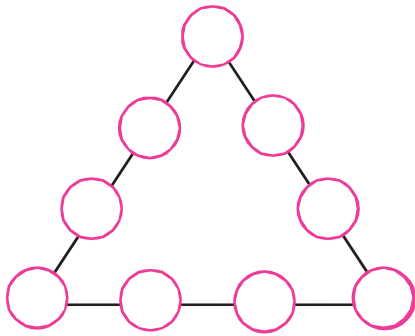


CHAPTER- 21

Pattern and Riddles



(1) Arrange the numbers 1 to 9 in the given cycle in the given triangle, so that the sum of each side is equal to 20. Number should not be repeated.

- (2) 5 pieces of chain were brought to a blacksmith to join. Each piece had 3 rings. Before he started the job, he thought 'How many joints should be opened to make it one'. After thinking he concluded that he would have to open 4 rings. Can we join them by opening less than 4 rings?



- (3) Some goats and hens are there in a room. The total number of them is 7, and total number of their legs are 20. How many hens and goats are there in that room?



- (4) Can we make 30 by using 5 three times -

Let us see -

We have $5 + 5 \times 5 = 30$

First we multiply then we add

$$5 \times 5 = 25$$

$$\begin{array}{r} + 5 \\ \hline 30 \end{array}$$

In the same way -

Solve the following questions -

- (i) Can we get 30 by using 6 three times?
- (ii) Can we get 20 by using 5 three times?
- (iii) Can we get 20 by using 4 three times?
- (5) An Aeroplane flying from City A to City B, takes 1 hour and 20 minutes, but comes back in 80 minutes, why it is this so?
- (6) Find out the missing numbers -

$$\begin{array}{r} 4 \quad 1 \quad \square \\ \times \quad \square \quad 1 \\ \hline \square \quad 1 \quad 5 \\ + 8 \quad 3 \quad \square \quad \times \\ \hline \square \quad \square \quad 1 \quad \square \end{array}$$

$$\begin{array}{r} \square \quad \square \quad 5 \\ \times \quad 1 \quad 4 \\ \hline 1 \quad 3 \quad \square \quad \square \\ + \square \quad \square \quad 0 \quad \times \\ \hline 4 \quad 6 \quad 0 \quad 0 \end{array}$$

Let us solve some puzzles-

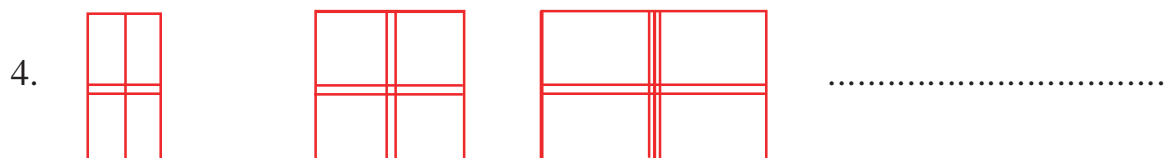
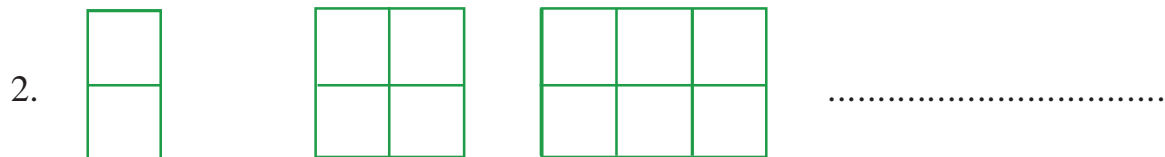
1. The distance from Raju's house to the tap is 9 steps. He takes 2 steps forward and 1 step backward. How many steps would he take to reach the tap.
2. I am a two digit number and a multiple of 6. On reversing the digit I become a single digit odd number. Who am I?
3. The players have made two teams. The first team says if one of your team member joins us, we both will have equal number of players. The second team says if one of you joins us, we will have twice the number of player of your team. How many players are there in each team?

