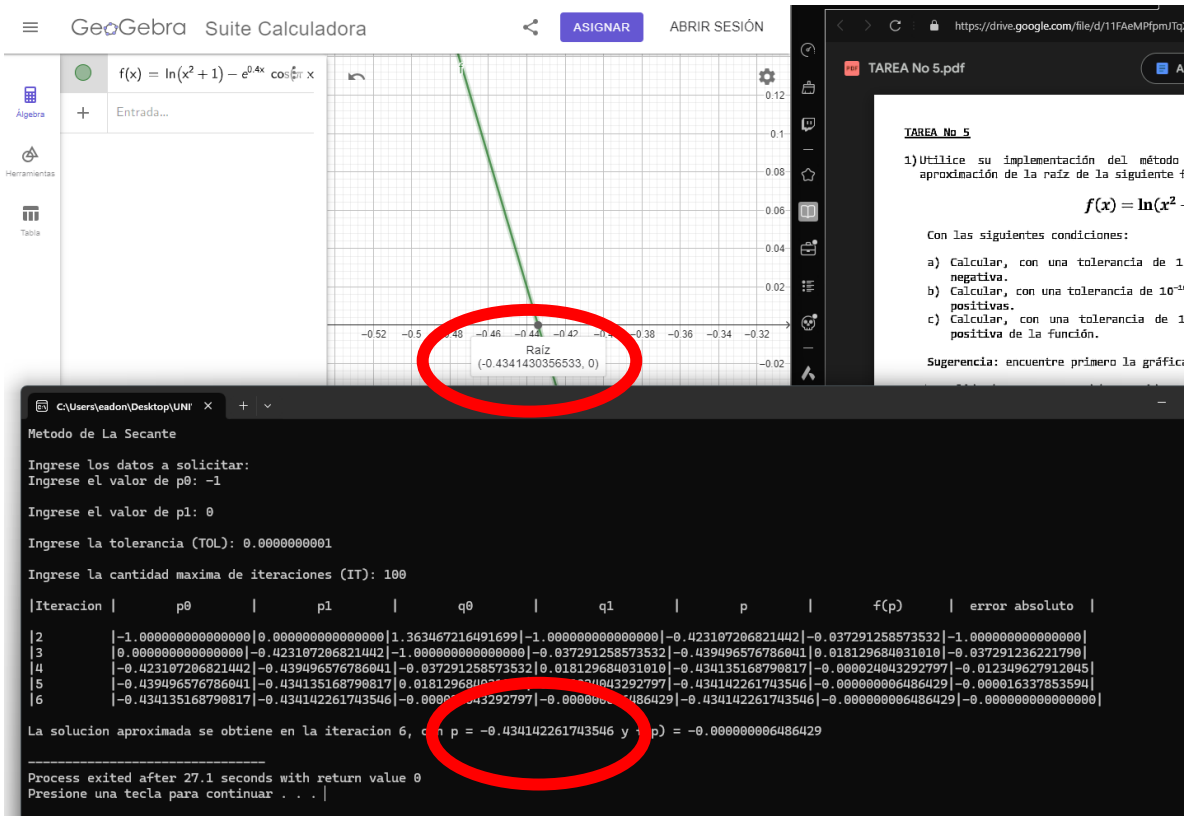
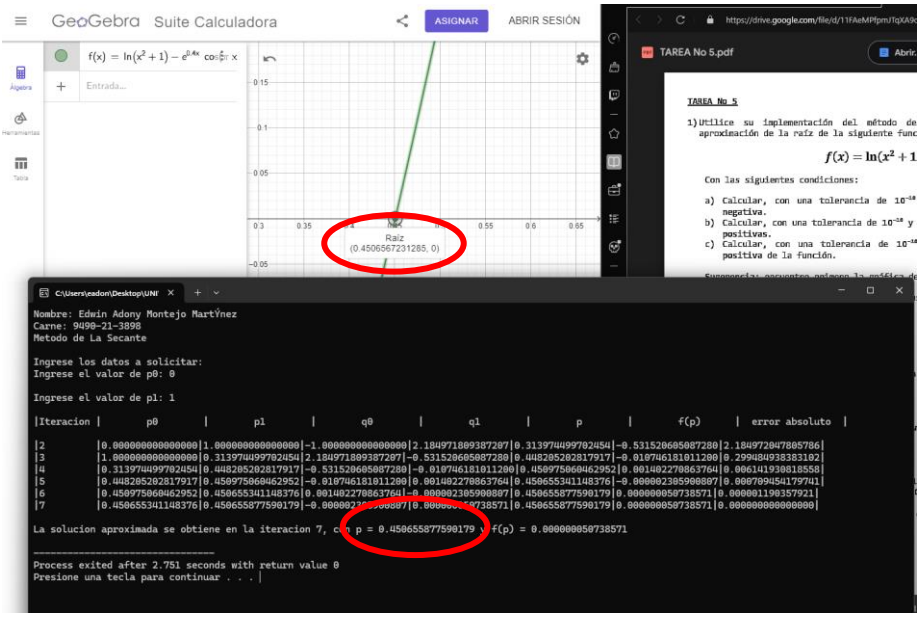
a) Primera raiz negativa

