

1. Determine the formula of the ionic compounds given the following elements. Name each compound.

	Formula	Name
a) cesium (Cs) and fluorine	CsF	cesium fluoride
b) calcium and sulfur	CaS	calcium sulfide
c) potassium and nitrogen	K₃N	potassium nitride
d) aluminum and sulfate	Al₂(SO₄)₃	aluminum sulfate
e) ammonium and nitrate	NH₄NO₃	ammonium nitrate
f) carbon and bromine	CBr₄	

2. Draw the Lewis structure for the following compounds

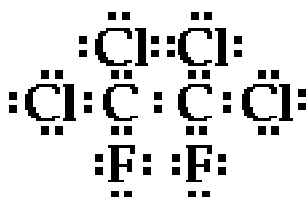
- a) SCl₂



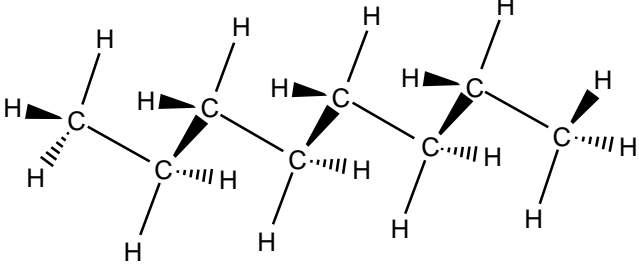
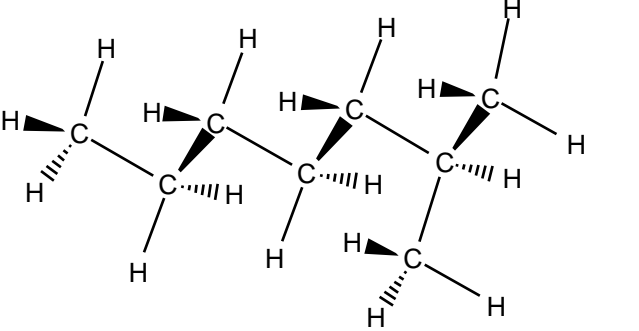
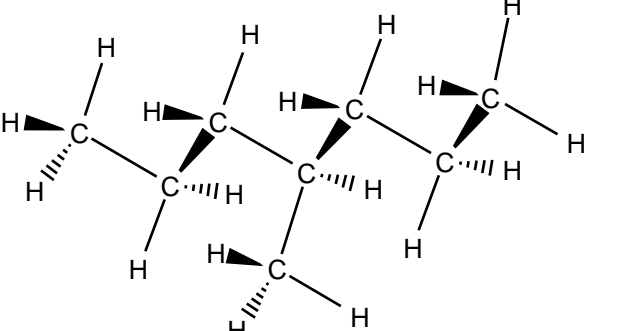
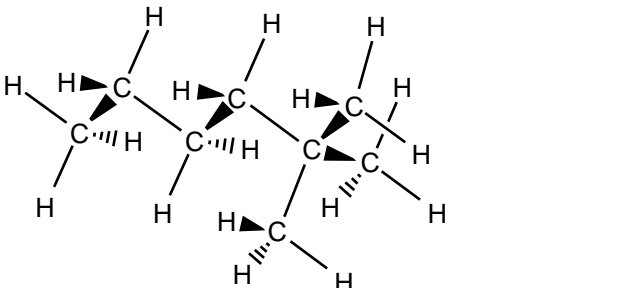
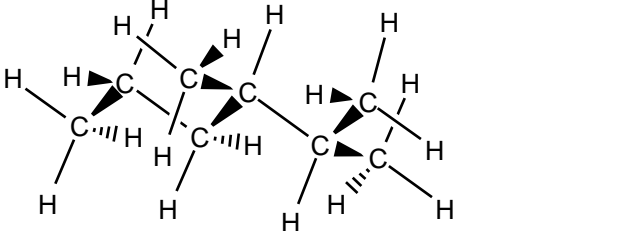
- b) NNO

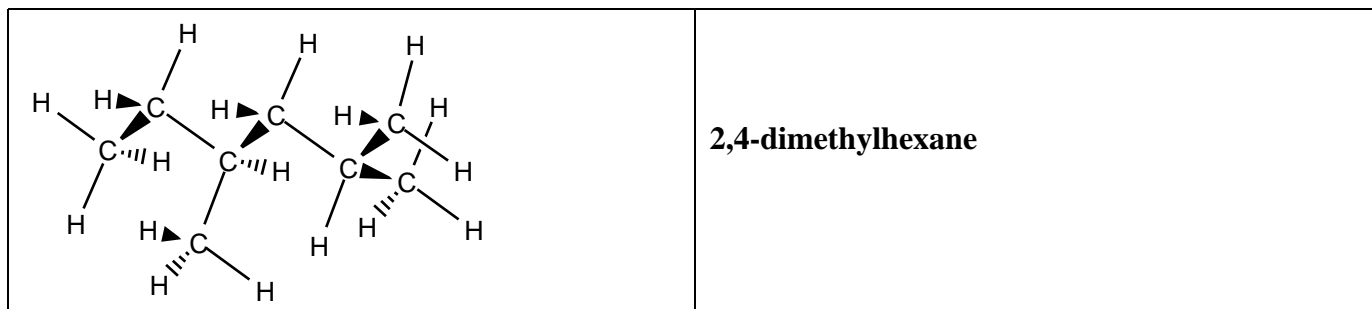


- c) C₂Cl₄F₂

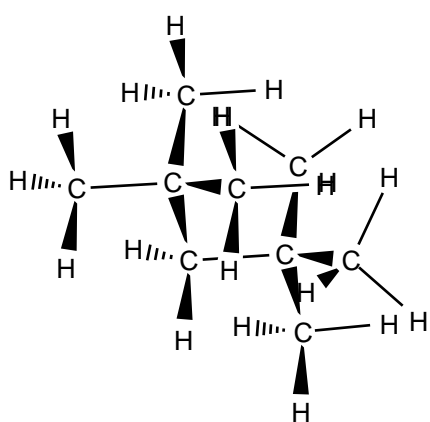


3. Draw and name six structural isomers for the compound C_8H_{18} . (Be sure to clearly show all bonds between carbon and hydrogen.)

	<p><i>n</i>-octane</p>
	<p>2-methylheptane</p>
	<p>3-methylheptane</p>
	<p>2,2-dimethylhexane</p>
	<p>2,3-dimethylhexane</p>

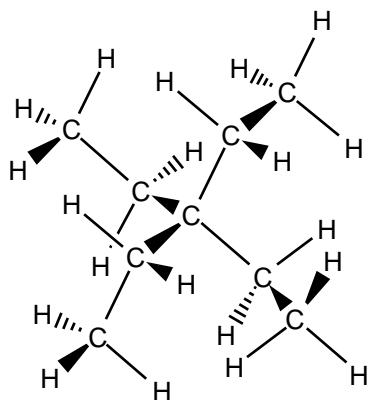


4. Are there any structural isomers of the compound C_9H_{20} with a parent chain five carbons long? If so draw an example and name the compound. If there are no structural isomers with a parent chain of five carbons, briefly explain why.



2,2,4,4-tetramethylpentane

or



3,3-diethylpentane