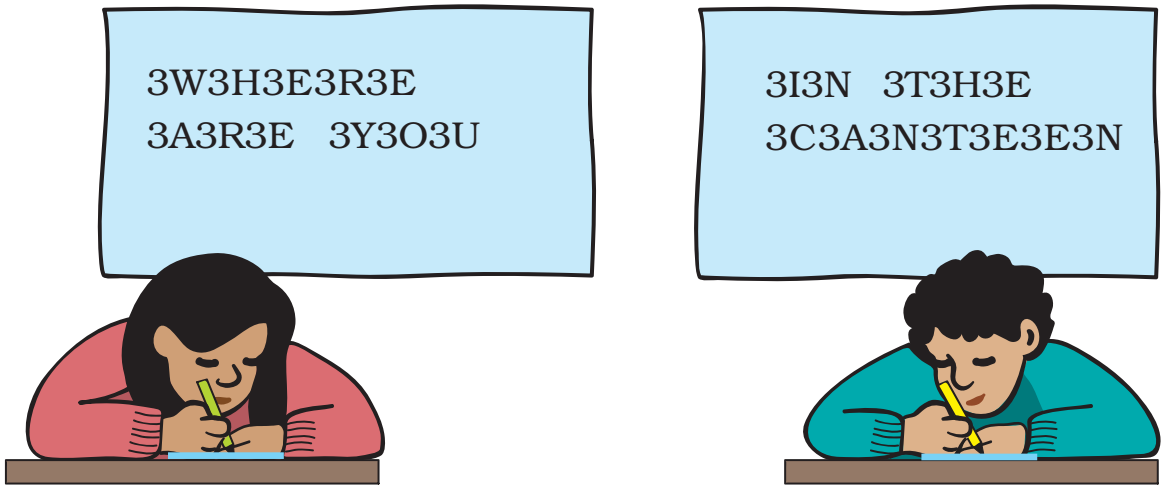
Secret Messages

Amrita and Paritosh are writing secret messages.



Can you tell what they are trying to say?

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

1 I 2 L 3 O 4 V 5 E 6 Y 7 O 8 U

ATBHCIDS EBFOGOHK IIJS KFLUMN

Now you also make your own secret messages.

_____

_____

_____

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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

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

96, 98, _____, 102, _____, _____, _____, _____, _____

How far can you continue this pattern?

These numbers have a special name. They are called **even** numbers.

Do any of these even numbers end with 3 or 5?

What do even numbers end with?

Look at the pattern of numbers in blue. Continue the pattern and fill in the blanks:

99, 101, _____, 105, 107, _____, _____, _____

What do the numbers in blue end with?

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All numbers that end with 1, 3, 5, 7 or 9 are called **odd** numbers.

Write all odd numbers between 400 and 410.

_____

Write all even numbers between 155 and 165.

_____

If we add 1 to any odd number we get an _____ (even/odd) number.

If we add 1 to any even number we get an _____ (even/odd) number.

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

Names in an Order

Adil has to arrange this list so that the names starting with A come first and then come those with B, C, D and so on. Number these names in the order in which they will come.

Sharada ☐ Mahadevan ☐ Tsering ☐ Adil ☐

Gurinder ☐ Baichung ☐ Harsha ☐ Raja ☐

Narayan ☐ Kavita ☐ Warsha ☐ Elvis ☐ Jalaj ☐

Jalaj is proud to have a special name. He says if you read it backwards it is still the same.

Which of the following names have the same pattern? Mark ✓.

Harsh, Anna, Kanak, Munna, Ongbi

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