```
disp('Grupo 5')
Grupo 5
disp('NRC:7543')
NRC:7543
date

ans =

    '23-Nov-2021'

clock

ans =

   1.0e+03 *

  Columns 1 through 5

    2.0210    0.0110    0.0230    0.0230    0.0510

  Column 6

    0.0328

clc
clear
clc
disp('Funcion Taylor')
Funcion Taylor
[fx,Rx,R,r] = ftaylor('exp(cos(x))',2);
<strong>Impresion de datos.</strong>
<strong>f(x):</strong> exp(cos(x))
<strong>n:</strong> 2
<strong>t(x):</strong> exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)
<strong>Rt(x):</strong> -(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6
<strong>     Impresion de datos.
</strong><strong>f(x): </strong>exp(cos(x))

<strong>n: </strong>    2

<strong>t(x): </strong>exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)

<strong>Rt(x): </strong>-(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6

Elapsed time is 0.708588 seconds.
{ Output argument "varargout{3}" (and maybe others) not
assigned during call to "ftaylor".
}
disp('Aqui va la fig 1')
Aqui va la fig 1
```
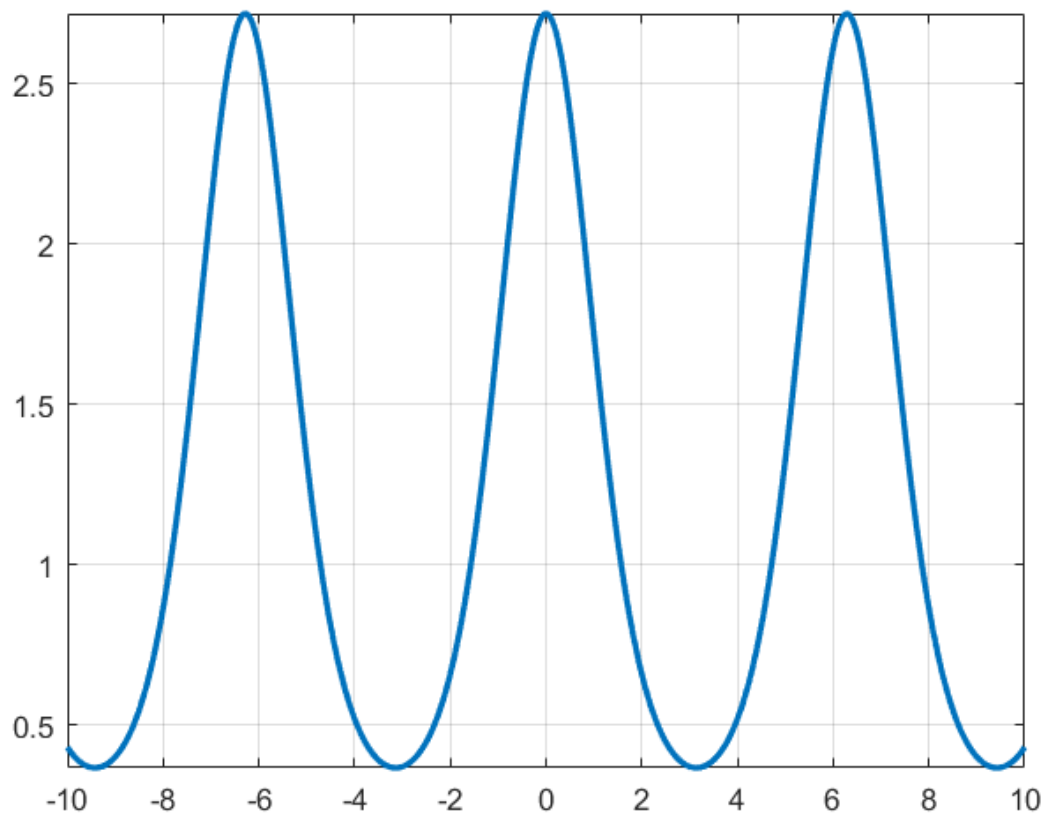
```
[fx,Rx] = ftaylor('exp(cos(x))',2);
```
Impresion de datos.
f(x): exp(cos(x))
n: 2
t(x): exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)
Rt(x): -(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6
   Impresion de datos.
f(x): exp(cos(x))

n: 2

t(x): exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)

