```
public class Divisors {
    public static void main(String[] args) {
        int num = Integer.parseInt(args[0]);

        for (int i = 1; i <= num; i++) {
            if (num % i == 0) {
                System.out.println(i);
            }
        }
    }
}
```

```
public class Reverse {
   public static void main(String[] args) {
      String str = args[0];
      String reversed = "";
      int len = str.length();

      for (int i = 0; i < len; i++) {
         reversed = str.charAt(i) + reversed;
      }

      System.out.println(reversed);
      System.out.println("The middle character is " + str.charAt((len - 1 )/ 2));
   }
}
```

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

        do {
            prev = rnd;
            System.out.print(prev + " ");
            rnd = (int) (Math.random() * 10);
        } while (rnd >= prev);
    }
}
```

```
import java.awt.*;

public class Perfect {
   public static void main(String[] args) {
      int num = Integer.parseInt(args[0]);
      String output = num + " is a perfect number since " + num + " = 1";
      int sum = 1;

      //find all divisors
      for (int i = 2; i < num; i++) {
         if (num % i == 0) {
            sum += i;
            output = output + " + " + i;
         }
      }

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

```
public class DamkaBoard {
   public static void main(String[] args) {
      int size = Integer.parseInt(args[0]);

      String evenRow = "";
      String oddRow = "";

      //create rows
      for (int i = 0; i < size; i++) {
         oddRow += "* ";
         evenRow += " *";
      }
      //prints rows
      for (int i = 1; i <= size; i++) {
         if (i % 2 == 0) {
            System.out.println(evenRow);
         } else {
            System.out.println(oddRow);
         }
      }
   }
}
```

```
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);

		//counters
		int twoChildren = 0;
		int threeChildren = 0;
		int fourOrMoreChildren = 0;
		int totalKids = 0;

		for (int i = 0; i < T; i++) {
			boolean noBoy = true;
			boolean noGirl = true;

			int kids = 0;
			//generates family
			while (noGirl || noBoy) {
				double rnd = generator.nextDouble();
				if (rnd < 0.5) {
					noGirl = false;
				} else {
					noBoy = false;
				}
				kids++;
			}

			//adds to counters
			totalKids += kids;
			if (kids == 2) {
				twoChildren++;
			} else if (kids == 3) {
				threeChildren++;
			} else {
				fourOrMoreChildren++;
			}
		}

		//prints stats
		System.out.println("Average: " + (double) totalKids / T +
				" 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: " +
                fourOrMoreChildren);

                //prints most common number of children
                if (twoChildren >= threeChildren) {
                        if (twoChildren >= fourOrMoreChildren) {
                                        System.out.println("The most common number of
                                        children is 2.");
                        } else {
                                System.out.println("The most common number of children is
                                4 or more.");
                        }
                } else {
                        if (threeChildren >= fourOrMoreChildren) {
                                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.");
                        }
                }
        }
}
```