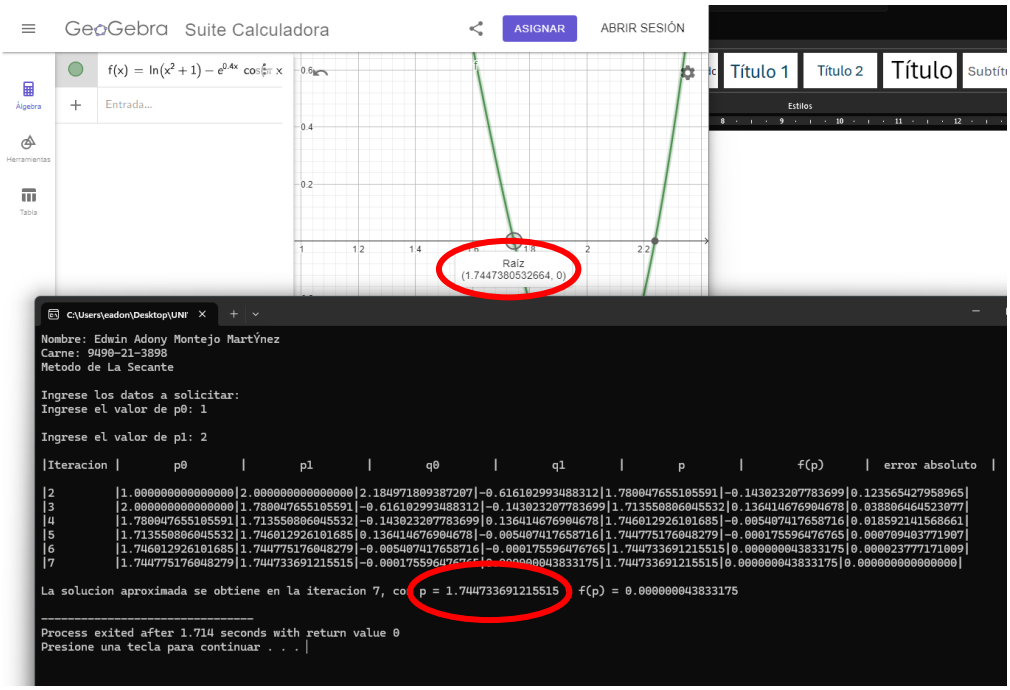


b) Primeras 4 raices positivas

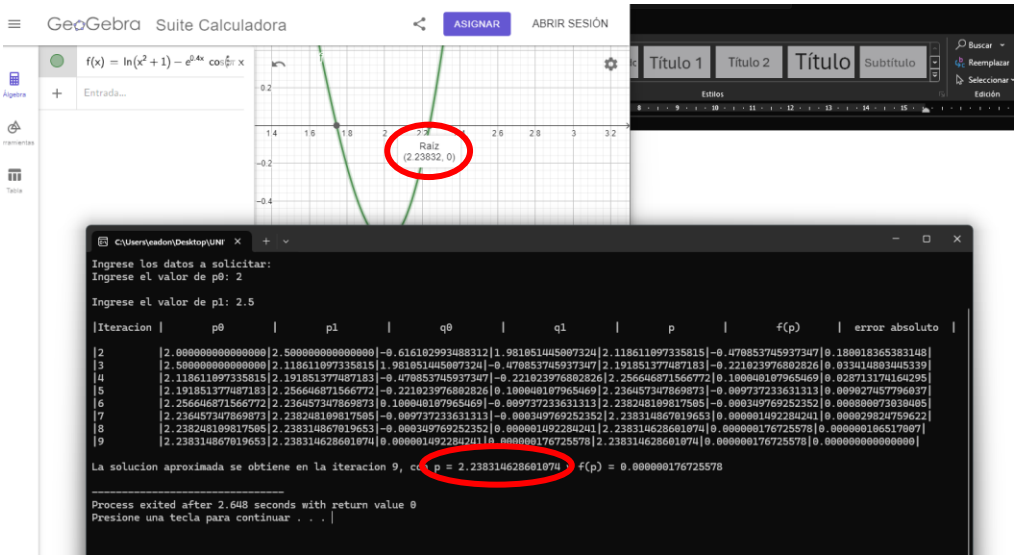
a.



