1. <u>Divisors</u>

```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 );
            }

        }

    }
}
```

2. Reversing a string

```java
public class Reverse {
    public static void main (String[] args){
        String x = args[0];
        String xOut = "";
        int n= x.length();

        for (int i= n-1; i >= 0 ; i= i-1 ) {
            char a = x.charAt(i);
            xOut= xOut + a;
        }
        System.out.println(xOut);
        System.out.println("The middle character is " +
x.charAt( (n-1) / 2));


    }
}
```

3. Lucky streak

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

        int a = 0;
        int b = 0;
        boolean check = true ;

    while (check) {
        b = a;
        a = (int) ((Math.random() * 10) );
        if (b > a) {
            check = false ;
        }
        else {
            System.out.print(a +" ");
        }

    }
    }
}
```

4. Perfect Numbers

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

        for ( int i = 2; i < num; i++) {
            if (num % i == 0) {
                answer += " + " + i ;
                sum += i;

            }
        }

        if (sum == num) {
            System.out.print(answer );

        }

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

    }
}
```

5. Damka Board

```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 j = 0; j < n; j++ ){
                if (i % 2 == 0) {
                System.out.print("* ");
            }
            else {
                System.out.print(" *");
            }

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

6. **One of Each**

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

            while(girl == false || boy == false){
            double a = (Math.random() );
            if (a >= 0.5){
                girl = true;
                System.out.print("g ");
            }

            else {
                boy = true;
                System.out.print("b ");
            }
            sum += 1;
        }
        System.out.println("");
        System.out.println("You made it... and you now have "
+ sum +" children.");

    }
}
```

7. One of Each Stats1

```java
public class OneOfEachStats1 {
    public static void main (String[] args) {
        int t = Integer.parseInt(args[0]);

        double sum_all= 0.0;
        double averege = 0.0;
        int twochildren = 0;
        int threechildren = 0;
        int fourchildren = 0;
        String common ;

            for (int i = 0; i < t; i++){
                boolean girl = false;
                boolean boy = false;
                int sum = 0;
                while(girl == false || boy == false){
                    double a = (Math.random() );
                    if (a >= 0.5){
                        girl = true;
                    }

                    else {
                        boy = true;
                    }
                    sum ++ ;
            }
            sum_all += sum;
            if (sum == 2) {
                twochildren ++;
            }
            else if (sum == 3) {
                threechildren ++;
            }
            else if (sum >= 4) {
                fourchildren ++;
            }

        }

        averege = sum_all / t ;

        if (twochildren >= threechildren && twochildren >=
fourchildren){
            common = "2.";
        }
```

```java
        else if (threechildren >= twochildren && threechildren
>= fourchildren){
            common = "3.";
        }
        else{
            common="4 or more.";
        }

        System.out.println("Averege: " + averege + " children
to get at least one of each gender.");
        System.out.println("Number of families with 2
children: "+ twochildren);
        System.out.println("Number of families with 3
children: "+ threechildren);
        System.out.println("Number of families with 4 or more
children: "+ fourchildren);
        System.out.println("The most common number of children
is "+ common);
    }
}
```

8. One of Each Stats (final version)

```
public class OneOfEachStats {
    public static void main (String[] args) {
        // Gets the two command-line arguments

        // Initailizes a random numbers generator with the
given seed value
        //// In the previous version of this program, you used
a statement like:
        //// double rnd = Math.random();
        //// Where "rnd" is the variable that stores the
generated random value.
        //// In this version of the program, replace this
statement with:
        //// double rnd = generator.nextDouble();
        //// This statement will generate a random value in
the range [0,1),
        //// just like you had in the previous version, except
that the
        //// randomization will be based on the given seed.
        //// This is the only change that you have to do in
the program.

        int t = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        Random generator = new Random(seed);

        double sum_all= 0.0;
        double averege = 0.0;
        int twochildren = 0;
        int threechildren = 0;
        int fourchildren = 0;
        String common ;

            for (int i = 0; i < t; i++){
                boolean girl = false;
                boolean boy = false;
                int sum = 0;
                while(girl == false || boy == false){
                    double a = generator.nextDouble();
                    if (a >= 0.5){
                        girl = true;
                    }

                    else {
                        boy = true;
                    }
```

```java
                    sum ++ ;
                }
            sum_all += sum;
            if (sum == 2) {
                twochildren ++;
            }
            else if (sum == 3) {
                threechildren ++;
            }
            else if (sum >= 4) {
                fourchildren ++;
            }

        }

        averege = sum_all / t ;

        if (twochildren >= threechildren && twochildren >=
fourchildren){
            common = "2.";
        }
        else if (threechildren >= twochildren && threechildren
>= fourchildren){
            common = "3.";
        }
        else{
            common="4 or more.";
        }

        System.out.println("Average: " + averege + " children
to get at least one of each gender.");
        System.out.println("Number of families with 2
children: "+ twochildren);
        System.out.println("Number of families with 3
children: "+ threechildren);
        System.out.println("Number of families with 4 or more
children: "+ fourchildren);
        System.out.println("The most common number of children
is "+ common);
    }
}
```