


Cornell Notes 	Topic/Objective: <b>Empirical and Molecular</b>	Name:
	<b>Formulas</b>	Class/Period: <b>Chemistry</b>
		Date:

Essential Questions: **How can you determine the formula for a compound?**

Questions:	Notes:
<b>What is an empirical formula?</b>	
<b>What are the steps for calculating an empirical formula?</b>	1.
	2.
	3.
	4.
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="text-align: center;">1 <sup>+1</sup><sub>-1</sub></p> <p style="text-align: center;"><b>H</b></p> <p style="text-align: center;">Hydrogen</p> <p style="text-align: center;">1.008 <sub>1s</sub></p> </div>	Methyl acetate is a solvent commonly used in some paints, inks, and adhesives. Determine the empirical formula for methyl acetate, which has the following chemical analysis: 48.64% carbon, 8.16% hydrogen, and 43.20% oxygen.
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="text-align: center;">6 <sup>+2</sup><sub>+4</sub><sup>-4</sup></p> <p style="text-align: center;"><b>C</b></p> <p style="text-align: center;">Carbon</p> <p style="text-align: center;">12.011 <sub>p</sub></p> </div>	
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="text-align: center;">8 <sup>-2</sup></p> <p style="text-align: center;"><b>O</b></p> <p style="text-align: center;">Oxygen</p> <p style="text-align: center;">15.999 <sub>p</sub></p> </div>	

<p><b>What is a molecular formula?</b></p>	
<p><b>What are the steps for calculating an empirical formula?</b></p>	<ol style="list-style-type: none"> <li>1. Change percent to grams</li> <li>2. Divide each element by its atomic mass (changes value to moles)</li> <li>3. Divide each mole value by the smallest mole value</li> <li>4. If you don't have whole numbers for your moles multiple until they are whole</li> <li>5.</li> </ol>
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">1 <sup>+1</sup> -1</p> <p style="text-align: center;">H</p> <p style="text-align: center;">Hydrogen 1.008 <sub>1s</sub></p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">6 <sup>+2</sup> <sup>+4</sup> -4</p> <p style="text-align: center;">C</p> <p style="text-align: center;">Carbon 12.011 <sub>p</sub></p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">8 <sup>-2</sup></p> <p style="text-align: center;">O</p> <p style="text-align: center;">Oxygen 15.999 <sub>p</sub></p> </div> </div>	<p>Succinic acid is a substance produced by lichens. Chemical analysis indicates it is composed of 40.68% carbon, 5.08% hydrogen, and 54.24% oxygen and has a molar mass of 118.1 g/mol. Determine the empirical and molecular formulas for succinic acid.</p>
<p><b>Summary:</b></p>	