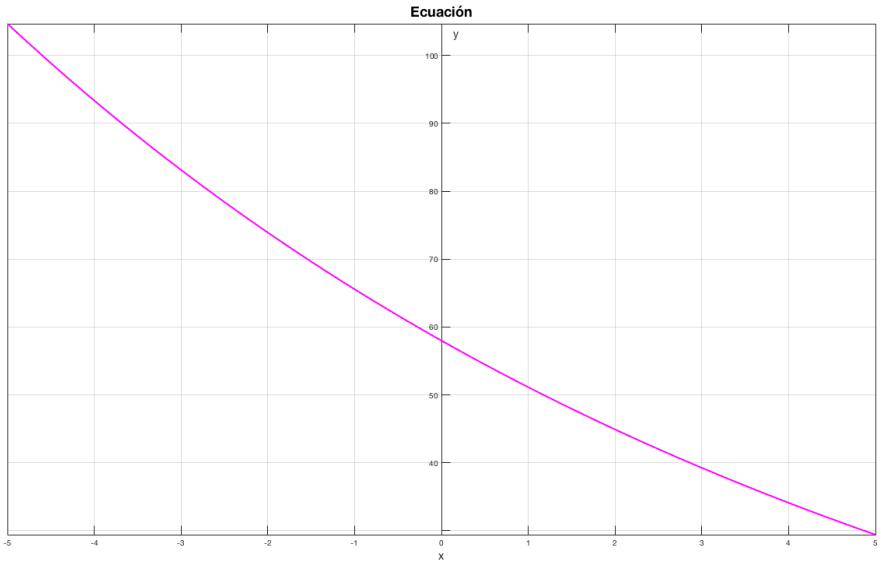
```
%Para la publicación del documento se utilizaron los siguientes datos:
eqnstr='667.38/x*(1-exp(-0.146843*x))-40';
xlstr='-1';
xhstr='16';
syms x;
%Para un uso general se descomentan las siguientes líneas
%eqnstr=input('Ingrese su función: ','s');
eqn(x)=str2sym(eqnstr);
%xlstr=input('Ingrese el límite menor para la trisección: ','s');
%xhstr=input('Ingrese el límite superior para la trisección: ','s');
xl=str2double(xlstr);
xh=str2double(xhstr);
found=false;
xr1ol=0;
xr2ol=0;
if eqn(xl)*eqn(xh)<0
    fprintf('aa            bb             ppm1             ppm2
     err1           err2\n');
    while found==false
        xr1=xl+(xh-xl)/3;
        xr2=xl+(xh-xl)*2/3;
        fprintf('%f     %f      %f       %f      %f       %f
\n',xl,xh,xr1,xr2,abs(xr1-xr1ol),abs(xr2-xr2ol));
        if eqn(xl)*eqn(xr1)<0
            xh=xr1;
        elseif eqn(xr1)*eqn(xr2)<0
            xl=xr1;
            xh=xr2;
        elseif eqn(xr2)*eqn(xh)<0
            xl=xr2;
        end
        xr1ol=xr1;
        xr2ol=xr2;
        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           err1
        err2
-1.000000     16.000000     4.666667       10.333333      4.666667
    10.333333
10.333333     16.000000     12.222222       14.111111      7.555556
     3.777778
14.111111     16.000000     14.740741       15.370370      2.518519
     1.259259
14.740741     15.370370     14.950617       15.160494      0.209877
     0.209877
14.740741     14.950617     14.810700       14.880658      0.139918
     0.279835
14.740741     14.810700     14.764060       14.787380      0.046639
     0.093278
14.764060     14.787380     14.771834       14.779607      0.007773
     0.007773
14.779607     14.787380     14.782198       14.784789      0.010364
     0.005182
14.779607     14.782198     14.780470       14.781334      0.001727
     0.003455
14.779607     14.780470     14.779895       14.780183      0.000576
     0.001152
14.780183     14.780470     14.780279       14.780374      0.000384
     0.000192
14.780183     14.780279     14.780215       14.780247      0.000064
     0.000128

answer =

   14.7802
```



Published with MATLAB® R2018a