1. Divisors

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

					}
	}
}
```

2. Reversing a string

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

3.Lucky streak

```
public class InOrder {
	public static void main (String[] args) {
		//// Write your code here
		int number = (int) (Math.random() * 10);
		int oldNumber = number;
		System.out.println (number);
		number = (int) (Math.random() * 10);
		while (number >= oldNumber) {
			System.out.println (number);
			oldNumber = number;
			number = (int) (Math.random() * 10);
		}

	}
}
```

4.Perfect Numbers

```
public class Perfect {
	public static void main (String[] args) {
		//// Put your code here
		int N = Integer.parseInt(args [0]);
		String end = N + " is a perfect number since " + N + " = 1";
		int sum = 1;
		for (int i = 2 ; i < N ; i++){
			if (N % i == 0){
				end = end + (" + " + i);
				sum = sum + i;
			}
		}
		if (sum == N){
			System.out.println (end);
		}
		else {
			System.out.println (N + " is not a perfect number");
		}
	}
}
```

5.Damka Board

```
public class DamkaBoard {
	public static void main(String[] args) {
		//// Put your code here
		int n = Integer.parseInt (args [0]);
		for (int i = 0 ; i < n ; i++){
			for (int j = 0 ; j < n ; j++){
				if (i == 0 || i % 2 == 0){
					System.out.print ("* ");
				}
				else {
					System.out.print (" *");
				}
			}
			System.out.println ("");
		}
	}
}
```

6.One of Each

```
public class OneOfEach {
	public static void main (String[] args) {
		//// Put your code here
		double p = Math.random();
		int numBoys = 0;
		int numGirls = 0;
		while (numBoys == 0 || numGirls == 0){
			if (p > 0.5){
				System.out.print ("g ");
				numGirls++;
			}
			if (p < 0.5){
				System.out.print ("b ");
				numBoys++;
			}
			p = Math.random();
		}
		int child = numBoys + numGirls;
		System.out.println ("");
		System.out.println ("You made it... and you now have " + child + " children.");
	}
}
```

7.One Of Each Stats

```
public class OneOfEachStats1 {
	public static void main (String[] args) {
		//// Put your code here
		int T = Integer.parseInt (args[0]);
		double p = Math.random();
		int numBoys = 0;
		int numGirls = 0;
		int totalChild = 0;
		int twoChild = 0;
		int threeChild = 0;
		int fourplusChild = 0;

		for (int i = 0 ; i < T ; i++){
		while (numBoys == 0 || numGirls == 0){
			if (p > 0.5){
				numGirls++;
			}
			if (p < 0.5){
				numBoys++;
			}
			p = Math.random();
		}
		int child = numBoys + numGirls;
		if (child == 2){
			twoChild++;
		}
		if (child == 3){
			threeChild++;
		}
		if (child > 3) {
			fourplusChild++;
		}

		totalChild = totalChild + child;
		child = 0;
		numBoys = 0;
		numGirls = 0;
		}


		String mostCommon = "";
		if (twoChild >= threeChild && twoChild >= fourplusChild){
			mostCommon = "2.";
		}
		if (threeChild >= twoChild && threeChild >= fourplusChild){
			mostCommon = "3.";
		}
```

```
            if (fourplusChild >= twoChild && fourplusChild >= threeChild){
                mostCommon = "4 or more.";
            }

            double eve = (double)totalChild / T ;
            System.out.println ("Avarage : " + eve + " children to get at least one of each gender.");
            System.out.println ("Number of families with 2 children: " + twoChild);
            System.out.println ("Number of families with 3 children: " + threeChild);
            System.out.println ("Number of families with 4 or more children: " + fourplusChild);
            System.out.println ("The most common number of children is " + mostCommon);


        }
}
```

8.One of each Stats (final version)

```
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);
		double p = generator.nextDouble();
		int numBoys = 0;
		int numGirls = 0;
		int totalChild = 0;
		int twoChild = 0;
		int threeChild = 0;
		int fourplusChild = 0;

		for (int i = 0 ; i < T ; i++){
		while (numBoys == 0 || numGirls == 0){
			if (p > 0.5){
				numGirls++;
			}
			if (p < 0.5){
				numBoys++;
			}
			p = generator.nextDouble();
		}
		int child = numBoys + numGirls;
		if (child == 2){
			twoChild++;
		}
		if (child == 3){
			threeChild++;
		}
		if (child > 3) {
			fourplusChild++;
		}

		totalChild = totalChild + child;
		child = 0;
		numBoys = 0;
		numGirls = 0;
		}

		double average = (double) totalChild / T;

		String mostCommon = "";
```

```
                if (twoChild >= threeChild && twoChild >= fourplusChild){
                        mostCommon = "2.";
                }
                if (threeChild >= twoChild && threeChild >= fourplusChild){
                        mostCommon = "3.";
                }
                if (fourplusChild >= twoChild && fourplusChild >= threeChild){
                        mostCommon = "4 or more.";
                }


                System.out.println ("Avarage : " + average + " children to get at least one of each
gender.");
                System.out.println ("Number of families with 2 children: " + twoChild);
                System.out.println ("Number of families with 3 children: " + threeChild);
                System.out.println ("Number of families with 4 or more children: " + fourplusChild);
                System.out.println ("The most common number of children is " + mostCommon);




        }
}
```