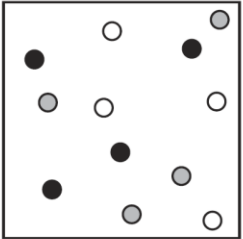
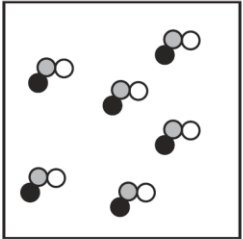
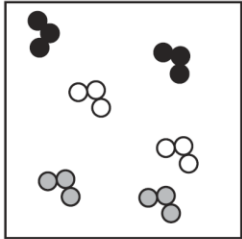
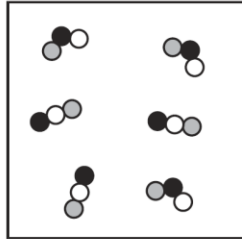
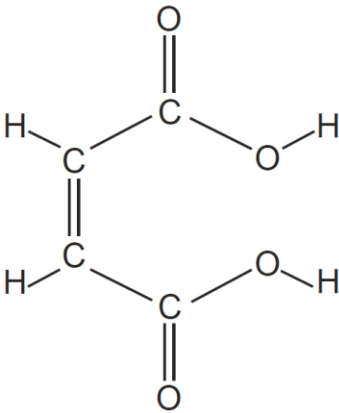
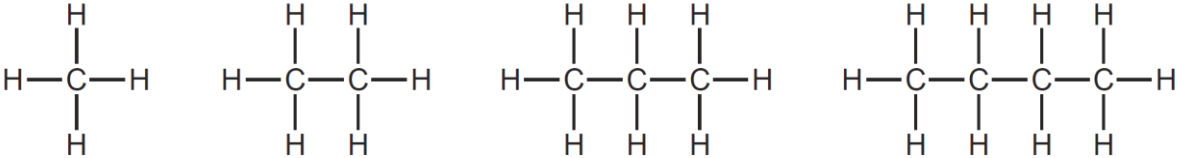
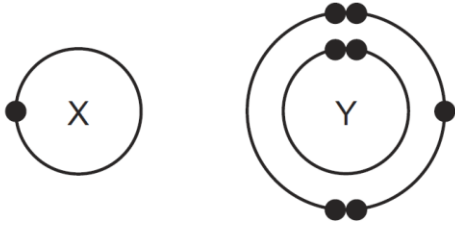


NO:	FINDING MOLECULAR FORMULA-SET-1															
1	<p>A compound, X, contains 40.0% carbon, 6.7% hydrogen and 53.3% oxygen by mass.</p> <p>The relative molecular mass, M_r, of X is 60.</p> <p>What is the molecular formula of X?</p> <p>A CH₂O B CH₄O C C₂H₄O D C₂H₄O₂</p>															
Ms-1	D															
2	<p>The relative molecular mass of an alcohol is 88.</p> <p>Its percentage composition by mass is: C, 54.5%; H, 9.1%; O, 36.4%.</p> <p>Which row shows the empirical formula and molecular formula for this alcohol?</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>empirical formula</th> <th>molecular formula</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>C₂H₄O</td> <td>C₂H₄O</td> </tr> <tr> <td>B</td> <td>C₂H₄O</td> <td>C₄H₈O₂</td> </tr> <tr> <td>C</td> <td>C₄H₈O₂</td> <td>C₄H₈O₂</td> </tr> <tr> <td>D</td> <td>C₄H₈O₂</td> <td>C₂H₄O</td> </tr> </tbody> </table>		empirical formula	molecular formula	A	C ₂ H ₄ O	C ₂ H ₄ O	B	C ₂ H ₄ O	C ₄ H ₈ O ₂	C	C ₄ H ₈ O ₂	C ₄ H ₈ O ₂	D	C ₄ H ₈ O ₂	C ₂ H ₄ O
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D	C ₄ H ₈ O ₂	C ₂ H ₄ O														
Ms-2	B															
3	<p>Which esters have the molecular formula C₅H₁₀O₂?</p> <ol style="list-style-type: none"> 1 ethyl propanoate 2 propyl ethanoate 3 butyl methanoate 4 methyl butanoate <p>A 1, 2, 3 and 4 B 1, 2 and 3 only C 1 and 2 only D 3 and 4 only</p>															
Ms-3	A															

4	<p>A gas has the molecular formula NOCl.</p> <p>Which diagram could show molecules of the pure gas NOCl?</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> <div style="text-align: center;"> <p>C</p>  </div> <div style="text-align: center;"> <p>D</p>  </div> <div style="margin-left: auto; text-align: right;"> <p>key</p> <ul style="list-style-type: none"> ● N ○ Cl ● O </div> </div>
Ms-4	D
5	<p>Butenedioic acid has the structure shown.</p> <div style="text-align: center; margin: 20px 0;">  </div> <p>What is the molecular formula of butenedioic acid?</p> <p>A CHO B $\text{C}_4\text{H}_4\text{O}_4$ C $\text{C}_6\text{H}_4\text{O}_2$ D $\text{C}_6\text{H}_4\text{O}_6$</p>
Ms-5	B
6	<p>Which formula represents a compound containing three atoms?</p> <p>A HNO_3 B H_2O C LiF D ZnSO_4</p>
Ms-6	B

7	<p>Magnesium and sulphur each form a chloride.</p> <p>What could be the formulae of these chlorides?</p> <table border="1" data-bbox="277 369 1081 699"> <thead> <tr> <th></th> <th>magnesium</th> <th>sulphur</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Mg_2Cl</td> <td>S_2Cl</td> </tr> <tr> <td>B</td> <td>Mg_2Cl</td> <td>SCl_2</td> </tr> <tr> <td>C</td> <td>$MgCl_2$</td> <td>S_2Cl</td> </tr> <tr> <td>D</td> <td>$MgCl_2$</td> <td>SCl_2</td> </tr> </tbody> </table>		magnesium	sulphur	A	Mg_2Cl	S_2Cl	B	Mg_2Cl	SCl_2	C	$MgCl_2$	S_2Cl	D	$MgCl_2$	SCl_2
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D	$MgCl_2$	SCl_2														
Ms-7	D															
8	<p>The diagram shows the first four members of a homologous series.</p> <div style="text-align: center;">  </div> <p>What is the difference in molecular formula between one member and the next in the series?</p> <p>A CH B CH₂ C CH₃ D CH₄</p>															
Ms-8	B															
9	<p>For complete combustion, one molecule of an organic compound needs 8 molecules of oxygen.</p> <p>What could the formula of this compound be?</p> <p>A C₅H₁₁OH</p> <p>B C₆H₉OH</p> <p>C C₆H₁₁OH</p> <p>D C₆H₁₂</p>															
Ms-9	B															

10	<p>For each atom of carbon present in a molecule, there is an equal number of atoms of oxygen but twice as many atoms of hydrogen.</p> <p>What is the formula of the molecule?</p> <p>A C₂H₂O₂ B C₂H₂O₄ C C₂H₄O₂ D C₂H₆O</p>
Ms-10	C
11	<p>The electronic structures of atoms X and Y are shown.</p> <div style="text-align: center;">  </div> <p>X and Y form a covalent compound.</p> <p>What is its formula?</p> <p>A XY₅ B XY₃ C XY D X₃Y</p>
Ms-11	D