Divisors

```
public class Divisors {
	public static void main (String[] args) {
		//// Put your code here

		int d = Integer.parseInt(args[0]);
	int i = 1;

		while (i <= d) {
			int a = d % i;
			if (a == 0)
			System.out.println(i);
			i++;

		}

	}
}
```

Reverse a String

```
public class Reverse {
	public static void main (String[] args){
		//// Put your code here
		String s = args[0];
		int n = s.length();
		int i = n-1;
		int a = (s.length()/2)-1;
		int b = (s.length()-1)/2;


		while ( i>=0)
		{
			System.out.print(s.charAt(i));
			i = i - 1;
		}
		System.out.println();
		{
      if (s.length() % 2 == 0)
		{
			System.out.println("The middle character is " + s.charAt(a));
		} else {
			System.out.println("The middle character is " + s.charAt(b));
		} }

		}

	}
```

In Order

```
public class InOrder {
	public static void main (String[] args) {
		//// Write your code here
		int a =(int)((Math.random() * (10 + 1)+0));
		 System.out.print(a + " ");

	do {

		 int b = (int)((Math.random() * (10 + 1)+0));
		 if (b>=a)
		 System.out.print(b + " ");
		 else break;
		a=b;
	} while (true);

}
}
```

Perfect

```
public class Perfect {
	public static void main (String[] args) {
		int n = Integer.parseInt(args[0]);
		int sum = 1;
		String perfectnum = n + " is a perfect number since " + n + " = 1";
		//initial string

		for (int i = 2; i < n; i++) {
			if (n % i ==0){ //if number divides by i with no remainder we add it
				sum += i;
				perfectnum = perfectnum + " + " + i;
			}
		}
		if (sum==n){
			System.out.print(perfectnum);
		}
		else {
			System.out.println(n + " is not a perfect number");
		}
	}
}
```

Damka Board

```
public class DamkaBoard {
        public static void main(String[] args) {
                //// Put your code here
      int n = Integer.parseInt(args[0]); //gets n
          int line = 1;  //declares line number

          while (line <= n) { //loop for lines
                int x = 1;
                while ( x<= n){ //loop for n of *
                        if (line%2==0) {
           System.out.print(" *");
                //on even lines prints with space first
                        } else {
                                System.out.print("* ");
                //on odd lines prints straight away
                        }
                        x=x+1;
                } System.out.println();
                //prints space between lines
                line = line + 1;
          }

                }


        }
```

One of Each

```
public class OneOfEach {
	public static void main (String[] args) {
		boolean boy = false;
		boolean girl = false;
		int count = 0;

		while (!boy || !girl){
			double prob = Math.random();

			if (prob < 0.5){
				boy = true;
				count++;
				System.out.print("b ");
			} else {
				girl = true;
				count++;
				System.out.print("g ");
			}
		} System.out.println();
		System.out.print("You made it... and you have "+ count+ " children");
	}
}
```

One of Each Stats

```
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 childSumCount = 0;
    int twochildlren = 0;
    int threechildren = 0;
    int fourplus = 0;
    for(int i = 0; i<T; i++){
        int childrenPerFamily=0;
        boolean boy = false;
        boolean girl = false;
        while (!boy || !girl){
            double prob = generator.nextDouble();

            if (prob < 0.5){
                boy = true;

            } else {
                girl = true;

            }
            childSumCount++;
            childrenPerFamily++;

        }
        if (childrenPerFamily==2) {
            twochildlren++;
        }
        else if(childrenPerFamily==3){
            threechildren++;
        }else if(childrenPerFamily >= 4){
            fourplus++;
        }

    }
    double average = (childSumCount/(double)T);
     System.out.print("Average: "+ average+ " children to get at least one of each gender.");
     System.out.println();
            System.out.println("Number of families with 2 children: " + twochildlren);
            System.out.println("Number of families with 3 children: " + threechildren);
            System.out.println("Number of families with 4 or more children: " + fourplus);
            String mode;
```

```
        if (twochildlren > threechildren && twochildlren > fourplus) {mode = "2";}
        else if (threechildren > twochildlren && threechildren > fourplus) {mode = "3";}
        else if (fourplus > twochildlren && fourplus > threechildren) {mode = "4 or more";}
        else if (twochildlren == threechildren && twochildlren > fourplus) {mode = "2";}
        else if (twochildlren == fourplus && twochildlren > threechildren) {mode = "2";}
        else if (threechildren == fourplus && threechildren> twochildlren) {mode = "3";}
        else {mode = "4 or more";}


       System.out.println("The most common number of children is " + mode + ".");

       }
}
```