Divisors

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

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

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

Reverse

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

                String a = (args[0]);

                int n = a.length();

                for (int i = n - 1; i >= 0; i --) {
                        System.out.print( a.charAt(i));

                }

                int Middle = (n / 2);

                System.out.println();

                if ((n % 2) == 0 ) {
                        System.out.println("The middle character is " +
a.charAt(Middle -1));

                } else {

                System.out.println("The middle character is " +
a.charAt(Middle));

            }
    }
}
```

InOrder

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

	int randomNumber = 0;
	int randomNumber1 = -1;
	int n = 1;

	while ( n == 1 ){
		randomNumber = (int)(Math.random() * 10);

			if (randomNumber >= randomNumber1){
			System.out.print(randomNumber + " ");
			 randomNumber1 =  randomNumber;
			} else {
				n = 2;
			}

	}
	}
}
```

DamkaBoard

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

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

    for (int i = 1; i <= a; i ++){
       for (int j = 1; j <= a; j ++){

                if((i % 2) == 1){
                   System.out.print("* ");
           } else {
                   System.out.print(" *");
       }

     }
           System.out.println();
           }
   }
}
```

Perfect

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

		int a = Integer.parseInt(args[0]);
		String answer = ( a + " is a perfect number since " + a + " = 1");
		int sum = 1;

		for(int i = 2; i < a; i++ ){
			if( (a % i) == 0 ){

			answer = answer + " + " + i;
			sum = sum + i;

			}

		}

		if (((sum != 1) && ((sum / a) == 1)) || ( sum == 1 )){
			System.out.println(answer);
		} else {
			System.out.println(a + " is not a perfect number");
		}

	}
}
```

OneOfEachStats

```
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 generator = new Random(seed);
	int f2 = 0;
	int f3 = 0;
	int f4 = 0;
	int moreThen4 = 0;


	for(int i = 0; i < T ; i ++){
	  String gender1 = "0";
			String gender2 = "1";
			int counter = 0;


		do{
				double j = generator.nextDouble();
			if(j >= 0.5){
				gender1 = "g";
			} else {
				gender1 = "b";
			}

			counter += 1;

			if((gender1 != gender2) && (counter > 1)){
				break;

			}

			gender2 = gender1;


		} while (true);

			if (counter == 2){
				f2 ++;
			  } else {
			    if (counter == 3){
				f3 ++;
			  } else {
				if (counter > 3){
				f4 ++;
```

```
                                moreThen4 = moreThen4 + counter;
                        }
                }
                }
        }


        double average = ((double)((f2*2) + (f3*3) + (moreThen4))/ T);
                String common = "0";

                if ((f2 > f3) && (f2 > f4)){
                common = "2";
                 } else if ((f3 > f2) && (f3 > f4)){
                common = "3";
                } else {
                common = "4 or more";
}
                System.out.println("Average: " + average + " children to get at
least one of each gender.");
                System.out.println("Number of families with 2 children: " + f2);
                System.out.println("Number of families with 3 children: " + f3);
                System.out.println("Number of families with 4 or more children: "
+ f4);
                System.out.println("The most common number of children is " +
common + ".");
        }
}
```