

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

```

public class Reverse {
    public static void main (String args[]){
        String word = args[0];
        int i=word.length()-1;
        String newWord = "";
        char middleWord;

        while((i>=0)){
            newWord += word.charAt(i);
            i--;

        }
        if(word.length()%2==0){
            middleWord = word.charAt(word.length()/2-1);
        }
        else{
            middleWord = word.charAt(word.length()/2);
        }
        System.out.println(newWord);
        System.out.println("The middle character is "+middleWord);
    }
}

```

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

```

public class DamkaBoard {

    public static void main (String args[]){

        int n=Integer.parseInt(args[0]);

        for(int i=0; i<n; i++){
            if (i%2>0) {
                System.out.print(" ");
            }
            for (int j=0; j<n; j++){
                if(j==n-1 && i%2>0){
                    System.out.print("X");
                }
                else{
                    System.out.print("X ");
                }
            }
            System.out.println();
        }

    }
}

```

```

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

        int num = Integer.parseInt(args[0]);
        int i = 2;
        int sum = 1;
        String str = num + " is a perfect number since "+ num + " = 1";
        while (i<num){
            if (num%i==0){
                sum = sum+i;
                str = str+ " + "+i;

            }
            i++;
        }

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

```

```

public class OneOfEachStats {
    public static void main(String args[]) {
        // Gets the two command-line arguments
        int T = Integer.parseInt(args[0]);
        int Seed = Integer.parseInt(args[1]);

        // Initailizes a random numbers generator with the given seed value
        Random generator = new Random(Seed);

        int g = 0;
        int b = 0;
        double x;
        double avg = 0;
        int sum2 = 0;
        int sum3 = 0;
        int sum4 = 0;

        for(int i=0; i<T; i++){
            while(b==0 || g==0){
                x = generator.nextDouble();
                if (x>0.5) {
                    b = b + 1;
                }
                else {
                    g = g + 1;
                }
            }

            int sum = b + g;
            avg = avg + sum;

            if (sum == 2){
                sum2++;
            }
            else if (sum == 3){
                sum3++;
            }
            else{
                sum4++;
            }

            b=0;
            g=0;
        }

        avg = avg / T;
        System.out.println("Average: " + avg + " children to get at least one of
each gender.");
        System.out.println("Number of families with 2 children: " + sum2);
        System.out.println("Number of families with 3 children: " + sum3);
    }
}

```

```
        System.out.println("Number of families with 4 or more children: " +
sum4);
        if (sum2>sum3 && sum2>sum4) {
            System.out.println("The most common number of children is 2.");
        }
        else if (sum3>sum2 && sum3>sum4){
            System.out.println("The most common number of children is 3.");
        }
        else{
            System.out.println("The most common number of children is 4.");
        }

    }

}
```