

## 4.8 Forming Two Digit Numbers Using the Given Digits

We form two digit numbers using digits, 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. There are two cases : They are —

- (1) Without repeating the digits. (2) With the digits repeating.

**Example 1 :** Form two digit numbers using the digits 2 and 3.

**Answer :**

**Case (1) :** Without repeating the digits. The numbers are 23 and 32.

**Case (2) :** With the digits repeating. The numbers are 22 and 33.

**Example 2 :** Form two digit numbers using the digits 4, 5 and 6.

**Answer :**

**Case (1) :** Without the digits repeating. The numbers are : 45, 46, 54, 56 and 64.

**Case (2) :** With the digits repeating. The numbers are 44, 55 and 66.

**Example 3 :** Form two digit numbers using the digit 0, 1 and 2.

When we form two digit numbers, we have to place digit 0 at the ones place only. If we place 0 at tens place, the number will become a one digit number. e.g. 02, 01.

**Case (1) :** Without the digits repeating. The two digit numbers are : 10, 12, 21 and 20.

**Case (2) :** With the digits repeating. The two digit numbers are : 11 and 22.

### Exercise

1. Form two digits numbers using the digits given below :

(a) 1, 3  $\{13, 31\}$  (b) 6, 7  $\{67, 76\}$  (c) 8, 9  $\{89, 98\}$

(d) 1, 2, 3  $\{12, 21, 23, 32\}$  (e) 5, 6, 7  $\{56, 65, 67, 76\}$  (f) 6, 7, 8  $\{67, 76, 78, 87\}$

2. Find the greatest and smallest number formed by the digits :

(a) 4, 5  $\left\{ \begin{array}{l} \text{Greatest} - 54 \\ \text{Smallest} - 45 \end{array} \right\}$  (b) 3, 4, 5  $\left\{ \begin{array}{l} \text{G} - 543 \\ \text{S} - 345 \end{array} \right\}$  (c) 1, 2, 3  $\left\{ \begin{array}{l} \text{G} - 321 \\ \text{S} - 123 \end{array} \right\}$

(d) 5, 6, 7  $\left\{ \begin{array}{l} \text{Greatest} - 765 \\ \text{Smallest} - 567 \end{array} \right\}$  (e) 7, 8, 9  $\left\{ \begin{array}{l} \text{G} - 987 \\ \text{S} - 789 \end{array} \right\}$  (f) 3, 0, 5  $\left\{ \begin{array}{l} \text{G} - 503 \\ \text{S} - 035 \end{array} \right\}$