Divisors

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

		}

	}
}
```

Reversing a string

```
public class Reverse {
	public static void main (String[] args){
		String s = args[0];
		int n = s.length();
		int indexMiddle = n/2;
		String r = "";

		for(int i = n-1; i >= 0; i--){
			r = r + s.charAt(i);
		}
		char middle = r.charAt(indexMiddle);

		System.out.println(r);
		System.out.println("The middle character is " + middle);
	}
}
```

Lucky streak

```
public class InOrder {
	public static void main (String[] args) {
		int num1 = (int)(Math.random() * 10);
		int num2;

		do{
		   System.out.println(num1);
		   num2 = num1;
		   num1 = (int)(Math.random() * 10);
		} while (num1 >= num2);

	}
}
```

Perfect Numbers

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

Damka Board

```
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("");
		}
	}
}
```

One of Each

```
public class OneOfEach {
	public static void main (String[] args) {
		boolean girl = false;
		boolean boy = false;
		int sum = 0;
		while (!(boy && girl)){
			double x = Math.random();
			if(x < 0.5){
				girl = true;
				System.out.print("g ");
			} else{
				boy = true;
			   System.out.print("b ");
			  }
			sum = sum + 1;
		   System.out.print(" ");

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

	}
}
```

One of Each Stats

```
import java.util.Random;
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 sumall = 0;
		int count2Children = 0;
		int count3Children = 0;
		int count4AndMore = 0;
		double avg;

		for(int i = 0; i < T; i++)
		{
			boolean girl = false;
			boolean boy = false;
			double sum = 0;
			while (!(boy && girl)){
				double x = generator.nextDouble();
				if(x < 0.5){
					girl = true;
				} else{
					boy = true;
				}
				sum = sum + 1;
			}
			if(sum == 2){
				count2Children++;
			} else if(sum ==3) {
				count3Children++;
			} else if(sum >= 4){
				count4AndMore++;
			}
			sumall = sumall + sum;
		}
		String common = "2";
		if(count3Children > count2Children){
			common = "3";
			if(count4AndMore > count3Children){
				common = "4 and more";
			}
		} else if(count4AndMore > count2Children){
```

```
                    common = "4 and more";
                }
                avg = sumall/T;
System.out.println("Average: " + avg + " children to get at least one of each gender.");
System.out.println("Number of families with 2 children: " + count2Children);
System.out.println("Number of families with 3 children: " + count3Children);
System.out.println("Number of families with 4 or more children: " + count4AndMore);
System.out.println("The most common number of children is " + common +".");

        }
}
```