

```
public class Divisors {  
    public static void main(String[] args) {  
  
        int num1 = Integer.parseInt (args[0]);  
        int i = 1;  
        while (i <= num1){  
            if ((num1 % i) == 0){  
                System.out.println(i);  
  
                }  
            i++;  
  
        }  
  
    }  
}
```

```
public class Reverse {
    public static void main(String[] args) {
        String str = args[0];
        for (int i = 0; i < str.length(); i++){

            System.out.print(str.charAt(str.length() - i -1));
        }
        System.out.println();

        if ( str.length() % 2 != 0){
            System.out.println("The middle character is " +
str.charAt((str.length() - 1 ) / 2));

        }else {
            System.out.println("The middle character is " +
str.charAt(((str.length() ) / 2)-1));//

        }

    }
}
```

```
public class InOrder {  
    public static void main(String[] args) {  
        int num = (int)(Math.random()*10);  
        int temp = num;  
  
        System.out.print(num + " ");  
        do{  
            temp = num;  
            num = (int)(Math.random()*10);  
            if (temp <= num){  
                System.out.print(num + " ");  
            }  
        }while (temp <= num);  
  
    }  
}
```

```
public class Perfect {  
    public static void main(String[] args) {  
        int num = Integer.parseInt(args[0]);  
        int sum = 1;  
        String str = num + " is a perfect number since " + num + " = 1";  
  
        for (int i = 2; i < num; i++){  
            if (num % i == 0){  
                sum += i;  
                str += " + " + i ;  
            }  
        }  
  
        if (num == sum){  
            System.out.print(str);  
  
        }else {  
            System.out.print(num + " is not a perfect number");  
  
        }  
  
    }  
}
```

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

```

import java.util.Random;
public class OneOfEachStats {
public static void main(String[] args) {
    int T = Integer.parseInt(args[0]);
    int seed = Integer.parseInt(args[1]);
    Random rnd = new Random(seed);
    int family2 = 0;
    int family3 = 0;
    int family4More = 0;
    String str = "";
    double p = 0;
    int count = 1;
    double sum = 0;

    for (int i = 0; i < T; i++){

        str = "";
        count = 1;
        p = rnd.nextDouble();

        if (p < 0.5){

            while ( p < 0.5 ){
                p = rnd.nextDouble();
                count++;
                str += "b ";
            }
        }else{

            while ( p >= 0.5 ){
                p = rnd.nextDouble();
                count++;
                str += "g ";
            }
        }
        if ((str.charAt(str.length()-2) == 'g')){
            str += "b";
        }else {
            str += "g";
        }

        sum += count;
        if (count == 2) {
            family2++;

```

```

        } else if (count == 3) {
            family3++;
        } else if (count >= 4) {
            family4More++;
        }
    }

    double Average = sum/T;

    System.out.println("Average: " + Average + " children to get at least one
of each gender.");
    System.out.println("Number of families with 2 children: " + family2 );
    System.out.println("Number of families with 3 children: " + family3 );
    System.out.println("Number of families with 4 or more children: " +
family4More );
    if (family2 > family3 && family2 > family4More ){
        System.out.println("The most common number of children is 2.");

    }else if (family3 > family2 && family3 > family4More ){
        System.out.println("The most common number of children is 3.");

    }else if (family2 >= family3 || family2 >= family4More ){
        System.out.println("The most common number of children is 2.");

    }else if (family3 >= family4More){
        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.");
    }

}

}
}

```