

$$I = \int_0^1 e^x dx = e - 1$$

| | $I = \int_0^1 e^x dx$ | | $I = \int_0^{\frac{3}{2}} \frac{e^{-1+\sqrt{1+2y}}}{\sqrt{1+2y}} dy$ | |
|------------|-----------------------|--------------|----------------------------------------------------------------------|--------------|
| N | I ¹ | σ_N^1 | I ¹ | σ_N^1 |
| 10 | 1.78833 | 0.15294 | 1.80129 | 0.04020 |
| 100 | 1.70869 | 0.05002 | 1.72632 | 0.01038 |
| 1000 | 1.72353 | 0.01550 | 1.71543 | 0.00348 |
| 10 000 | 1.72358 | 0.00491 | 1.71747 | 0.00109 |
| 100 000 | 1.71991 | 0.00155 | 1.71787 | 0.00034 |
| 1 000 000 | 1.71824 | 0.00049 | 1.71830 | 0.00010 |
| 10 000 000 | 1.71818 | 0.00015 | 1.71838 | 0.00003 |
| Exact | 1.7182818 | | | |

¹ Particular value depends on the random numbers generator.

