

## 1.1 Scientific notation and rounding

### 1.1.1 Switch the TI-Nspire to scientific mode

Recall that any number can be written in scientific notation (or normal form):


$$\pm[\textit{number between 1 and 9.999...}] \times 10^{\textit{integer}}.$$

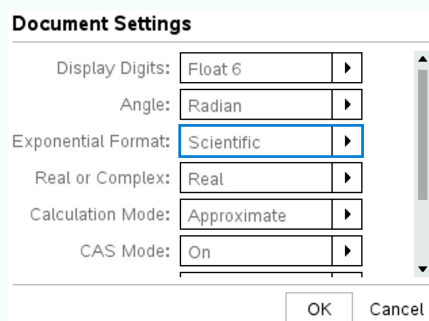
For example,  $142857 = 1.42857 \times 10^5$ .


The TI-Nspire uses the symbol **E** for scientific notation. It means  $\times 10^{\dots}$ . For example, if you compute  $4.51 * 10^{11}$  the calculator should display **4.51.E11**.



Note that for the IB, you must write numbers using  $\times 10^{\dots}$  format, and not **E** symbols

By default, any number between 0.001 and 999'999'999 will not be written in scientific notation. You can change that so any number is written in scientific notation. Press  and select Settings & Status > Document Settings. Choose Exponential Format as Scientific as below :



Press . Typing 142857 should thus display **1.42857.E5**.

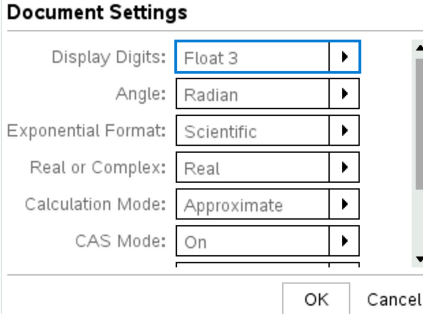
### 1.1.2 Rounding up automatically



You cannot round up to  $n$  significant figures directly with the calculator (it basically doesn't know what significant figures are), but it can round up to any decimals between 0 and 9.

If you are struggling with rounding, you can set-up the calculator to display any amount of decimals (between 0 and 9).

Suppose you want to display a number up to 3 decimals. To do so, press  and select Settings & Status > Document Settings. Choose Display Digits as Float 3 as below :



**Document Settings**

Display Digits: Float 3

Angle: Radian

Exponential Format: Scientific

Real or Complex: Real

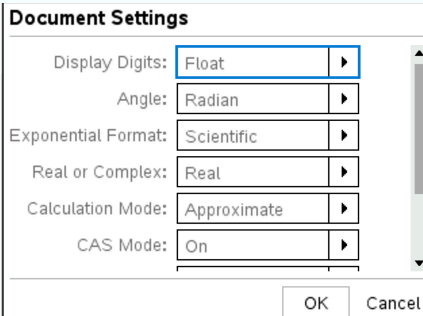
Calculation Mode: Approximate

CAS Mode: On

OK Cancel

Press  .

If you type 0.1234 the calculator should display **0.123** or **1.23.E-1** (scientific notation) . If you want to switch back do the same process but choose Float instead of Float 3.



**Document Settings**

Display Digits: Float

Angle: Radian

Exponential Format: Scientific

Real or Complex: Real

Calculation Mode: Approximate

CAS Mode: On

OK Cancel

Press  .