1)

```
class Q1{
    public static void main(String[] args){
        int[] array = {10,20,30,40,50,60,70,80,90};

        for(int i=0; i<array.length; i++)
        {
            System.out.print(array[i]+" ");
        }
    }
}
```

2)

```
class Q2{
    public static void main(String[] args){
        int[] array1 = {10,20,30,40,50,60,70,80,90};
        int[] array2 = {10,20,30,40,50,70,80,90};

        if (array1.length == array2.length)
        {
            System.out.println("Two arrays are equal.");
        }
        else
        {
            System.out.println("Two arrays are not equal.");
        }
    }
}
```

3)

```
class Q3{
    public static void main(String[] args){

        int[] array = {1,2,3,4,5,6,7,8,9};

        int x = 7;

        for (int i=0; i<array.length; i++)
        {
            for (int j=i+1; j<array.length; i++)
            {
                if (array[i]+array[j] == x)
                {
                    System.out.println("( " + array[i] +" , " +
array[j] + " )");
                }

            }
        }

    }
```

```
}
```

4)

```
class Q4{
    public static void main(String[] args){
        int[] array = {10,20,30,40,50,60,70,80,90};

        for(int i=array.length - 1;i>=0; i--)
        {
            System.out.print(" " + array[i]);
        }
    }
}
```

5)

```
class Q5{
    public static void main(String[] args){

        int[] array = {1,2,3,4,5,6,7,8,9};
        int largest = array[0];
        int smallest = array[0];

        for (int i = 1; i < array.length; i++) {
            if (array[i] < smallest) {
                smallest = array[i];
            }
            if (array[i] > largest) {
                largest = array[i];
            }
        }

        System.out.println("Largest Number: " + largest);
        System.out.println("Smallest Number: " + smallest);

    }
}
```

6)

```
class Q6{
    public static void main(String[] args){

        int[] array = { 24,54,31,16,82,45,67};
        int largest = array[0];
        int secondLargest = array[0];
        int thirdLargest = array[0];

        for (int i = 1; i < array.length; i++) {
            if (array[i] > largest) {
                thirdLargest = secondLargest;
                secondLargest = largest;
```

```
                largest = array[i];
            }
            else if (array[i] > secondLargest && array[i] !=
largest) {
                thirdLargest = secondLargest;
                secondLargest = array[i];
            }
            else if (array[i] > thirdLargest && array[i] != largest
&& array[i] != secondLargest) {
                thirdLargest = array[i];
            }
        }

        System.out.println(thirdLargest + " (" + largest + " and " +
secondLargest + " are largest and second-largest number)");

    }
}


7)
class Q7{
    public static void main(String[] args){

        int[] array1 = {23,60,94,3,102};
        int[] array2 = {42,16,74};

        for(int i=0; i<array1.length; i++)
        {
             System.out.print(array1[i] + " ");
            for (int j=i; j<array2.length; j++)
            {
                System.out.print(array2[j] + " ");
                break;
            }

        }

    }
}


8)
class Q8 {
    public static void main(String[] args) {
        int[] array = {5, 14, 35, 89, 140};

        if (array.length < 3)
        {
            System.out.println("No output (array has fewer than 3
integers)");
            return;
        }
        else
```

```
        {
            System.out.print("[ ");
            for (int i = 0; i <= array.length - 3; i++)
            {
                int average = (array[i] + array[i + 1] + array[i +
2]) / 3;
                System.out.print(average);
                if (i < array.length - 3) {
                    System.out.print(", ");
                }
            }
            System.out.print(" ]");
        }
    }
}
```

9)

```
class Q9 {
    public static void main(String[] args) {

    int n = 6;

       for (int i = 1; i <= n; i++)
       {
            int result;
            if (i % 2 == 0)
            {
                result = i * i;
            }
            else
            {
                result = i * i * i;
            }
            System.out.print(result + " ");
       }

    }
}
```

10)

```
class Q10 {
    public static void main(String[] args) {
        int[] array1 = {5, 14, 35, 90, 139};
        int[] array2 = {88, 67, 35, 14, -12};
        int[] array3 = {65, 14, 129, 34, 7};

        checkOrder(array1);
        checkOrder(array2);
        checkOrder(array3);
    }
```

```
    public static void checkOrder(int[] array) {
        if (isAscending(array))
        {
            System.out.println("Ascending Order");
        }
        else if (isDescending(array))
        {
            System.out.println("Descending Order");
        }
        else
        {
            System.out.println("Random Order");
        }
    }

    public static boolean isAscending(int[] array)
    {
        for (int i = 0; i < array.length - 1; i++)
        {
            if (array[i] > array[i + 1])
            {
                return false;
            }
        }
        return true;
    }

    public static boolean isDescending(int[] array)
    {
        for (int i = 0; i < array.length - 1; i++)
        {
            if (array[i] < array[i + 1])
            {
                return false;
            }
        }
        return true;
    }
}
```