

Scientific Notation

For numbers greater than 1	For numbers less than 1
300000000.0	0.00000250
3.000000000 Put decimal point to the right of the first non-zero number 8 places Count the number of places the decimal point moved left, use number as exponent ($\times 10^{\text{left places}}$) 3.000000000 $\times 10^8$ 10^8 This can now be expressed with two digits after removing extra zeros 3.0×10^8 <i>This value is the speed of light in m/s!</i>	0000002.50 Put decimal point to the right of the first non-zero number 6 places Count the number of places the decimal moved right, use as exponent ($\dots \times 10^{\text{right places}}$) 0000002.5 $\times 10^{-6}$ <i>note that it is a (-6) since initial number is less than one</i> Drop the extra zeros 2.5×10^{-6} <i>This is the average mass of an ant in kg!</i>
Adding/Subtracting	Multiplying/Dividing
4.215×10^{-2} $+ 3.2 \times 10^{-4}$ 4.215×10^{-2} $+ 0.032 \times 10^{-2}$ <hr style="width: 50%; margin-left: 0;"/> 4.247 4.247×10^{-2} Convert all numbers to the same power of 10. Add/subtract digits Put in scientific notation	$(3.4 \times 10^6) \times (4.2 \times 10^3)$ $(3.4) \times (4.2) = 14.28$ $10^{(6+3)} = 10^9$ 14.28×10^9 1.428×10^{10} Digit terms are multiplied/divided in the normal way Exponents are added for multiplication (subtracted for division) Combine digits and exponent terms Put in scientific notation
Using the Calculator	
Punch the digit number into your calculator Push the EE or EXP button. Do NOT use the 'x' times button! Enter the exponent number. Use +/- button to change sign.	