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

		int num = Integer.parseInt(args[0]);
		int div = 1;

		while (div < num) {

			if (num % div == 0) {

				System.out.println(div);

			}

			div++;

		}

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

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

		String str = args[0];
		String str2 = "";
		int n = str.length();
		char midChar = str.charAt((n-1)/2);


		for (int i = n-1; i >= 0; i--) {

			str2 += str.charAt(i);

		}

		System.out.println(str2);
		System.out.println("The middle character is " + midChar);

	}
}
```

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

		int randNum, randNum2, prevNum, prevNum2;

		randNum = (int)(Math.random()*10);
		System.out.print(randNum);

		do{

			randNum2 = (int)(Math.random()*10);

			if (randNum <= randNum2) {

				System.out.print(" " + randNum2);

			} else {

				break;

			}

			prevNum = randNum;
			prevNum2 = randNum2;

			randNum = randNum2;

		} while (prevNum <= prevNum2);

	}
}
```

```
public class Perfect {

	public static void main (String[] args) {

		int num = Integer.parseInt(args[0]);
		int div = 2;
		int sum = 1;
		String str = "";


		while (div < num) {

			if (num % div == 0) {

				sum += div;
				str += " + " + div;

			}

			div++;

		}


		if (sum == num) {

			System.out.println(num + " is a perfect number since " + num + " =
					1" + str);


		} else {

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

		}
	}
}
```

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

		int num = Integer.parseInt(args[0]);

		for (int i = 1; i <= num; i++){

			for (int j = 1; j <= num; j++){

				if (i % 2 == 0) {

					System.out.print(" *");

				} else {

					System.out.print("* ");

				}

			}

			System.out.println();

		}
	}
}
```

```
import java.util.Random;

public class OneOfEachStats {
	public static void main (String[] args) {

		int T = Integer.parseInt(args[0]);
		int seed = Integer.parseInt(args[1]);

	Random generator = new Random(seed);

		String gender = "";
		int num2Ch = 0;
		int num3Ch = 0;
		int num4Ch = 0;
		int sum = 0;
		int sum2;
		int index = 1;
		double average;

		for (int i = 0; i < T; i++){

			sum2 = 0;
			index = 1;
			gender = "";

			while(true) {


				if (generator.nextDouble() < 0.5) {

					gender += "g ";

						} else {

							gender += "b ";

						}

				sum++;
				sum2++;
```

```
                if (index >= 3){

                        if ((gender.charAt(index - 1) != gender.charAt(index -
                            3)) && (sum2 == 2)) {

                                num2Ch++;
                                break;
                        }

                        if ((gender.charAt(index - 1) != gender.charAt(index -
                            3)) && (sum2 == 3)) {

                                num3Ch++;
                                break;
                        }

                        if ((gender.charAt(index - 1) != gender.charAt(index -
                            3)) && (sum2 >= 4)) {

                                num4Ch++;
                                break;
                        }



                }

                index += 2;

        }
}


average = (double) sum/T;

System.out.println("Average: " + average + " children to get at least one of
 each gender.");
System.out.println("Number of families with 2 children: " + num2Ch);
```

```
            System.out.println("Number of families with 3 children: " + num3Ch);
            System.out.println("Number of families with 4 or more children: " +
                                num4Ch);


            int mostCommon = Math.max(Math.max(num2Ch, num3Ch), num4Ch);

            if (num2Ch == mostCommon) {

                System.out.println("The most common number of children is 2.");

            }

            else if (num3Ch == mostCommon) {

                System.out.println("The most common number of children is 3.");

            }

            else if (num4Ch == mostCommon) {

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

            }

        }
}
```