

Divisors

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

Reversing a string

```
public class Reverse {  
    public static void main (String[] args){  
        //// Put your code here  
        String str = args[0];  
        int length = str.length()-1;  
        int i = str.length();  
        int middleindex = length/2;  
        char middle=0;  
        if(((middleindex % 2) == 0))  
        {  
            middle = str.charAt(middleindex);  
        }  
        else  
        {  
            middle = str.charAt(middleindex);  
        }  
        for(int j=0;j<length;j++)  
        {  
            System.out.print(str.charAt(i-j-1));  
        }  
        System.out.println(str.charAt(0));  
        System.out.println("The middle character is " + middle);  
    }  
}
```

InOrder.java

```
public class InOrder {  
    public static void main (String[] args) {  
        int r = (int) (Math.random()*10.0);  
        System.out.print(r + " ");  
        int t = (int) (Math.random() * 10.0);  
        while((t >= r) && (t < 10.0))  
        {  
            System.out.print(t + " ");  
            r=t;  
            t = (int) (Math.random() * 10.0);  
        }  
    }  
}
```

perfect.java

```
public class Perfect {
    public static void main (String[] args) {
        //// Put your code here
        if (args.length != 1) {
            System.out.println("Usage: java Perfect <number>");
        }
        else{

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

            while ((x <= num) && (sum < num))
            {
                if (num % x == 0) {
                    ssum = ssum + x;
                    sum = sum + x;

                    if (sum != num)
                    {
                        ssum = ssum + " + ";
                    }
                }
                x++;
            }

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

        }

    }
}
```

DamkaBoard

```
public class DamkaBoard {
    public static void main(String[] args) {
        int n = Integer.parseInt(args[0]);
        for(int i = 0; i < n; i++)
        {
            if(i != 0 )
            {
                System.out.println();
            }
            for (int k = 0; k < n; k++)
            {
                if(i % 2 == 1)
                {
                    System.out.print(" *");
                }
                else
                {
                    System.out.print("* ");
                }
            }
        }
    }
}
```

OneOfEach.java

```
public class OneOfEach {
    public static void main (String[] args) {
        //// Put your code here
        Boolean girl = false , boy = false;
        int count = 0;
        while((!girl) || (!boy))
        {
            double random = Math.random();
            if (random >= 0.5)
            {
                girl = true;
                System.out.print("g ");
            }
            else
            {
                boy = true;
                System.out.print("b ");
            }
            count++;
        }
        System.out.println("You made it... and you now have " + count + " children");
    }
}
```

OneOfEachStats1.java

```
public class OneOfEachStats1 {
    public static void main (String[] args) {
        //// Put your code here

        boolean girl, boy;
        int count2C = 0;
        int count3C = 0;
        int count4C = 0;
        int sum = 0;
        double n = Double.parseDouble(args[0]);
        int max;
        double average;

        for (int i = 0; i < n; i++) {
            girl = false;
            boy = false;
            int count = 0;

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

            sum += count;

            if (count >= 4) {
                count4C++;
            } else if (count == 3) {
                count3C++;
            } else if (count == 2) {
                count2C++;
            }
        }

        int tempmax = Math.max(count2C, count3C);
        max = Math.max(tempmax, count4C);
        average = sum / n;

        System.out.println("Average: " + average + " children to get at least one of each
gender.");
        System.out.println("Number of families with 2 children: " + count2C);
    }
}
```

```
System.out.println("Number of families with 3 children: " + count3C);
System.out.println("Number of families with 4 children: " + count4C);

if (max == count4C) {
    System.out.println("The most common number of children is 4 or more.");
} else if (max == count2C) {
    System.out.println("The most common number of children is 2.");
} else {
    System.out.println("The most common number of children is 3.");
}
}
```


OneOfEachStats.java

```
public class OneOfEachStats {
    public static void main (String[] args) {
        boolean girl, boy;
        int T = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        Random generator = new Random(seed);
        int count2C = 0;
        int count3C = 0;
        int count4C = 0;
        int sum = 0;
        int max;
        double average;

        for (int i = 0; i < T; i++) {
            girl = false;
            boy = false;
            int count = 0;

            while ((!girl) || (!boy)) {
                double random = generator.nextDouble();
                if (random >= 0.5) {
                    girl = true;
                } else {
                    boy = true;
                }
                count++;
            }

            sum += count;

            if (count >= 4) {
                count4C++;
            } else if (count == 3) {
                count3C++;
            } else if (count == 2) {
                count2C++;
            }
        }

        int tempmax = Math.max(count2C, count3C);
        max = Math.max(tempmax, count4C);
        average = (double) 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: " + count2C);
System.out.println("Number of families with 3 children: " + count3C);
System.out.println("Number of families with 4 or more children: " + count4C);

if (max == count4C) {
    System.out.println("The most common number of children is 4 or more.");
} else if (max == count2C) {
    System.out.println("The most common number of children is 2.");
} else {
    System.out.println("The most common number of children is 3.");
}
}
```