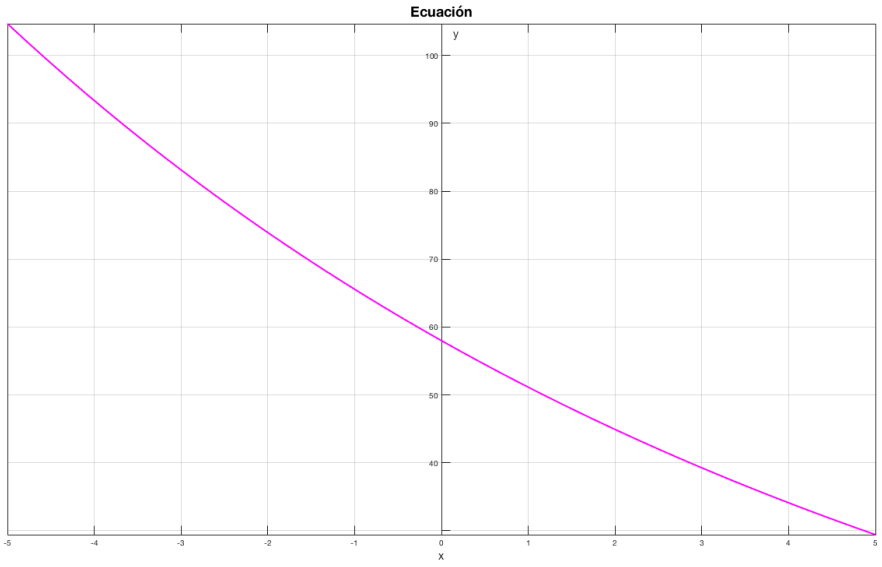
```
%Para la publicación del documento se utilizaron los siguientes datos:
eqnstr='667.38/x*(1-exp(-0.146843*x))-40';
xlstr='-1';
xhstr='16';
syms x;
%Para un uso general se descomentan las siguientes líneas
%eqnstr=input('Ingrese su función: ','s');
eqn(x)=str2sym(eqnstr);
%xlstr=input('Ingrese el límite menor para la cuatrisección: ','s');
%xhstr=input('Ingrese el límite superior para la cuatrisección:
 ','s');
xl=str2double(xlstr);
xh=str2double(xhstr);
found=false;
xr1ol=0;
xr2ol=0;
xr3ol=0;
if eqn(xl)*eqn(xh)<0
    fprintf('aa          bb           ppm1           ppm2
 ppm3            err1          err2             err3\n');
    while found==false
        xr1=xl+(xh-xl)/4;
        xr2=xl+(xh-xl)/2;
        xr3=xl+(xh-xl)*3/4;
        fprintf('%f     %f      %f      %f      %f     %f     %f
     %f\n',xl,xh,xr1,xr2,xr3,abs(xr1-xr1ol),abs(xr2-xr2ol),abs(xr3-
xr3ol));
        if eqn(xl)*eqn(xr1)<0
            xh=xr1;
        elseif eqn(xr1)*eqn(xr2)<0
            xl=xr1;
            xh=xr2;
        elseif eqn(xr2)*eqn(xr3)<0
            xl=xr2;
            xh=xr3;
        elseif eqn(xr3)*eqn(xh)<0
            xl=xr3;
        end
        xr1ol=xr1;
        xr2ol=xr2;
        xr3ol=xr3;
        if abs(eqn(xl)*eqn(xh))<0.000000001
            found=true;
            if eqn(xl)<0.001
                answer=xl;
            else
                answer=xh;
            end
        end
    end
    figure('units','normalized','outerposition',[0 0 1 1]);
    fplot(eqn);
```

```
    grid
    xlabel('x','FontSize',14);
    ylabel('y','FontSize',14);
    title('Ecuación','FontSize',18);
    ax=gca;
    ax.XAxisLocation='origin';
    ax.YAxisLocation='origin';
    ax.Children.Color=[1 0 1];
    ax.Children.LineWidth=2;
    answer
else
    disp('Los límites deben ser de signo contrario');
end
```

```
aa          bb          ppm1          ppm2          ppm3
 err1          err2          err3
-1.000000    16.000000     3.250000     7.500000     11.750000
 3.250000     7.500000     11.750000
11.750000    16.000000    12.812500    13.875000    14.937500
   9.562500     6.375000     3.187500
13.875000    14.937500    14.140625    14.406250    14.671875
   1.328125     0.531250     0.265625
14.671875    14.937500    14.738281    14.804688    14.871094
   0.597656     0.398438     0.199219
14.738281    14.804688    14.754883    14.771484    14.788086
   0.016602     0.033203     0.083008
14.771484    14.788086    14.775635    14.779785    14.783936
   0.020752     0.008301     0.004150
14.779785    14.783936    14.780823    14.781860    14.782898
   0.005188     0.002075     0.001038
14.779785    14.780823    14.780045    14.780304    14.780563
   0.000778     0.001556     0.002335
14.780045    14.780304    14.780109    14.780174    14.780239
   0.000065     0.000130     0.000324
14.780174    14.780239    14.780190    14.780207    14.780223
   0.000081     0.000032     0.000016

answer =

   14.7802
```



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