```
      public class Divisors {     public
static void main(String[] args) {
        //// Put your code here
        int x = Integer.parseInt(args[0]);
int divisor = 1;         while (divisor <=
x) {             if (x % divisor == 0) {
               System.out.println(divisor);
            }
            divisor++;
        }


    }
}
```

```
public class Reverse {
    public static void main(String[] args) {
        //// Put your code here
        String word = args[0];
String reverseWord = "";         int
i = word.length() - 1;         while
(i >= 0) {
            char c = word.charAt(i);
reverseWord = reverseWord + c;
i--;         }
        char middleCharacter = reverseWord.charAt((reverseWord.length() / 2));
        System.out.println(reverseWord);
        System.out.println("The middle character is " + middleCharacter);
    }
}
```

```
public class InOrder {     public static
void main(String[] args) {
        /// Write your code here
        int firstNumber = (int) (Math.random() * 10);
System.out.print(firstNumber + " ");         int
randomNumber = (int) (Math.random() * 10);
while (randomNumber >= firstNumber) {
System.out.print(randomNumber + " ");
firstNumber = randomNumber;             randomNumber =
(int) (Math.random() * 10);
        }
    }
}
```

```java
public class DamkaBoard {
    public static void main(String[] args) {          //// Put your code here
int size = Integer.parseInt(args[0]);          for (int i = 0; i < size; i++) {
if (i % 2 == 1) {
                System.out.print(" ");
            }
            for (int j = 0; j < size; j++) {
                System.out.print("* ");
            }
            System.out.println();
        }
    }
}
```

```
public class Perfect {
    public static void main(String[] args) {
        //// Put your code here
        int x = Integer.parseInt(args[0]);
int divisor = 1;         int sumOfDivisors
= 0;
        String perfectNumber = (x + " is a perfect number since " + x + " = ");
while (divisor < x) {             if (x % divisor == 0) {
                perfectNumber = perfectNumber + divisor;
sumOfDivisors = sumOfDivisors + divisor;                 if
(sumOfDivisors < x) {
                    perfectNumber = perfectNumber + " + ";
}


            }
            divisor++;
        }
        if (sumOfDivisors == x) {
            System.out.println(perfectNumber);
        } else {
            System.out.println(x + " is not a perfect number");
        }


    }
}
```

```java
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 birth = generator.nextDouble();
        int numOfBoys = 0;
        int numOfGirls = 0;
        int numOfKids = 0;
        int familiesTwo = 0;
        int familiesThree = 0;
        int familiesFour = 0;
        double sumOfKids = 0;
        for (int i = 0; i <= T; i++) {
            numOfBoys = 0;
            numOfGirls = 0;
            numOfKids = 0;
            while (numOfGirls < 1 || numOfBoys < 1) {
                if (birth < 0.5) {
                    numOfBoys++;
                } else if (birth > 0.5) {
                    numOfGirls++;
                }
                birth = Math.random();
                numOfKids++;
            }
            sumOfKids += numOfKids;
            if (numOfKids == 2) {
                familiesTwo++;
            } else if (numOfKids == 3) {
                familiesThree++;
            } else if (numOfKids >= 4) {
                familiesFour++;
            }
        }
        double average = (sumOfKids / T);
        int max = (int) Math.max(familiesTwo, (int) Math.max(familiesThree,
familiesFour));
        System.out.println("Average : " + average + " children to get at least one
of each gender.");
        System.out.println("Number of families with 2 children: " + familiesTwo);
        System.out.println("Number of families with 3 children: " +
familiesThree);
```

```
        System.out.println("Number of families with 4 or more children: " +
familiesFour);
        if (max == familiesTwo) {
            System.out.println("The most common number of children is 2");
        } else if (max == familiesThree) {
            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");
        }
    }

}
```