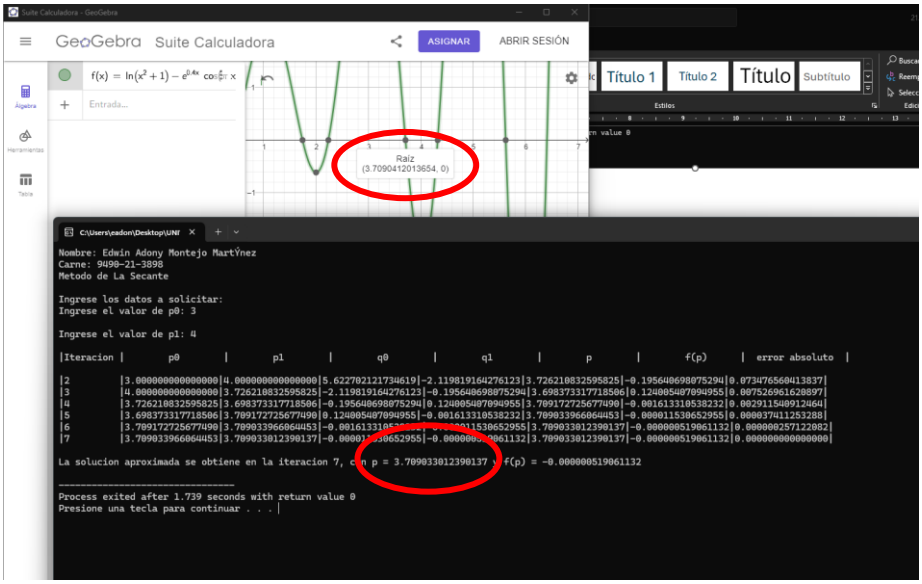
b.


GeoGebra Suite Calculadora
ASIGNAR
ABRIR SESIÓN
Título 1
Título 2
Título
Raíz
(1.7447380532664, 0)
Nombre: Edwin Adony Montejo MartÝnez
Carne: 9490-21-3898
Metodo de La Secante
Ingrese los datos a solicitar:
Ingrese el valor de p0: 1
Ingrese el valor de p1: 2
Iteracion	p0	p1	q0	q1	p	f(p)	error absoluto
2	1.000000000000000	2.000000000000000	2.184971809387207	-0.616102993488312	1.780047655105591	-0.143023207783699	0.123565427958965
3	2.000000000000000	1.780047655105591	-0.616102993488312	-0.143023207783699	1.713550806045532	0.136414676904678	0.038806464523077
4	1.780047655105591	1.713550806045532	-0.143023207783699	0.136414676904678	1.746012926101685	-0.005407417658716	0.018592141568661
5	1.713550806045532	1.746012926101685	0.136414676904678	-0.005407417658716	1.744775176048279	-0.000175596476765	0.000709403771907
6	1.746012926101685	1.744775176048279	-0.005407417658716	-0.000175596476765	1.744733691215515	0.000000043833175	0.000023777171009
7	1.744775176048279	1.744733691215515	-0.000175596476765	0.000000043833175	1.744733691215515	0.000000043833175	0.000000000000000
La solucion aproximada se obtiene en la iteracion 7, co p = 1.744733691215515 f(p) = 0.000000043833175
Process exited after 1.714 seconds with return value 0
Presione una tecla para continuar . . .

