

Spreadsheet for approximating  $\int_a^b e^{-x^2} dx$  by Simpson's Rule

	A	B	C	D	E
1					
2		a=	0	dx=	=(C3-C2)/C4
3		b=	1	approx=	=@SUM(C7..C17)*E2/3
4		n=	10		
5					
6	i	x_i	(1or2or4)f(x_i)		
7	0	=C2	=@EXP(-B7*B7)		
8	=A7+1	=B7+\$E\$2	=4*@EXP(-B8*B8)		
9	=A8+1	=B8+\$E\$2	=2*@EXP(-B9*B9)		
10	=A9+1	=B9+\$E\$2	=4*@EXP(-B10*B10)		
11	=A10+1	=B10+\$E\$2	=2*@EXP(-B11*B11)		
12	=A11+1	=B11+\$E\$2	=4*@EXP(-B12*B12)		
13	=A12+1	=B12+\$E\$2	=2*@EXP(-B13*B13)		
14	=A13+1	=B13+\$E\$2	=4*@EXP(-B14*B14)		
15	=A14+1	=B14+\$E\$2	=2*@EXP(-B15*B15)		
16	=A15+1	=B15+\$E\$2	=4*@EXP(-B16*B16)		
17	=A16+1	=B16+\$E\$2	=@EXP(-B17*B17)		

Numbers resulting from the above spreadsheet

	A	B	C	D	E
1					
2		a=	0	dx=	0.1
3		b=	1	approx=	0.7468249
4		n=	10		
5					
6	i	x_i	(1or2or4)f(x_i)		
7	0	0	1.0000000		
8	1	0.1	3.9601993		
9	2	0.2	1.9215789		
10	3	0.3	3.6557247		
11	4	0.4	1.7042876		
12	5	0.5	3.1152031		
13	6	0.6	1.3953527		
14	7	0.7	2.4505056		
15	8	0.8	1.0545848		
16	9	0.9	1.7794323		
17	10	1.0	0.3678794		