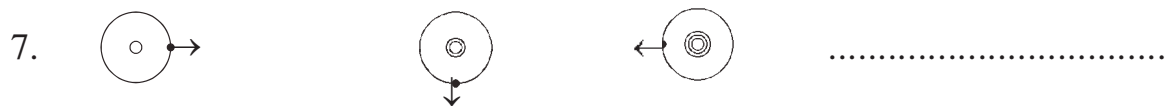
Maths - 5

4. Use 2 three times to get 24.
5. Use 3 four times to get 24.
6. The sum of Ram's age and his daughter's age is 31 years. Ram is 30 years older than his daughter. What are their ages?
7. A boatsman has to take a fox, a duck and some corn across a river in a boat. But the boat at one time can carry only the boatman and one of the remaining three. How will he get them across taking care that the fox does not eat the duck and the duck does not eat the corn.

Pattern 1 :

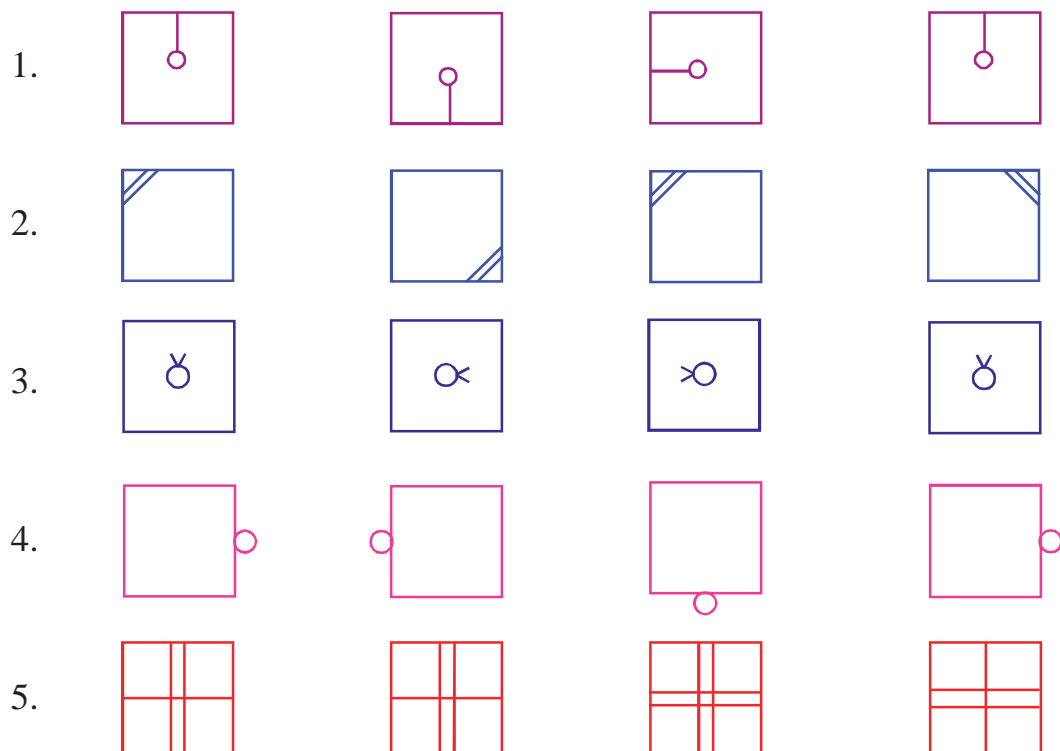
What will come next in the given pattern? Observe, understand and make:





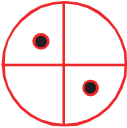
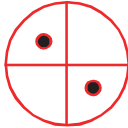

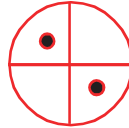








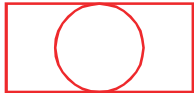
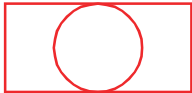

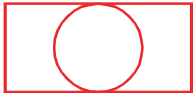
Pattern 2 :

Identify the figure similar to the first from the remaining 3 and make a (✓)



Pattern 3 :

Look at the patterns carefully and identify the one which is different. Mark it with (✓).

1.				
2.				
3.				
4.				
5.	