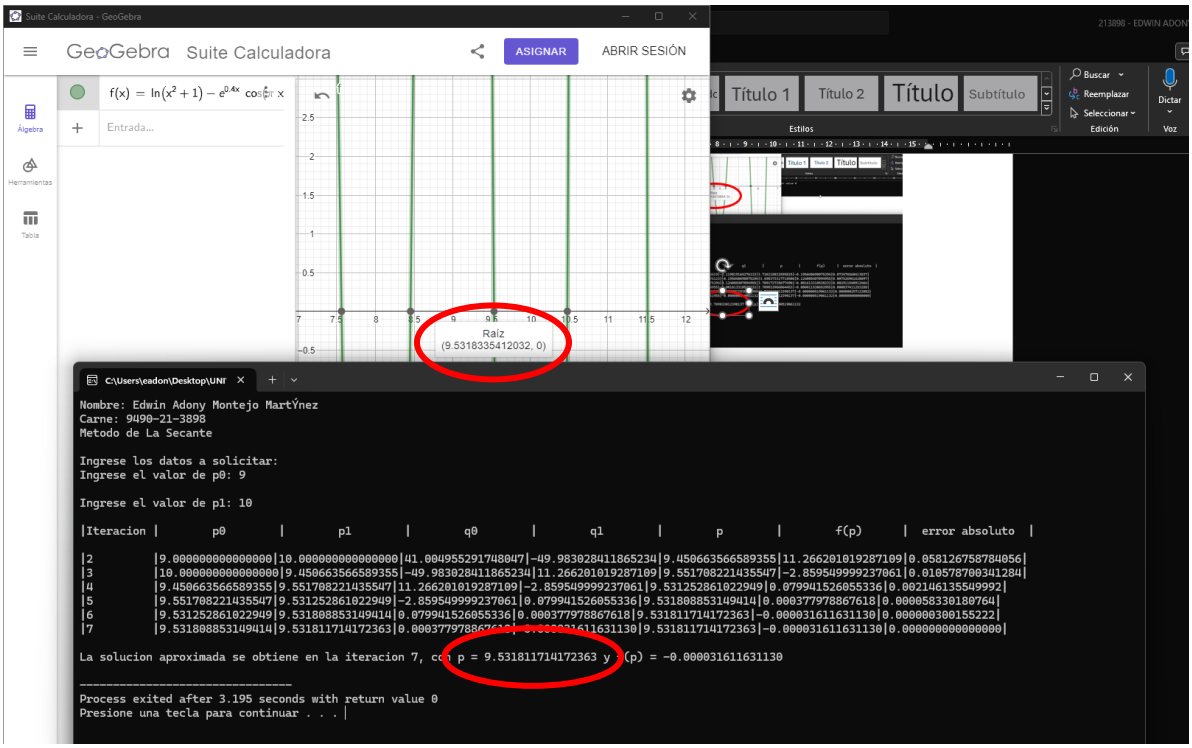
c.


GeoGebra Suite Calculadora
ASIGNAR
ABRIR SESIÓN
Título 1
Título 2
Título
Subtítulo
Raíz
(2.23832, 0)
Ingrese los datos a solicitar:
Ingrese el valor de p0: 2
Ingrese el valor de p1: 2.5
Iteracion	p0	p1	q0	q1	p	f(p)	error absoluto
2	2.000000000000000	2.500000000000000	-0.616102993488312	1.981051445007324	2.118611097335815	-0.470853745937347	0.180018365383148
3	2.500000000000000	2.118611097335815	1.981051445007324	-0.470853745937347	2.191851377487183	-0.221023976802826	0.033414803445339
4	2.118611097335815	2.191851377487183	-0.470853745937347	-0.221023976802826	2.256646871566772	0.100040107965469	0.028713174164295
5	2.191851377487183	2.256646871566772	-0.221023976802826	0.100040107965469	2.236457347869873	-0.009737233631313	0.009027457796037
6	2.256646871566772	2.236457347869873	0.100040107965469	-0.009737233631313	2.238248109817505	-0.000349769252352	0.008800730308405
7	2.236457347869873	2.238248109817505	-0.009737233631313	-0.000349769252352	2.238314867019653	0.000001492284241	0.000029824759622
8	2.238248109817505	2.238314867019653	-0.000349769252352	0.000001492284241	2.238314628601074	0.000000176725578	0.000000106517007
9	2.238314867019653	2.238314628601074	0.000001492284241	0.000000176725578	2.238314628601074	0.000000176725578	0.000000000000000
La solucion aproximada se obtiene en la iteracion 9, co p = 2.238314628601074 f(p) = 0.000000176725578
Process exited after 2.648 seconds with return value 0
Presione una tecla para continuar . . .

d.


GeoGebra Suite Calculadora
ASIGNAR
ABRIR SESIÓN
Raíz
(3.7090412013654, 0)
Nombre: Edwin Adony Montejo MartÝnez
Carne: 9490-21-3898
Metodo de La Secante
Ingrese los datos a solicitar:
Ingrese el valor de p0: 3
Ingrese el valor de p1: 4
Iteracion	p0	p1	q0	q1	p	f(p)	error absoluto
2	3.000000000000000	4.000000000000000	5.622782121734619	-2.119819164276123	3.726210832595825	-0.195640698075294	0.073476560413837
3	4.000000000000000	3.726210832595825	-2.119819164276123	-0.195640698075294	3.698373317718506	0.124005487094955	0.007526961628097
4	3.726210832595825	3.698373317718506	-0.195640698075294	0.124005487094955	3.709172725677490	-0.001613310538232	0.002911540912464
5	3.698373317718506	3.709172725677490	0.124005487094955	-0.001613310538232	3.709033966064453	-0.000011530652955	0.000037411253288
6	3.709172725677490	3.709033966064453	-0.001613310538232	-0.000011530652955	3.709033012390137	-0.000000519061132	0.000000257122082
7	3.709033966064453	3.709033012390137	-0.000011530652955	-0.000000519061132	3.709033012390137	-0.000000519061132	0.000000000000000
La solucion aproximada se obtiene en la iteracion 7, con p = 3.709033012390137 y f(p) = -0.000000519061132
Process exited after 1.739 seconds with return value 0
Presione una tecla para continuar . . .

