```java
public class Divisors {
    public static void main (String[] args) {
        int x = Integer.parseInt(args[0]);

        System.out.println(1);
        for (int i = 2; i <= x / 2; i++) {
            if (x % i == 0) {
                System.out.println(i);
            }
        }
        System.out.println(x);
    }
}
```

```java
public class Reverse {
    public static void main (String[] args){
        String str = args[0];

        String reversedStr = "";
        for (int i = str.length() - 1; i >= 0; i--) {
            reversedStr += str.charAt(i);
        }
        System.out.println(reversedStr);

        char middleCharOfStr = str.charAt((str.length() - 1) / 2);
        System.out.println("The middle character is " + middleCharOfStr);
    }
}
```

```java
public class InOrder {
    public static void main (String[] args) {
        int randomInt = (int) (Math.random() * 10);
        int lastRandomInt;

        do {
            System.out.println(randomInt);
            lastRandomInt = randomInt;
            randomInt = (int) (Math.random() * 10);
        } while (randomInt >= lastRandomInt);
    }
}
```

```java
public class Perfect {
    public static void main (String[] args) {
        int number = Integer.parseInt(args[0]);

        int divisorsSum = 1;
        String outputIfPerfect = number + " is a perfect number since " +
                                 number + " = 1";
        for (int i = 2; i <= number / 2; i++) {
            if (number % i == 0) {
                divisorsSum += i;
                outputIfPerfect += " + " + i;
            }
        }

        if (number == divisorsSum && number != 1) {
            System.out.println(outputIfPerfect);
        }
        else {
            System.out.println(number + " is not a perfect number");
        }
    }
}
```

```java
public class DamkaBoard {
    public static void main(String[] args) {
        int n = Integer.parseInt(args[0]);

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

```java
public class OneOfEach {
    public static void main (String[] args) {
        boolean boyBorn = false;
        boolean girlBorn = false;
        int childrenCount = 0;
        String birthLog = "";

        while (!(boyBorn && girlBorn)) {
            childrenCount++;
            double randomNum = Math.random();

            if (randomNum < 0.5) {
                boyBorn = true;
                birthLog += "b ";
            }
            else {
                girlBorn = true;
                birthLog += "g ";
            }
        }

        System.out.println(birthLog);
        System.out.println("You made it... and you now have " +
                           childrenCount + " children.");
    }
}
```

```java
public class OneOfEachStats1 {
    public static void main (String[] args) {
        int T = Integer.parseInt(args[0]);
        int totalSumOfChildren = 0;
        int count2Children = 0;
        int count3Children = 0;
        int count4OrMoreChildren = 0;
        int mode;

        for (int t = 0; t < T; t++) {
            int childrenCount = 0;
            boolean boyBorn = false;
            boolean girlBorn = false;

            while (!(boyBorn && girlBorn)) {
                childrenCount++;
                double randomNum = Math.random();

                if (randomNum < 0.5) {
                    boyBorn = true;
                }
                else {
                    girlBorn = true;
                }
            }

            totalSumOfChildren += childrenCount;

            if (childrenCount == 2) {
                count2Children++;
            }
            else if (childrenCount == 3) {
                count3Children++;
            }
            else {
                count4OrMoreChildren++;
            }
        }

        double averageChildren = (double) totalSumOfChildren / T;
```

```
        if (Math.max(Math.max(count2Children, count3Children),
            count4OrMoreChildren) == count2Children) {
            mode = 2;
        }
        else if (Math.max(count3Children, count4OrMoreChildren) ==
                 count3Children) {
            mode = 3;
        }
        else {
            mode = 4;
        }

        System.out.println("Average: " + averageChildren +
                           " children to get at least one of each gender.");
        System.out.println("Number of families with 2 children: " +
                           count2Children);
        System.out.println("Number of families with 3 children: " +
                           count3Children);
        System.out.println("Number of families with 4 or more children: " +
                           count4OrMoreChildren);
        System.out.println("The most common number of children is " +
                           mode + ".");
    }
}
```

```java
public class OneOfEachStats {
    public static void main (String[] args) {
        int T = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        Random generator = new Random(seed);

        int totalSumOfChildren = 0;
        int count2Children = 0;
        int count3Children = 0;
        int count4OrMoreChildren = 0;
        int mode;

        for (int t = 0; t < T; t++) {
            int childrenCount = 0;
            boolean boyBorn = false;
            boolean girlBorn = false;

            while (!(boyBorn && girlBorn)) {
                childrenCount++;
                double randomNum = generator.nextDouble();

                if (randomNum < 0.5) {
                    boyBorn = true;
                }
                else {
                    girlBorn = true;
                }
            }

            totalSumOfChildren += childrenCount;

            if (childrenCount == 2) {
                count2Children++;
            }
            else if (childrenCount == 3) {
                count3Children++;
            }
            else {
                count4OrMoreChildren++;
            }
        }

        double averageChildren = (double) totalSumOfChildren / T;
```

```
        if (Math.max(Math.max(count2Children, count3Children),
            count4OrMoreChildren) == count2Children) {
            mode = 2;
        }
        else if (Math.max(count3Children, count4OrMoreChildren) ==
                 count3Children) {
            mode = 3;
        }
        else {
            mode = 4;
        }

        System.out.println("Average: " + averageChildren +
                           " children to get at least one of each gender.");
        System.out.println("Number of families with 2 children: " +
                           count2Children);
        System.out.println("Number of families with 3 children: " +
                           count3Children);
        System.out.println("Number of families with 4 or more children: " +
                           count4OrMoreChildren);
        System.out.println("The most common number of children is " +
                           mode + ".");
    }
}
```