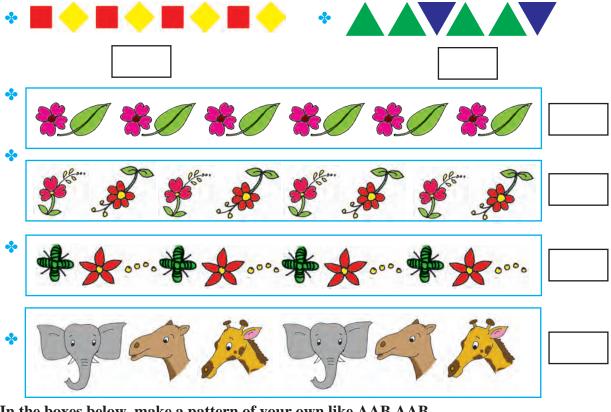
## **Patterns**



Note the pattern in the sequence of letters below.

| A | В | A | В | A | В | A | В | A | В |
|---|---|---|---|---|---|---|---|---|---|
| A | A | В | A | A | В | A | A | В |   |

♦ Look at the patterns below. Which one is like ABAB, which one like AAB AAB and which one like ABC ABC?



**♦** In the boxes below, make a pattern of your own like AAB AAB.



**♦** In the patterns given below, draw the pictures which follow.

\*\*\*\*\*#\*\*\*#.....

\*\*\*\*##\*\*##\*\*##

For teachers: Collect and exhibit the patterns made by the children.



**♦** Spot the pattern and fill in the empty boxes.

| 1                                      | <b>→</b>         | ļ     | <b>←</b>                                 | - 1                        |                   | •                          |  |                       |                   |   |
|--|------------------|-------|--|----------------------------|-------------------|----------------------------|--|-----------------------|-------------------|---|
| <b>(</b>                               |                  |       |  |                            |                   |                            |  |                       |                   |   |
| 11 12 1<br>10 2<br>9 3<br>8 4<br>7 6 5 | 11 12 19 9 8 7 6 | 2)    | 11 12 1<br>10 2<br>1 3 3<br>8 4<br>7 6 5 | 11 12 1<br>10 9<br>8 7 6 5 | 10<br>9<br>8<br>7 | 12 1<br>2<br>3<br>4<br>6 5 | 11 12 1<br>10 2<br>9 3<br>8 4<br>7 6 5 | 11. 1<br>10<br>9<br>8 | 2 i 2 2 3 4 5 5 5 | 11. 12 1<br>10 2<br>9 3<br>8 4<br>7 6 5 |
| A                                      | 1                | 1     | В  | 8                          |                   |                            | <b>O</b>                               |                       |                   |   |
|  |                  |       |  |                            |                   |                            |  |                       |                   |   |
| 1×1=                                   | 1 2×2            | 2=4 3 | <b>×</b> 3= 9                            |                            |                   |                            | 6 <b>×</b> 6=36                        |                       |                   |   |
| 5                                      | 10               | 15    |  |                            | 30                |                            |  |                       |                   |   |
| 2                                      | 9                | 16    |  | 30                         |                   | 44                         |  |                       |                   |   |

**♦** Make a pattern of your own.

**♦** In the pattern given below, each figure has been given a number.



In the pattern above, at which serial numbers are the triangles?

At which serial numbers are the circles?

**♦** In the sequence of figures in the table below, draw the next figure and write the number of marbles.

| The serial number of the figure | 1 | 2  | 3 | 4 | 5 | 6 |
|---------------------------------|---|----|---|---|---|---|
| Arrangement of marbles          | • | 80 |   |   |   |   |
| Number of marbles               | 1 | 3  |   |   |   |   |

There are ..... marbles in the third figure. There are ..... marbles in the fourth figure.

**♦** Can you tell how many marbles there will be in the seventh figure without drawing it ? Write down your answer. Now draw the figure and check your answer.

How many marbles will there be in the tenth figure?

**Tony:** Hey, look what I found in this calendar! Another pattern. If we add these three numbers in a row, we get 27. And the sum of these three numbers in the middle column is 27 too.

**Sonu**: These three numbers, crosswise, also add up to 27!

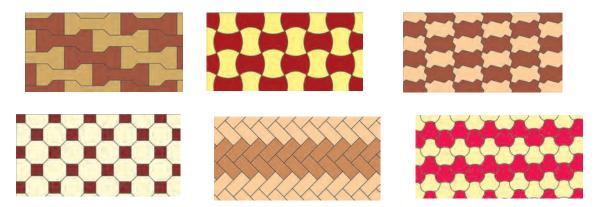
Salma: Look at the 3 numbers in the three rows in the box on the left. In it, the three numbers in the middle column, those in the middle row and the crosswise ones all add up to the same number.

| SUN | MON | TUE | WED | THU | FRI         | SAT |
|-----|-----|-----|-----|-----|-------------|-----|
|     |     |     | 1   | 2   | -3          | 4   |
| 5   | 6   | 7   | 8   | 9   | <b>-1</b> 0 | 11  |
| 12  | 13  | 14  | 15  | 16  | 17          | 18  |
| 19  | 20  | 21  | 22  | 23  | 24          | 25  |
| 26  | 27  | 28  | 29  | 30  | 31          |     |

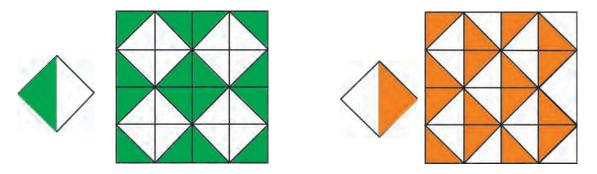
For teachers: Encourage the children to find more patterns in the numbers on one page of the calendar.

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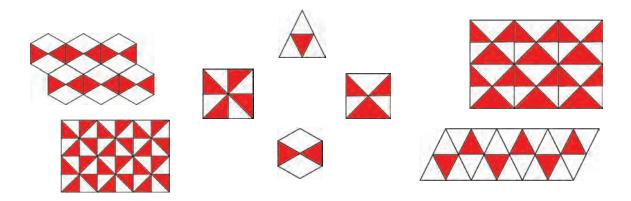
♦ Observe the patterns in the arrangements of tiles shown below. The tiles have been arranged in a particular manner. Note that there is no empty space between any two tiles. In other words, no part of the ground is left uncovered.



**♦** Observe the patterns below, which have been made using tiles of only one kind. Try to make another pattern using the same tiles.



♦ Observe the patterns carefully. Match the tiles and the patterns they make.



For teachers: Tell the children to observe the patterns made from tiles in their surroundings. Discuss their special features. Visit an agricultural field and try to spot a pattern in which the crops have been planted.