

```
1 function [I] = Simpson(x, y)
2 % Numerical evaluation of integral by Simpson's 1/3 Rule
3 % Inputs
4 %   x = the vector of equally spaced independent variable
5 %   y = the vector of function values with respect to x
6 % Outputs:
7 %   I = the numerical integral calculated
8
9 %Check for valid input size
10 szx = size(x);
11 szy = size(y);
12 if isequal(szx,szy)
13     x = x;
14     y = y;
15 else
16     error("Inputs are not the same size");
17 end
18
19
20 %CHECK IF X IS EQUALLY SPACED
21 space = diff(x)
22 if all(space == space(1))
23     x = x;
24 else
25     error("X is not equally spaced");
26 end
27
28 end
```