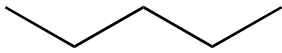
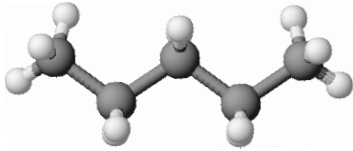
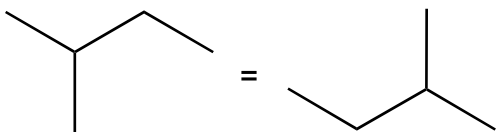
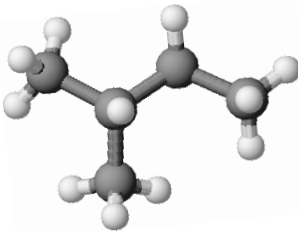
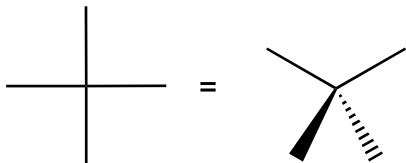
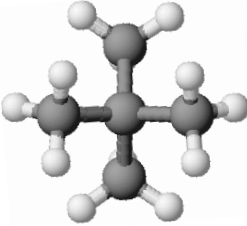
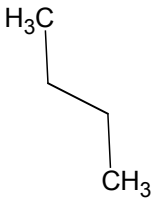
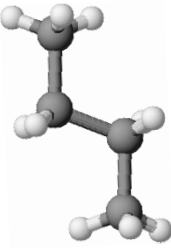
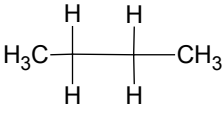
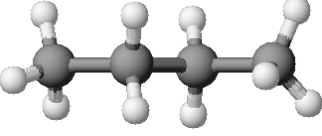
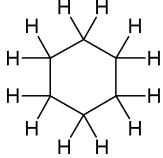
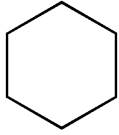
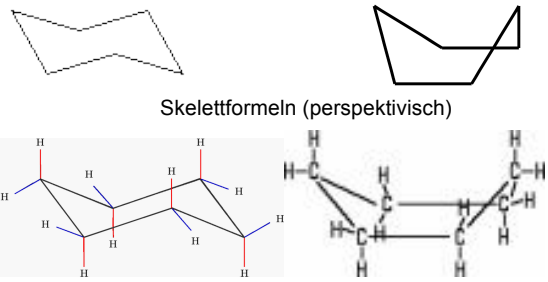
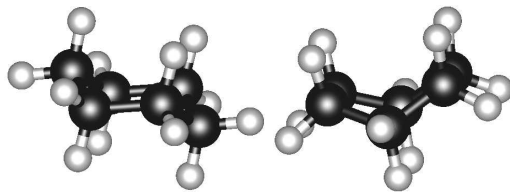
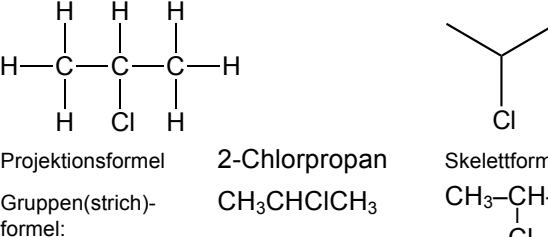
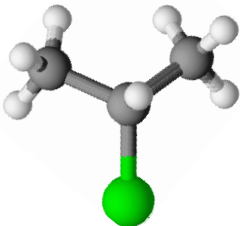
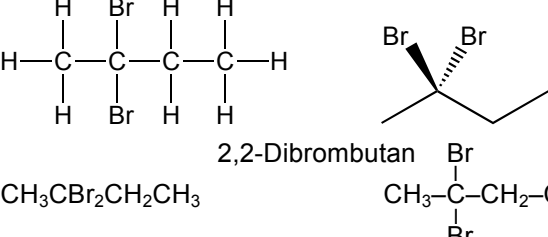
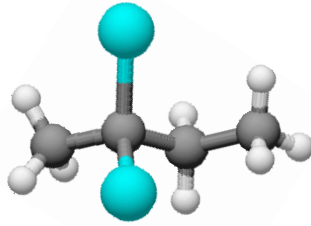
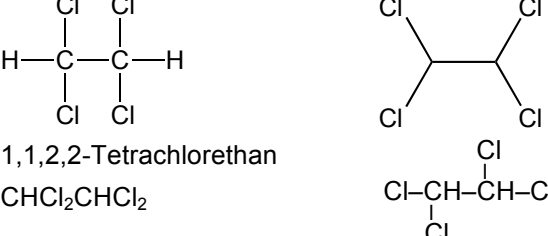
