# ACTIVIDAD METODO DE ROMBERG

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*Encontrar la integral de y=1/x de 7 a 9.*

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clc
clear

 f = @(x) 1/x;
 a = 7;
 b = 9;
 n = 4;

 h = b-a;
 r = zeros(2,n+1);

 r(1,1) = (f(a)+f(b))/2*h;
 fprintf('\nTabla de Integración Romberg:\n');
 fprintf('\n %11.8f\n\n', r(1,1));

 for i = 2:n
    sum = 0;
    for k = 1:2^(i-2)
       sum = sum+f(a+(k-0.5)*h);
    end
    r(2,1) = (r(1,1)+h*sum)/2;

    for j = 2:i
       l = 2^(2*(j-1));
       r(2,j) = r(2,j-1)+(r(2,j-1)-r(1,j-1))/(l-1);
    end

     for k = 1:i
       fprintf(' %11.8f',r(2,k));
    end

    fprintf('\n\n');
    h = h/2;
    for j = 1:i
       r(1,j) = r(2,j);
    end
 end
```