

Scientific Notation always involves having a number that is between 1 and 10 multiplied by a Power of 10.

 “Handy” Helpful Tip 1  Keep in mind at all times the following: Normal Numbers bigger than 1, or large numbers, always have a POSITIVE Power of 10. $6.2 \times 10^1 = 62$ $1.496 \times 10^8 = 149\,600\,000$ Values smaller than 1, usually decimal values, always have a NEGATIVE Power of 10. $2.31 \times 10^{-3} = 0.00231$ $6.234 \times 10^{-1} = 0.6234$	 “Handy” Helpful Tip 2  The Power of 10 value gives us key information about how many places to move the Decimal Point to make Number values. $2.31 \times 10^{-3} = 0.00231$ Move the Decimal Point three to the Left. $1.496 \times 10^8 = 149\,600\,000$ Move the Decimal Point eight to the Right
Positive exponents = numbers > 1	Negative exponents = numbers < 1
9.61×10^0 5.93566516×10^3 7.57×10^5 7.95651987×10^5 9.66460984×10^6	9.08014×10^{-2} 5.72×10^{-4} $2.89648579 \times 10^{-8}$ 2.15×10^{-3} 7.81×10^{-5}

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Note: For a number to be properly written in scientific notation, there must be only one digit in front of the decimal point. 1.1×10^6 is good, 11×10^6 is incorrect

Numbers into Scientific Notation 1000 The Number is Greater than 10, so the Exponent will be Positive. = 1 0 0 0 3 places Move the Decimal point to the LEFT to create a number between 1 and 10. = 1.0 0 0 Remove Zeroes that are not needed. = 1×10^3 or 10^3 ✓ We moved 3 places so Power of 10 is three : 10^3	Numbers into Scientific Notation 0.0050 The Number is a decimal less than 1, so the Exponent will be Negative. = 0 .0 0 5 0 3 places Move the Decimal point to the RIGHT to create a number between 1 and 10. = 0 0 0 5.0 Remove Zeroes that are not needed. NEVER REMOVE ZEROES THAT CAME AFTER A DECIMAL POINT. = 5.0×10^{-3} ✓ We moved 3 places so Power of 10 is three : 10^{-3}
Normal Numbers bigger than 1, or large numbers, always have a POSITIVE Power of 10.	Values smaller than 1, usually decimal values, always have a NEGATIVE Power of 10.
2000 99 43.9 795651.987 823762188	0.000757 0.536 0.57200 0.00106 0.000000459