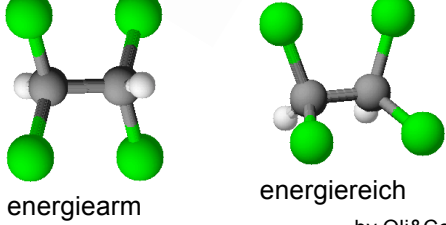
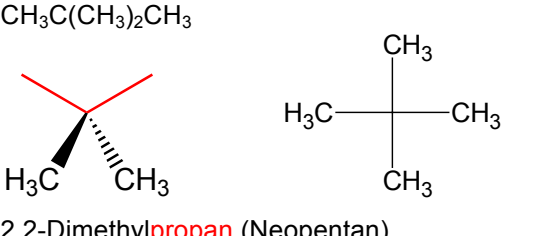
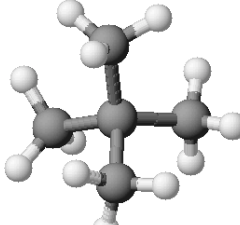
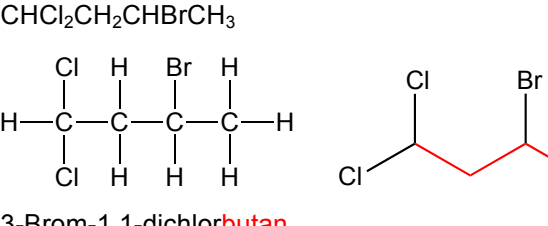
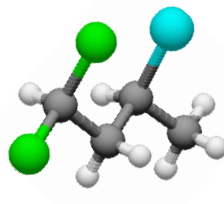
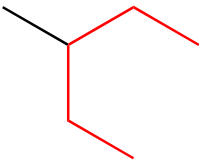
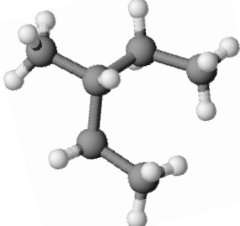
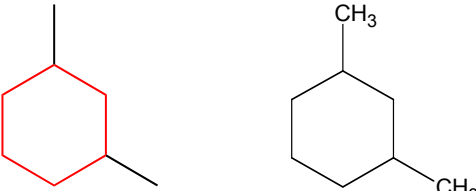
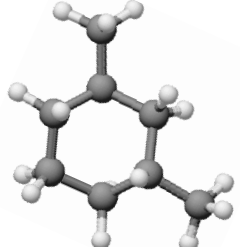
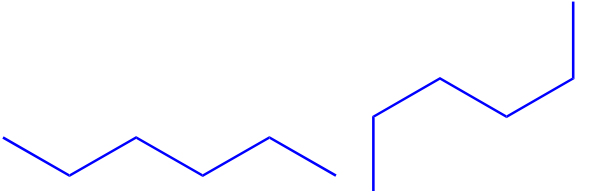
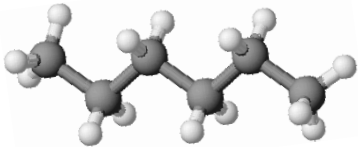
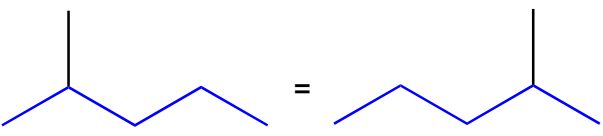
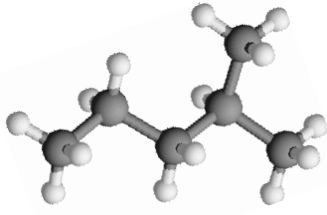
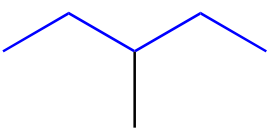
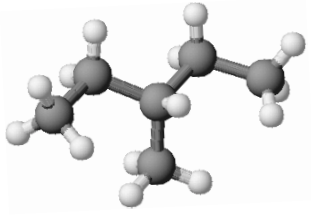
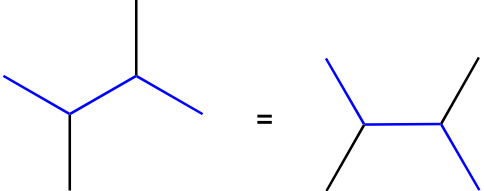
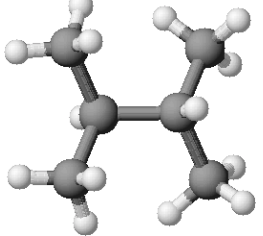
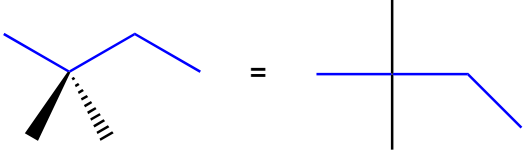
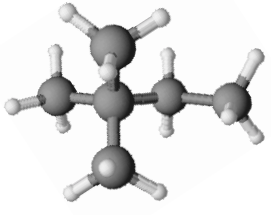


