Forming Numbers

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Example 1:

Form a smallest and greatest 4 digit number

7, 5, 2, 4

Solution:

Arrange the numbers in increasing order

2, 4, 5, 7

The smallest number is 2457

Arrange the numbers in decreasing order

7, 5, 4, 2

The greatest number is 7542

Example 2:

Form a smallest and greatest 4 digit number

1, 8, 6, 0

Solution:

Arrange the numbers in increasing order

0, 1, 6, 8

If 0 comes first, that number will become a 3 digit number. So interchange 0 and 1.

The smallest number is 1068

Arrange the numbers in decreasing order

8, 6, 1, 0

The greatest number is 8610.

Example 3:

Form 4 digit numbers using these numbers

3, 9, 6, 1

Solution:

Make numbers using 3 as thousand

3 9 6 1

3 9 1 6

3 6 1 9

3 6 9 1

3 1 6 9

3 1 9 6

Make numbers using 9 as thousand

9 6 3 1

9 6 1 3

9 3 1 6

9 3 6 1

9 1 6 3

9 1 3 6

Make numbers using 6 as thousand

6 9 3 1

6 9 1 3

6 3 1 9

6 3 9 1

6 1 3 9

6 1 9 3

Make numbers using 1 as thousand

1 9 3 6

1 9 6 3

1 6 1 6

1 6 6 1

1 3 6 3

1 3 3 6

Example 4:

Form a smallest and greatest 3 digit number

6, 9, 1, 7

Solution:

Arrange the numbers in increasing order

1, 6, 7, 9

The smallest number is 167

Arrange the numbers in decreasing order

9, 7, 6, 1

The greatest number is 976

Example 5:

Form a smallest and greatest 3 digit number

5, 3, 6, 2

Solution:

Arrange the numbers in increasing order

2, 3, 5, 6

The smallest number is 235

Arrange the numbers in decreasing order

6, 5, 3, 2

The greatest number is 653