





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

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

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