6.  Can you program the Simpson rule to calculate the integral in the above question? The length of the subinterval h is used as an input parameter.

>> clear

>>

x0 = 0;

x1 = 2;

h =input('please input h: ');

x\_val = [0 1 2]; %Define x\_val

y=zeros(1,3); % set an empty matrix to store y

total = 0;

for c=1:1:3

y\_func = exp(2\*x\_val(c))\*sin(3\*x\_val(c));

end

y(c)= y\_func;

totals = (y(1) + 4\*y(2) + y(3)) \* h /3;

disp (['Simpson Rule: ' num2str(totals)])

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please input h: 0.01

Simpson Rule: -0.050852

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