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

```
public class Reverse {
	public static void main (String[] args){
		String word = args[0];
		String reverseWord = "";
		int middleChar = (word.length() - 1) / 2;
		int i = word.length() - 1;

		while (i >= 0) {
			reverseWord += word.charAt(i);
			i--;
		}

		System.out.println(reverseWord);
		System.out.println("The middle character is " + word.charAt(middleChar));
	}
}
```

```
public class InOrder {
	public static void main (String[] args) {
		int randomInteger = (int)(Math.random() * 10);
		int previousInteger = randomInteger;
		System.out.print(randomInteger);

		do {
			randomInteger = (int)(Math.random() * 10);
			if (randomInteger >= previousInteger){
				System.out.print(" " + randomInteger);
				previousInteger = randomInteger;
			}

		} while (previousInteger <= randomInteger);

		System.out.println();

	}
}
```

```
public class DamkaBoard {
        public static void main(String[] args) {
                int n = Integer.parseInt(args[0]);
      //iterate through the pattern of the damka rows
                for (int i = 0; i < n ; i++) {
                        //iterate through the pattern of the damka columns
                        for (int j = 0; j < n; j++) {
                                if (i % 2 == 0){
                                        System.out.print("* ");
                                } else {
                                        System.out.print(" *");
                                }

                    }
                    System.out.println();

            }
   }
}
```

```
public class Perfect {
	public static void main (String[] args) {
		int number = Integer.parseInt(args[0]);
		int sum = 1;
		String isPerfect = number + " is a perfect number since " + number
+ " = 1";
		for (int i = 2; i < number; i++) {
			if (number % i == 0) {
				isPerfect += (" + " + i);
				sum += i;
			}
		}

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

```
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);

                int totalSum = 0;
                int twoChildren = 0;
                int threeChildren = 0;
                int fourChildrenOrMore = 0;

                for (int i = 0; i < T; i++) {
                        boolean isBoy = false;
                   boolean isGirl = false;
                   boolean baby = true;
                   int sum = 0;

                   while (baby != (isGirl && isBoy)) {
                           double birth = generator.nextDouble(); // birth < 0.5
represents a boy and birth >=0.5 represents a girl
                           if (birth < 0.5) {
                                   isBoy = true;
                           } else {
                                   isGirl = true;
                           }
                           sum++;
                   }

                   switch (sum) {
                      case 2: twoChildren++;
                           break;
                      case 3: threeChildren++;
                            break;
                      default: fourChildrenOrMore++;
                            break;
                   }

                   totalSum += sum;
                }
        double average = (double) totalSum / T;
```

```
            System.out.println("Average: " + average + " 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: " +
fourChildrenOrMore);

            if ((twoChildren >= threeChildren) && (twoChildren >= fourChildrenOrMore))
{
              System.out.println("The most common number of children is 2.");

            } else if ((threeChildren >= twoChildren) && (threeChildren >=
fourChildrenOrMore)) {
              System.out.println("The most common number of children is 3.");

            } else {
              System.out.println("The most common number of children is 4 or more.");

            }


              }


        }
```