

Problem 1 – Checking Power of 2

```
package ishwarchavan.com;
import java.io.*;

public class PowerOfTwo {    //class created

    static boolean isPowerOfTwo(int n) {    //function is created to check n is power
of 2 or not

        if (n == 0)            //condition true then false
            return false;

        while (n != 1) {        //condition is checking
            if (n % 2 != 0)      //if true then false
                return false;
            n = n / 2;
        }
        return true;            //return true
    }

    public static void main(String args[])    //main program started
    {
        if (isPowerOfTwo(4))        //function calling
            System.out.println("Yes 4 is power of two");
        else
            System.out.println("No");

        if (isPowerOfTwo(15))
            System.out.println("Yes ");    //function calling
        else
            System.out.println("No 15 is power of two");
    }
}
```

Problem 2 - Number of Digit One

```
package ishwarchavan.com;

public class NumberOfDigitOne {    //class started

    public static void main(String[] args) {    //main program started
        System.out.println(countDigitOne(13));    //calling function and printing
    }

    public static int countDigitOne(int n) {    //function created
        int count = 0;    //value assigning to count variable

        for (long i = 1; i <= n; i *= 10) {    //loops created
            long div = i * 10;
            long quotient = n / div;    //value is storing in quotient variable
            long remainder = n % div;
            count += quotient * i + Math.min(Math.max(remainder - i + 1, 0), i); //math
method
        }
        return count;
    }
}
```