Musterlösung zu den Aufgaben 1–6, S. 10

Zentral sind die Kugel-Stäbchen-Modelle (3-D-Vorstellung), wie sie plastisch im Unterricht mit den Molekülbausätzen erstellt wurden; aber auch die Projektions- und/oder Skelettformeln sind dargestellt.

Aufg.-Nr.	2-D-Darstellung (ChemSketch) / Name	3D-Darstellung (ChemSketch 3D)
(1) (i)	 n-Pentan	 by Lukas&Jenner
(ii)	 2-Methylbutan (Isopentan)	 by Lukas&Jenner
(iii)	 2,2-Dimethylpropan (Neopentan)	 by Lukas&Jenner
(iv)	Die Bindungswinkel C–C–C, C–C–H und H–C–H sind alle identisch und entsprechen dem Tetraederwinkel von 109.5° zwischen den 4 Bindungswolken.	
(2) (i)	 H ₃ C CH ₃	 by Dominik
(ii)	 H ₃ C H H H ₃ C—C—C—CH ₃ H H H	 by Dominik
(3)	 Projektionsformel	 Skelettformel

	<p>Erst die Steckmodelle respektive die Software lassen erkennen, dass zwei Konformere (Konformationsisomere) vom Cyclohexan vorliegen:</p>  <p>Skelettformeln (perspektivisch)</p> <p>Strichformeln (perspektivisch)</p> <p>Cyclohexan (Sesselform) Cyclohexan (Wannenform)</p>	 <p>by Patrick&mau</p> <p>Animation (lokal)</p> <p>Animation (Youtube)</p>
(4) (a)	 <p>Projektionsformel 2-Chlorpropan Skelettformel</p> <p>Gruppen(strich-)formel: $\text{CH}_3\text{CHClCH}_3$ $\text{CH}_3-\text{CH}-\text{CH}_3$</p> <p style="text-align: center;">Cl</p>	 <p>by Pirmin</p>
(b)	 <p>2,2-Dibrombutan</p> <p>$\text{CH}_3\text{CBr}_2\text{CH}_2\text{CH}_3$ $\text{CH}_3-\text{C}-\text{CH}_2-\text{CH}_3$</p> <p style="text-align: center;">Br</p>	 <p>by Joker</p>
(c)	 <p>1,1,2,2-Tetrachlorethan</p> <p>$\text{CHCl}_2\text{CHCl}_2$ $\text{Cl}-\text{CH}-\text{CH}-\text{Cl}$</p> <p style="text-align: center;">Cl</p>	 <p>energiearm energiereich</p> <p>by Oli&Corinne</p>
(5) (a)	 <p>$\text{CH}_3\text{C}(\text{CH}_3)_2\text{CH}_3$</p> <p>2,2-Dimethylpropan (Neopentan)</p>	 <p>by Simon</p>
(b)	 <p>3-Brom-1,1-dichlorbutan</p> <p>$\text{CHCl}_2\text{CH}_2\text{CHBrCH}_3$</p>	 <p>by Barbara</p>

(c)	 <p>3-Methylpentan</p>	 <p>by Simon</p>
(d)	 <p>1,3-Dimethylcyclohexan</p>	 <p>by Marlene</p>
(6) (i)	 <p>n-Hexan Konformationsisomer zur Form links</p>	 <p>by Nantara&Jenny</p>
(ii)	 <p>2-Methylpentan (Isohexan)</p>	 <p>by Carmela&Conny</p>
(iii)	 <p>3-Methylpentan</p>	 <p>by Nantara&Jenny</p>
(iv)	 <p>2,3-Dimethylbutan</p>	 <p>by Carmela&Conny</p>
(v)	 <p>2,2-Dimethylbutan (Neohexan)</p>	 <p>by Joker</p>