Rt(x): -(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6

Elapsed time is 0.847435 seconds.
[fx,Rx,R,r] = ftaylor('exp(cos(x))',2,6);
1

   Impresion de datos.
f(x): exp(cos(x))

n: 2
```

**t(x):** exp(cos(6)) - x^2*(x -
6)^2*((cos(6)*exp(cos(6)))/2 - (exp(cos(6))*sin(6)^2)/2) -
x*exp(cos(6))*sin(6)*(x - 6)

**Rt(x):** -(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6

**c:**       6

**R:**       1

**r:**       0

Elapsed time is 1.268188 seconds.
disp('Aqui va la fig 2')
Aqui va la fig 2



[fx,Rx,R,r] = ftaylor('exp(cos(x))',2,8);
1

**    Impresion de datos.
**f(x): exp(cos(x))

**n:**       2

**t(x):** exp(cos(8)) - x^2*(x -
8)^2*((cos(8)*exp(cos(8)))/2 - (exp(cos(8))*sin(8)^2)/2) -
x*exp(cos(8))*sin(8)*(x - 8)

**Rt(x):** -(x^3*(exp(cos(e))*cos(e) - exp(cos(e))*sin(e)^2))/6

**c:**      8

**R:**      1

**r:**      0

```
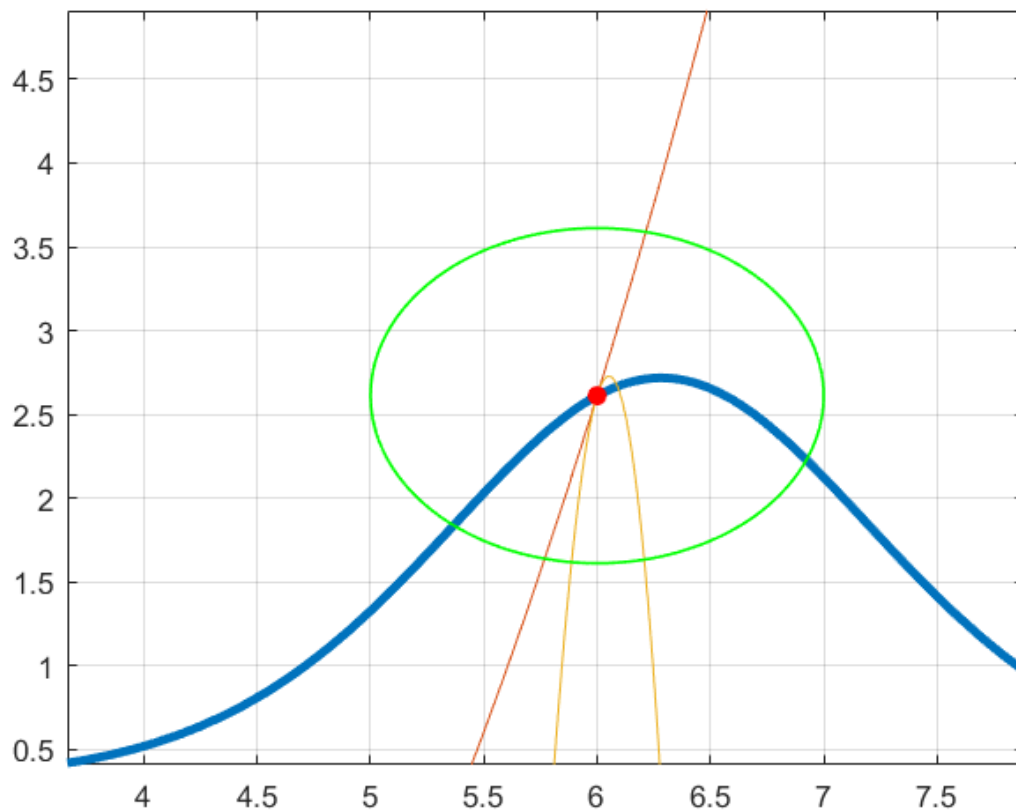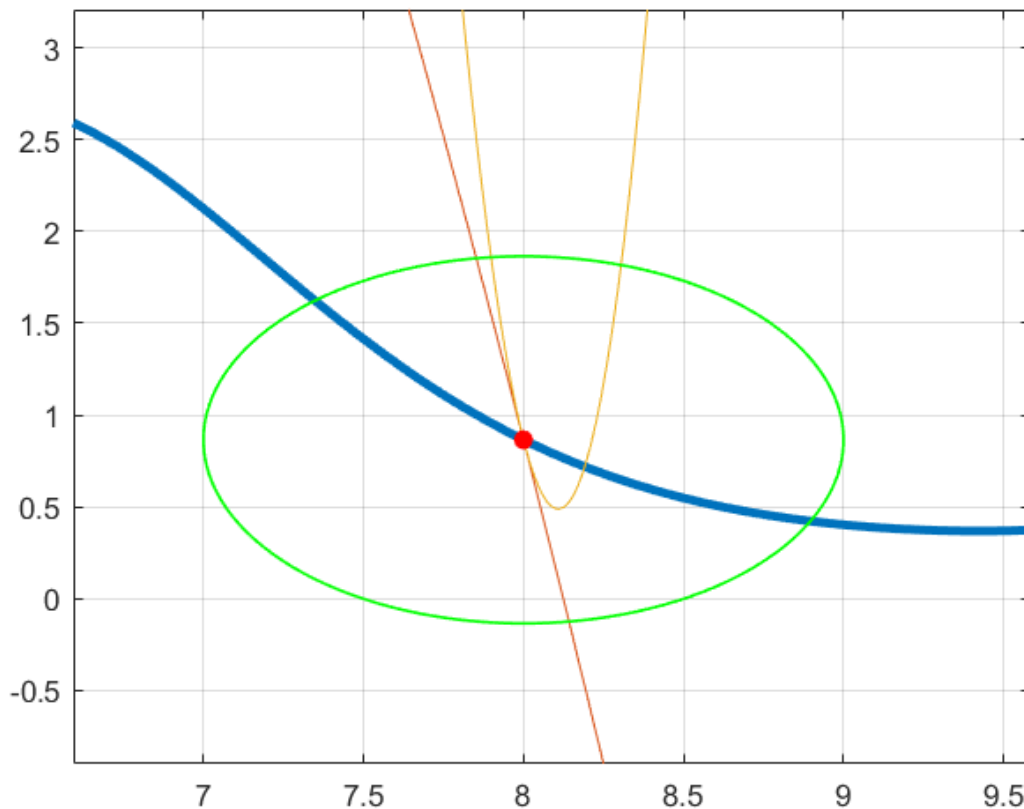Elapsed time is 1.177980 seconds.
disp('Aqui va la fig 3')
Aqui va la fig 3
```



