```java
public class Divisors {
    public static void main(String[] args) {
        int input = Integer.parseInt(args[0]);
        int start = 1;
        while (start <= input){
            if (input%start == 0){
                System.out.println(start);
                start++;
            }else {
                start++;
            }
        }
    }
}
```

```java
public class Reverse {
    public static void main (String[] args){
        String word = args[0];
        int letter = word.length() - 1;
        while (word.charAt(letter)>0){
            if (word.charAt(letter)>0){
                System.out.print(word.charAt(letter));
                letter--;
            }else {letter--;};
            if (letter < 0) {
                System.out.println("");
                break;}
        }
        letter = word.length() - 1;
        System.out.println("The middle character is " + word.charAt(letter/2));
    }
}
```

```java
public class InOrder {
    public static void main (String[] args) {
        int random1 = (int)(Math.random() * 10);
        int random2 = (int)(Math.random() * 10);
        System.out.print(random1 + " ");
        while (random2 > random1){
            System.out.print(random2 + " ");
            random1 = random2;
            random2 = (int)(Math.random() * 10);
        }
    }
}
```

```java
public class DamkaBoard {
    public static void main(String[] args) {
        int input = Integer.parseInt(args[0]);
        int verticalCounter = 1;
        int horizontalCounter = 0;
        int evenChecker = 1;
        while (horizontalCounter < input){
            while (verticalCounter <= input){
                System.out.print("*");
                verticalCounter++;
                while (verticalCounter <= input){
                    System.out.print(" ");
                    break;
                }
            }
            horizontalCounter++;
            if (evenChecker % 2 == 0){
            System.out.println("");
            evenChecker++;
            }else {
                System.out.println(" ");
                System.out.print(" ");
            evenChecker++;}
            verticalCounter = 1;
        }
    }
}
```

```java
public class Perfect {
    public static void main (String[] args) {
        int input = Integer.parseInt(args[0]);
        int checker = 0;
        int start = 1;
        int notLastDivisor = 0;
        while (start < input){
            int divisor = input % start;
            if (divisor == 0) {
                notLastDivisor = start;
                checker = checker + start;
                start++;}
            else {start++;}
            }
        if (checker == input){
            System.out.print(input + " is a perfect number since " + input + " =
1 + ");
            start = 2;
            while (start < input){
                if (start < input && input%start == 0 && start !=
notLastDivisor){
                    System.out.print(start + " + ");
                    start++;
                }else if (start == notLastDivisor) {System.out.print(start);
start++;}
                else{start++;}
            }
        } else {System.out.print(input + " is not a perfect number");}
    }
}
```

```java
import java.util.Random;
/**
 *  Computes some statistics about families in which the parents decide
 *  to have children until they have at least one child of each gender.
 *  The program expects to get two command-line arguments: an int value
 *  that determines how many families to simulate, and an int value
 *  that serves as the seed of the random numbers generated by the program.
 *  Example usage: % java OneOfEachStats 1000 1
 */
public class OneOfEachStats {
    public static void main (String[] args) {
        // Gets the two command-line arguments
```

```
        int input = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        Random generator = new Random(seed);
        double birth = generator.nextDouble();
        boolean girlBorn = false;
        boolean boyBorn = false;
        int childCounter = 0;
        int girlCounter = 0;
        int boyCounter = 0;
        double twoKids = 0;
        double threeKids = 0;
        double manyKids = 0;
        for (int inputCounter = 0; inputCounter < input; inputCounter++){
            while (boyBorn == false || girlBorn == false){
                if (birth < 0.5){
                    girlBorn = true;
                    girlCounter++;
                } else {
                    boyBorn = true;
                    boyCounter++;
                }
                birth = generator.nextDouble();
                childCounter++;
            }
            if (boyCounter + girlCounter == 2) {twoKids++;}
            if (boyCounter + girlCounter == 3) {threeKids++;}
            if (boyCounter + girlCounter > 3) {manyKids++;}
            boyCounter = 0;
            girlCounter = 0;
            boyBorn = false;
            girlBorn = false;
        }
        //System.out.println(twoKids);
        //System.out.println(threeKids);
        //System.out.println(manyKids);
        double average = (childCounter) / ((double) input);
        System.out.println("Average: " + average + " children to get at least one
of each gender.");
        System.out.println("Number of families with 2 children: " +
(int)twoKids);
        System.out.println("Number of families with 3 children: " +
(int)threeKids);
        System.out.println("Number of families with 4 or more children: " +
(int)manyKids);
```

```
        String mode;
        if (twoKids > threeKids && twoKids > manyKids){mode = "2";}
        else if (threeKids > twoKids && threeKids > manyKids){mode = "3";}
        else {mode = "4 or more";};

        System.out.println("The most common number of children is " + mode +
".");
    }
}
```

```
public class OneOfEach {
    public static void main (String[] args) {
        double birth = Math.random();
        boolean girlBorn = false;
        boolean boyBorn = false;
        int childCounter = 0;
            while (boyBorn == false || girlBorn == false){
                if (birth < 0.5){
                    System.out.print("g ");
                    girlBorn = true;
                    birth = Math.random();
                    childCounter++;
                }
                else {
                    System.out.print("b ");
                    boyBorn = true;
                    birth = Math.random();
                    childCounter++;
                }
            }
            System.out.println("");
            System.out.print("You made it... and you now have " + childCounter +
" children.");
    }
}
```

```
public class OneOfEachStats1 {
    public static void main (String[] args) {
        int input = Integer.parseInt(args[0]);

        double birth = Math.random();
        boolean girlBorn = false;
        boolean boyBorn = false;
```

```
        int childCounter = 0;
        int girlCounter = 0;
        int boyCounter = 0;
        double twoKids = 0;
        double threeKids = 0;
        double manyKids = 0;
        for (int inputCounter = 0; inputCounter < input; inputCounter++){
            while (boyBorn == false || girlBorn == false){
                if (birth < 0.5){
                    girlBorn = true;
                    birth = Math.random();
                    childCounter++;
                    girlCounter++;
                } else {
                    boyBorn = true;
                    birth = Math.random();
                    childCounter++;
                    boyCounter++;
                }
            }
            if (boyCounter + girlCounter == 2) {twoKids++;}
            if (boyCounter + girlCounter == 3) {threeKids++;}
            if (boyCounter + girlCounter > 3) {manyKids++;}
            boyCounter = 0;
            girlCounter = 0;
            boyBorn = false;
            girlBorn = false;
        }
        double average = (twoKids + threeKids + manyKids) / 3;
        System.out.println("Average: " + average + " children to get at least one
of each gender.");
        System.out.println("Number of families with 2 children: " +
(int)twoKids);
        System.out.println("Number of families with 3 children: " +
(int)threeKids);
        System.out.println("Number of families with 4 or more children: " +
(int)manyKids);
        double mode;
        if (twoKids > threeKids && twoKids > manyKids){mode = (int)twoKids;}
        else if (threeKids > twoKids && threeKids > manyKids){mode =
(int)threeKids;}
        else {mode = (int)manyKids;};

        System.out.println("The most common number of children is " + (int)mode);
    }
```

```
}
```