
gauss_quadrature.m

```
function I= gauss_quadrature(h,a,b)
% Two point method
for i= 1:length(h) % looping through all step size
    x_l=a;
    t0= 1./sqrt(3);
    t1= -1./sqrt(3);
    I_temp=0;
    for j=1:i
        x_u= x_l + h(i); % upper bound of interval
        I_temp= I_temp + (f((x_u - x_l).*t0./2 + (x_l + x_u)./2)
+ f((x_u - x_l).*t1./2 + (x_l + x_u)./2)).*(x_u - x_l)./2; % Gauss
Quadrature formula
        x_l= x_u; % updating lower bound of next interval
    end
    I(i) = I_temp; % storing integral value for diff. step size
end
end
```

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