```java
/**
 *  Gets a command-line argument (int), and prints all the divisors of the
given number.
 */
public class Divisors {
    public static void main (String[] args) {
        int num_divided = Integer.parseInt(args[0]);

        // finding divisors of num_divided
        for(int i = 1; i <= num_divided; i++){
            if(num_divided % i == 0){
                System.out.println(i);
            }
        }
    }
}
```

```java
/**
 * Prints a given string, backward. Then prints the middle character in the
string.
 * The program expects to get one command-line argument: A string.
 */
public class Reverse {
    public static void main (String[] args){
        if (args.length > 0){
            String my_str = args[0];
            for(int i = my_str.length() - 1; 0 <= i; --i){
                System.out.print(my_str.charAt(i));
            }
            System.out.println();

            char middle;
            if ( my_str.length() % 2 == 0){
                middle = my_str.charAt((my_str.length() / 2) - 1);
            }
            else{
                middle = my_str.charAt(my_str.length() / 2);
            }
            System.out.println("The middle character is " + middle);
        }
        else{
            System.out.println("No string provided");
        }
    }
}
```

```java
/**
 *  Generates and prints random integers in the range [0,10),
 *  as long as they form a non-decreasing sequence.
 */
public class InOrder {
    public static void main (String[] args) {
        // prints first num
        double num_double = 10.0 * Math.random();
        int num_int = (int) Math.round(num_double);
        System.out.print(num_int);

        double num_2_double;
        int num_2_int;

        // prints another int if it's equal or larger than num_1
        do{
            num_2_double = 10.0 * Math.random();
            num_2_int = (int) Math.round(num_2_double);

            if (num_int <= num_2_int){
                System.out.print(" " + num_2_int);
                num_int = num_2_int;
            }
        }while (num_int <= num_2_int);
    }
}
```

```java
/**
 *  Gets a command-line argument (int), and chekcs if the given number is
perfect.
 */
public class Perfect {
    public static void main (String[] args) {
        int num = Integer.parseInt(args[0]);

        int my_sum = 1;

        // I know there's a replica of the same code, but we have'nt learned
functions yet.
        // checks if the number is perfect
        for (int i = 2; i < num; i ++){
            if (num % i == 0){
                my_sum += i;
            }}

        // if the number is perfect or not print accordingly
        if (my_sum == num){
                System.out.print(num + " is a perfect number since " + num + "
= 1");
                for (int j = 2; j < num; j ++){
                    if (num % j == 0){
                        System.out.print(" + " + j);
                    }
                }
            }
        else{
                System.out.print(num + " is not a perfect number");
            }
            }



        }
```

```java
/**
 *  Gets a command-line argument n (int), and prints an n-by-n damka board.
 */
public class DamkaBoard {
    public static void main(String[] args) {
        int num = Integer.parseInt(args[0]);

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

```java
import java.util.Random;
/**
 *  Computes some statistics about families in which the parents decide
 *  to have children until they have at least one child of each gender.
 *  The program expects to get two command-line arguments: an int value
 *  that determines how many families to simulate, and an int value
 *  that serves as the seed of the random numbers generated by the program.
 *  Example usage: % java OneOfEachStats 1000 1
 */
public class OneOfEachStats {
    public static void main (String[] args) {
        // Gets the two command-line arguments
        int T = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        // Initailizes a random numbers generator with the given seed value
        Random generator = new Random(seed);

        //// 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.
        // init
        int mySum = 0;
        int counter2 = 0;
        int counter3 = 0;
        int counter4 = 0;

        for (int i = 0; i < T; i++){
            boolean boy = false;
            boolean girl = false;
            double choice;
            int num_children = 0;

            // checks
            do{
            choice = generator.nextDouble();
            if (choice < 0.5){
                boy = true;
                num_children++;
            }
            else{
```

```
                girl = true;
                num_children++;
            }
            }while((!boy) || (!girl));

            if(num_children == 2){
                counter2 ++;
            }
            if (num_children == 3){
                counter3++;
            }
            if (num_children >= 4){
                counter4++;
            }
            mySum += num_children;
        }
        double average = (double) mySum / T;
        int myMax = Math.max(counter2, counter3);
        myMax = Math.max(myMax, counter4);
        String common;
        if (myMax == counter2){
            common = "2";
        }
        else if (myMax == counter3){
            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: " + counter2);
        System.out.println("Number of families with 3 children: " + counter3);
        System.out.println("Number of families with 4 or more children: " +
counter4);
        System.out.println("The most common number of children is " + common
+".");
    }
}
```