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% Numerical Integration for LTE
% 4N1RU0H M17R4 201951024

% function for LTE numerical integration, decides which rule to use :-
function fval = numericalIntegrationSingle(f, a, b, choice)
    switch choice
        case 1
            fval = trap(f, a, b);
        case 2
            fval = oneThird(f, a, b);
        case 3
            fval = threeEighth(f, a, b);
    end
end

% Trapezoidal Rule function :-
function fval = trap(f, a, b)
    h = b - a;
    fval = h.*(f(a) + f(a + h))./2;
end

% Simpson's One Third Rule function :-
function fval = oneThird(f, a, b)
    h = (b - a)./2;
    fval = h.*(f(a) + 4.*f(a + h) + f(a + 2.*h))./3;
end

% Simpson's Three Eighth Rule function :-
function fval = threeEighth(f, a, b)
    h = (b - a)./3;
    fval = 3.*h.*(f(a) + 3.*f(a + h) + 3.*f(a + 2.*h) + f(a +
    3.*h))./8;
end

Not enough input arguments.

Error in numericalIntegrationSingle (line 6)
    switch choice

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