```
[fx,Rx,R,r] = ftaylor('exp(cos(x))',2,8,2,3);
{ Error using <a
href="matlab:matlab.internal.language.introspective.errorDocCallback('sym
engine')" style="font-weight:bold">symengine</a>
Unable to convert expression into double array.

Error in <a
href="matlab:matlab.internal.language.introspective.errorDocCallback('sym
/double', 'C:\Program
Files\Polyspace\R2020a\toolbox\symbolic\symbolic\@sym\sym.m', 698)"
style="font-weight:bold">sym/double</a> (<a href="matlab:
opentoline('C:\Program
Files\Polyspace\R2020a\toolbox\symbolic\symbolic\@sym\sym.m',698,0)">line
698</a>)
        Xstr = mupadmex('symobj::double', S.s,
        0);
```

```
Error in <a
href="matlab:matlab.internal.language.introspective.errorDocCallback('fta
ylor>taylor4', 'C:\Users\ismae\OneDrive\Documentos\MATLAB\Met.
Numericos\Grupal\Serie Taylor\ftaylor.m', 261)" style="font-
weight:bold">ftaylor>taylor4</a> (<a href="matlab:
opentoline('C:\Users\ismae\OneDrive\Documentos\MATLAB\Met.
Numericos\Grupal\Serie Taylor\ftaylor.m',261,0)">line 261</a>)
        sigma(i+1)=sum(double(s));

Error in <a
href="matlab:matlab.internal.language.introspective.errorDocCallback('fta
ylor', 'C:\Users\ismae\OneDrive\Documentos\MATLAB\Met.
Numericos\Grupal\Serie Taylor\ftaylor.m', 55)" style="font-
weight:bold">ftaylor</a> (<a href="matlab:
opentoline('C:\Users\ismae\OneDrive\Documentos\MATLAB\Met.
Numericos\Grupal\Serie Taylor\ftaylor.m',55,0)">line 55</a>)
            [varargout{1},varargout{2},varargout{3},varargout{4}]
            = taylor4(fx,n,c,e,N);
}
[fx,Rx] = ftaylor('exp(cos(x))',2);
<strong>Impresion de datos.</strong>
<strong>f(x):</strong> exp(cos(x))
<strong>n:</strong> 2
<strong>t(x):</strong> exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)
<strong>Rt(x):</strong> -(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6
<strong>    Impresion de datos.
</strong><strong>f(x): </strong>exp(cos(x))

<strong>n: </strong>    2

<strong>t(x): </strong>exp(cos(c)) - x^2*((exp(cos(c))*cos(c))/2 -
(exp(cos(c))*sin(c)^2)/2)*(c - x)^2 + x*exp(cos(c))*sin(c)*(c - x)

<strong>Rt(x): </strong>-(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6

Elapsed time is 0.607654 seconds.
[fx,Rx,R,r] = ftaylor('exp(cos(x))',2,8);
1

<strong>    Impresion de datos.
</strong><strong>f(x): </strong>exp(cos(x))

<strong>n: </strong>    2

<strong>t(x): </strong>exp(cos(8)) - x^2*(x -
8)^2*((cos(8)*exp(cos(8)))/2 - (exp(cos(8))*sin(8)^2)/2) -
x*exp(cos(8))*sin(8)*(x - 8)

<strong>Rt(x): </strong>-(x^3*(exp(cos(e))*cos(e) -
exp(cos(e))*sin(e)^2))/6

<strong>c: </strong>    8

<strong>R: </strong>    1
```

```
<strong>r: </strong>      0

Elapsed time is 0.999772 seconds.
diary off
```