```java
public class Divisors {
     public static void main (String[] args) {
          //// Put your code here
          int input = Integer.parseInt(args[0]);
          int divisor = input;

          int i = 0;
          while ((i <= input) && (divisor != 0)){
               int k = input % divisor;
               if (k == 0){
                    System.out.println(input / divisor);
               }
               divisor = divisor - 1;
               i++;
          }
     }
}
```

```java
public class Reverse {
     public static void main (String[] args){
          //// Put your code here
          String str = args[0];
          int strLength = str.length() - 1;
          int location = strLength;

          for (int i = 0; i <= strLength ; i++ ){
               System.out.print(str.charAt(location));
               location--;
          }
          char midChar = str.charAt(strLength / 2);
          System.out.println();
          System.out.println("The middle character is " + midChar);
     }
}
```

```java
public class InOrder {
     public static void main (String[] args) {
          //// Write your code here
         int numGen1 = (int) (Math.random ()*10);
         System.out.print(numGen1);

         int i = 0;
         do{
            int numGen2 = (int) (Math.random ()*10);
            if (numGen2 >= numGen1){
                   System.out.print(" " + numGen2);
                    numGen1 = numGen2;
            } else{
                i++;
            }
          } while(i == 0);
     }
}
```

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

          int input = Integer.parseInt(args[0]);
          int divisor = input - 1;
          int i = 0;
          int sum = 1;
          String str = input + " is a perfect number since " + input + " = 1";

          while ((i <= input) && (divisor > 1)){
               int kInt = input % divisor;
               int div = input / divisor;
               if (kInt == 0){
                str += " + " + div;
                sum += div;
               }
               divisor = divisor - 1;
               i++;
          }

          if (sum == input){
           System.out.println(str);
          } else {
           System.out.println(input + " is not a perfect number");
          }
     }
}
```

```java
public class DamkaBoard {
     public static void main(String[] args) {
          //// Put your code here
        int input = Integer.parseInt(args[0]);
        int i = 0;
        while (i < input) {

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

```java
public class OneOfEach {
     public static void main (String[] args) {
          //// Put your code here
          String gender = "";
          int sum = 0;
          int girls = 0;
          int boys = 0;

          int i = 0;
          while (i == 0){
               int odds  = (int) (Math.random ()*2);
               if (odds == 0){
                    gender += "g ";
                    girls ++;
               } else{
                    gender += "b ";
                    boys ++;
               }
               sum ++;
               if ((girls > 0) && (boys > 0)){
                    i++;
               }
          }
          System.out.println(gender);
          System.out.println("You made it... and you now have " + sum + "
children.");
     }
}
```

```java
public class OneOfEachStats1 {
    public static void main (String[] args) {
        //// Put your code here
        int input = Integer.parseInt(args[0]);
        int child2 = 0;
        int child3 = 0;
        int child4 = 0;
        double totalSum = 0;

        for (int t = 0; t < input; t++){

            int sum = 0;
            int girls = 0;
            int boys = 0;

            int i = 0;
            while (i == 0){
                double odds = (Math.random());
                if (odds >= 0.5){
                    girls ++;
                } else{
                    boys ++;
                }
                sum ++;
                if ((girls > 0) && (boys > 0)){

                    if (sum == 2){
                        child2++;
                    }
                    if (sum == 3){
                        child3++;
                    }
                    if (sum >= 4){
                        child4++;
                    }
                    totalSum += sum;
                    i++;
                 }
             }
        }
        double avrg = (totalSum / input);
        int common = Math.max(Math.max(child2, child3), Math.max(child3,
child4));

        System.out.println("Average: " + avrg +" children to get at least one
of each gender.");
        System.out.println("Number of families with 2 children: " + child2);
        System.out.println("Number of families with 3 children: " + child3);
        System.out.println("Number of families with 4 or more children: " +
child4);

        if (common == child2){
            System.out.println("The most common number of children is 2.");
```

```
          } else {
               if (common ==child3){
                   System.out.println("The most common number of children is
3.");
               } else {
                    System.out.println("The most common number of children is 4
or more.");
               }
          }
     }
}
```

```java
import java.util.Random;

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

          int input = Integer.parseInt(args[0]);
          int seed = Integer.parseInt(args[1]);
          Random generator = new Random(seed);

          int child2 = 0;
          int child3 = 0;
          int child4 = 0;
          double totalSum = 0;

          for (int t = 0; t < input; t++){
              int sum = 0;
              int girls = 0;
              int boys = 0;

              int i = 0;
              while (i == 0){
                   double odds = generator.nextDouble();
                   if (odds >= 0.5){
                        girls ++;
                   } else{
                        boys ++;
                   }
                   sum ++;

                   if ((girls > 0) && (boys > 0)){

                        if (sum == 2){
                             child2++;
                        }
                        if (sum == 3){
                             child3++;
                        }
                        if (sum >= 4){
                             child4++;
                        }
                        totalSum += sum;
                        i++;
                    }
               }
          }
          double avrg = (totalSum / input);
          int common = Math.max(Math.max(child2, child3), Math.max(child3,
child4));

          System.out.println("Average: " + avrg +" children to get at least one
of each gender.");
          System.out.println("Number of families with 2 children: " + child2);
          System.out.println("Number of families with 3 children: " + child3);
```

```
          System.out.println("Number of families with 4 or more children: " +
child4);

          if (common == child2){
               System.out.println("The most common number of children is 2.");
          } else {
               if (common ==child3){
                   System.out.println("The most common number of children is
3.");
               } else {
                    System.out.println("The most common number of children is 4
or more.");
               }
          }
     }
}
```