c)


GeoGebra Suite Calculadora
ASIGNAR
ABRIR SESIÓN
Raíz
(9.5318335412032, 0)
Nombre: Edwin Adony Montejo MartÝnez
Carne: 9490-21-3898
Metodo de La Secante
Ingrese los datos a solicitar:
Ingrese el valor de p0: 9
Ingrese el valor de p1: 10
Iteracion	p0	p1	q0	q1	p	f(p)	error absoluto
2	9.000000000000000	10.000000000000000	41.004955291748047	-49.983028411865234	9.450663566589355	11.266201019287109	0.058126758784056
3	10.000000000000000	9.450663566589355	-49.983028411865234	11.266201019287109	9.551708221435547	-2.859549999237061	0.010578700341284
4	9.450663566589355	9.551708221435547	11.266201019287109	-2.859549999237061	9.531252861022949	0.079941526055336	0.002146135549992
5	9.551708221435547	9.531252861022949	-2.859549999237061	0.079941526055336	9.531808853149414	0.000377978867618	0.000058330180764
6	9.531252861022949	9.531808853149414	0.079941526055336	0.000377978867618	9.531811714172363	-0.000031611631130	0.000000300155222
7	9.531808853149414	9.531811714172363	0.000377978867618	-0.000031611631130	9.531811714172363	-0.000031611631130	0.000000000000000
La solucion aproximada se obtiene en la iteracion 7, con p = 9.531811714172363 y f(p) = -0.000031611631130
Process exited after 3.195 seconds with return value 0
Presione una tecla para continuar . . .

CODIGO

```
#include <iostream>
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
#include <math.h>
#include <cstdlib>
#include <windows.h>
#include <cmath>

using namespace     std;

int i, IT, salir;
float p, p0, p1, q0, q1, TOL, errAbs;
const double e = 2.71828182845904525356;
const double pi = 3.1416;

float f(float x){

        return log(pow(x,2)+1)-pow(e,0.4*x)*cos(pi*x);
}



int iteracion(){

        printf("|Iteracion |      p0      |      p1      |      q0      |      q1      |      p      |      f(p)
|  error absoluto  |\n\n");

}
```

```
int pedirDatos(){

	printf("Nombre: Edwin Adony Montejo Martínez\n");
	printf("Carne: 9490-21-3898\n");
	printf("Metodo de La Secante\n");
	printf("\n");
	printf("Ingrese los datos a solicitar: \n");
	printf("Ingrese el valor de p0: ");scanf("%f",&p0);
	printf("\n");
	printf("Ingrese el valor de p1: ");scanf("%f",&p1);
	printf("\n");
}

int salida(int caso){
	if(caso ==0){
		printf("\n");
		printf("FRACASO, se superaron las cantidades maximas de iteraciones
permitidas \n");
		printf("sin que se alcanzara una aproximación valida. \n");
		printf("\n");
	}
	else{
		printf("\n");
		printf("La solucion aproximada se obtiene en la iteracion %i, con p =
%4.15f y f(p) = %4.15f\n", i, p, f(p));

	}
}
```

```
int metodo(){

        salir = 0;
        i = 1;
        q0 = f(p0);
        q1 = f(p1);
        iteracion();
        TOL=pow(10,-10);
        IT=100;
        do{
                i++;
                p = (p1 - ((q1 * (p1-p0)) / (q1-q0)));
                errAbs = abs(p - p1)/p;

                printf("|%i       |%4.15f|%4.15f|%4.15f|%4.15f|%4.15f|%4.15f|%4.15f|\n",
i, p0, p1, q0, q1, p, f(p), errAbs);

                        if(f(p) == 0 || abs(p - p1) < TOL){
          salir = 1;
          salida(1);
       }

                        else{
                        if(salir == 0){
                                p0 = p1;
                                q0 = q1;
                                p1 = p;
                                q1 = f(p);
```

```
                        }
        }

          }while((i<IT) && (salir==0));

          if(salir == 0 ){
                  salida (0);
          }

          return(0);

          }

main(){

          pedirDatos();

          metodo();

}
```