Divisors

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

        }
}
```

Reverse

```java
public class Reverse{
    public static void main (String[] args){
        String s = args[0];

        for(int i = s.length()-1; i>=0; i--){
            System.out.print(s.charAt(i));
        }
    char c = s.charAt((s.length()-1)/2);
        System.out.println();
        System.out.println( "The middle character is " + c );

    }
}
```

InOrder

```java
import java.util.Random;

public class  InOrder {
    public static void main (String[] args) {
        int num1 = -1;
        int num2 = 0;
        String res = "";
        do{
            num2 = (int)(Math.random() * 10);
            if( num2 >= num1 ){

                res = res + num2 + " ";
                num1 = num2 ;

            }
            else {
                break;
            }
        }
        while(true);
        System.out.println(res);



    }
}
```

Perfect

```java
public class Perfect {
    public static void main (String[] args) {
        int x = Integer.parseInt(args[0]);

if (x < 0) {
System.out.println(x + " is not a perfect number ");
}
String res = x + " is a perfect number since " + x + " = 1";
int counter = 1;
        for (int i = 2; i < x-1; i++) {
          if ( x % i == 0 ) {

counter = counter + i;
res = res + " + " + i;
    }
}
if (counter == x){
System.out.println(res);
}
else {
        System.out.println(x + " is not a perfect number");


        }
    }
        }
```

DamkaBoard

```java
public class DamkaBoard {
    public static void main (String[] args) {
        int n = Integer.parseInt(args[0]);
        for (int i = 0; i < n; i++) {
            for (int a = 0; a < n; a++) {

                if (i % 2 == 0) {
                    System.out.print("* ");
                }

}
else {
    System.out.print(" *");
}
    }
                System.out.println();
            }



        }
    }
```

OneOfEach

```java
public class OneOfEach {

    public static void main (String[] args) {

        int children = 0;
        boolean boy = false;
        boolean girl = false;

        while(!boy || !girl) {

    double random = Math.random();
        if (random <= 0.5) {

            boy = true;
            System.out.print("b ");

        }
        else {

            girl = true;
            System.out.print("g ");

        }
children++;
}
System.out.println( "You made it... " + " and you now have " +
children + " children" );


    }
}
```

```java
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]);
double num1 = 0.0;
int num2 = 0, num3 = 0, num4 = 0;
Random generator = new Random(seed);

for (int i = 1; i <= T; i++) {
int children = 0;
boolean boy = false;
boolean girl = false;

while(!boy || !girl) {
if (generator.nextDouble() < 0.5) {
boy = true;
children++;
}
else {
girl = true;
children++;
}

}
if (children == 2) {
```

```java
num2++;

} else if (children == 3) {

num3++;

} else if (children >= 4) {

num4++;

}

num1 += children;

}

double average = num1 / T;

System.out.println("Average: " + average + " children to get at
least one of each gender.");


System.out.println("Number of families with 2 children: " + num2);


System.out.println("Number of families with 3 children: " + num3);

System.out.println("Number of families with 4 or more children: " +
num4);

if (num2 > num3 && num2 > num4 ) {


System.out.println("The most common number of children is 2.");

} else if (num3 > num4 && num3 > num2) {


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.");

}


}
}
```

OneOfEachStats

```java
public class OneOfEachStats1 {
public static void main (String[] args) {

int T = Integer.parseInt(args[0]);
int num1 = 0, num2 = 0, num3 = 0, num4 = 0;

for (int i = 1; i <= T; i++) {
int children = 0;
boolean boy = false;
boolean girl = false;

while (!boy || !girl) {
double random = Math.random();
if (random <= 0.5){
boy = true;
}
else {
girl = true;
}
children ++;

}
if (children == 2) {
num2++;
}
else if (children == 3) {
num3++;
```

```java
}
else if (children >= 4) {
num4++;
}
num1 += children;
children=0;
}
double average = num1 / T;
System.out.println("Average: " + average + " children to get at
least one of each gender.");

System.out.println("Number of families with 2 children: " + num2);

System.out.println("Number of families with 3 children: " + num3);
System.out.println("Number of families with 4 children: " + num4);
if (num2 > num3) {

System.out.println("The most common number of children is 2.");
} else if (num3 > num4) {

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.");
}


}
}
```