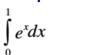
Exemplo 4: Calcular



usando a regra de Simpson com n = 10.

a) Número de intervalos:

n=	10
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b) Tamanho do intervalo

a=	0
b=	1

h= 0.	h=	0.1
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c) iterações:

$$S(h_n) = \frac{h}{3} \left[f(x_0) + 4f(x_1) + 2f(x_2) + 4f(x_3) + 2f(x_4) + \dots + 4f(x_{n-1}) + f(x_n) \right]$$

i	X' _i	f(x';)	C _i	c _i *f(x' _i)
0	0,0000	1,0000	1	1,0000
1	0,1000	1,1052	4	4,4207
2	0,2000	1,2214	2	2,4428
3	0,3000	1,3499	4	5,3994
4	0,4000	1,4918	2	2,9836
5	0,5000	1,6487	4	6,5949
6	0,6000	1,8221	2	3,6442
7	0,7000	2,0138	4	8,0550
8	0,8000	2,2255	2	4,4511
9	0,9000	2,4596	4	9,8384
10	1,0000	2,7183	1	2,7183
Soma				51,5485

$$S(h_{10}) = 0.0333 * 51.5485 = 1.71828$$