1. Consider the following code:

```
public static void process (Integer a[], int liminf, int limsup) {

     int i=liminf ;
     int j=limsup-1 ;
     while (i < j) {
         int temp=a[i] ;
         a[i]=a[j] ;
         a[j]=temp ;
         i++ ;
         j-- ;
    }
}

public static void example (Integer a[], int li, int ls) {

     if (li < ls) {
       process (a,li,ls);
       ls=ls/2;
       example (a,li,ls);
     }
}
```

LS LI

Explain what the methods above do and present the result applied to the array a[8]={6,1,4,2,7,3,1,5}, li=0, ls=8, example(a,0,8).

o vetor termina com os valores 37152416 , pois a função process vai trocando os valores superiores do vetor com os inferiores e depois na função example vai selecionar apenas metade até ls ser 0

2. Develop recursive methods that permit:

a) Calculate the sum of two positive integer numbers.

b) Convert a decimal integer *n* to a binary representation.

c) Verify if a positive integer is prime.

d) Verify if a word is palindrome. A word, phrase, or other sequence of symbols or elements, whose meaning may be interpreted the same way in either forward or reverse direction: ANA, SOPAPOS.