

# *Chem 41c Quiz 4*

Stoltz, Spring 2007

May 11, 2007

Due May 14, 2007 9:55 AM

You have 25 min to take this quiz. It is closed note, closed book, and no collaboration is allowed. Please do not discuss the quiz with anyone until you receive it back graded. There is no partial credit. Please **BOX** your answer for each question.

*Do Not Open until you are Ready  
to take the Quiz. Once you open  
this you have 25 min.*

# Chem 41c Quiz 4

Stoltz, Spring 2007

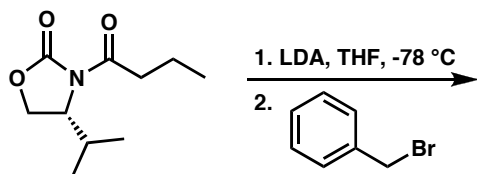
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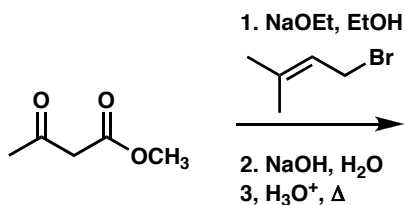
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Predict the products of each reaction. (5 points each)

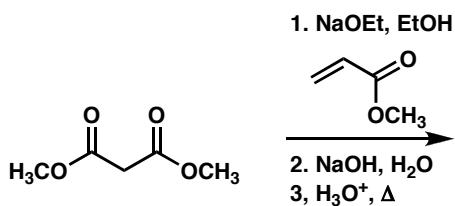
1.



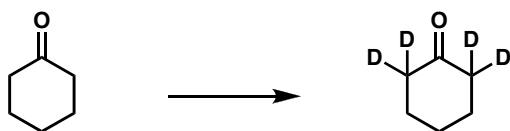
2.



3.



4. Provide reagents to accomplish the following transformation.



**Bonus (5 points)**

What is the structure of LDA?

# PERIODIC TABLE OF THE ELEMENTS

<http://www.kjf-split.hr/periodni/en/>

PERIOD

GROUP	1	2	PERIODIC TABLE OF THE ELEMENTS																18
IA	1	2																	IIA
1	1.0079																		2
	<b>H</b>																		<b>He</b>
	HYDROGEN																		HELIUM
2	3 6.941	4 9.0122																	10 2.0180
	<b>Li</b>	<b>Be</b>																	<b>Ne</b>
	LITHIUM	BERYLLIUM																	NEON
3	11 22.990	12 24.305																	18 39.948
	<b>Na</b>	<b>Mg</b>																	<b>Ar</b>
	SODIUM	MAGNESIUM																	ARGON
4	19 39.098	20 40.078	21 44.956	22 47.867	23 50.942	24 51.996	25 54.938	26 55.845	27 58.933	28 58.693	29 63.546	30 65.39	31 68.723	32 72.64	33 74.922	34 78.96	35 79.904	36 83.80	
	<b>K</b>	<b>Ca</b>	<b>Sc</b>	<b>Ti</b>	<b>V</b>	<b>Cr</b>	<b>Mn</b>	<b>Fe</b>	<b>Co</b>	<b>Ni</b>	<b>Cu</b>	<b>Zn</b>	<b>Ga</b>	<b>Ge</b>	<b>As</b>	<b>Se</b>	<b>Br</b>	<b>Kr</b>	
	POTASSIUM	CALCIUM	SCANDIUM	TITANIUM	VANADIUM	CHROMIUM	MANGANESE	IRON	COBALT	NICKEL	COPPER	ZINC	GALLIUM	GERMANIUM	ARSENIC	SELENIUM	BROMINE	KRYPTON	
5	37 85.468	38 87.62	39 88.906	40 91.224	41 92.906	42 95.94	43 (98)	44 101.07	45 102.91	46 106.42	47 107.87	48 112.41	49 114.82	50 118.71	51 121.76	52 127.60	53 126.90	54 131.29	
	<b>Rb</b>	<b>Sr</b>	<b>Y</b>	<b>Zr</b>	<b>Nb</b>	<b>Mo</b>	<b>Tc</b>	<b>Ru</b>	<b>Rh</b>	<b>Pd</b>	<b>Ag</b>	<b>Cd</b>	<b>In</b>	<b>Sn</b>	<b>Sb</b>	<b>Te</b>	<b>I</b>	<b>Xe</b>	
	RUBIDIUM	STRONTIUM	YTTORIUM	ZIRCONIUM	NIOBIUM	MOLYBDENUM	TECHNETIUM	RUTHENIUM	RHODIUM	PALLADIUM	SILVER	CADMIUM	INDIUM	TIN	ANTIMONY	TELLURIUM	IODINE	XENON	
6	55 132.91	56 137.33	57-71	72 178.49	73 180.95	74 183.84	75 186.21	76 190.23	77 192.22	78 195.08	79 196.97	80 200.59	81 204.38	82 207.2	83 208.98	84 (209)	85 (210)	86 (222)	
	<b>Cs</b>	<b>Ba</b>	<b>La-Lu</b>	<b>Hf</b>	<b>Ta</b>	<b>W</b>	<b>Re</b>	<b>Os</b>	<b>Ir</b>	<b>Pt</b>	<b>Au</b>	<b>Hg</b>	<b>Tl</b>	<b>Pb</b>	<b>Bi</b>	<b>Po</b>	<b>At</b>	<b>Rn</b>	
	CAESIUM	BARIUM	Lanthanide	HAFNIUM	TANTALUM	TUNGSTEN	RHENIUM	OSMIUM	IRIDIUM	PLATINUM	GOLD	MERCURY	THALLIUM	LEAD	BISMUTH	POLONIUM	ASTATINE	RADON	
7	87 (223)	88 (226)	89-103	104 (261)	105 (262)	106 (266)	107 (264)	108 (277)	109 (268)	110 (281)	111 (272)	112 (265)							
	<b>Fr</b>	<b>Ra</b>	<b>Ac-Lr</b>	<b>Rf</b>	<b>Db</b>	<b>Sg</b>	<b>Bh</b>	<b>Hs</b>	<b>Mt</b>	<b>Uun</b>	<b>Uuu</b>	<b>Uub</b>							
	FRANCIUM	RADIUM	Actinide	RUTHERFORDIUM	DUBNIUM	SEABORGIUM	BOHRIIUM	HAASIIUM	MEITNERIUM	UNUNNIUM	UNUNNIUM	UNUNBIUM							

13	10.811	14	12.011	15	14.007	16	15.999	17	18.998	18	20.180				
	<b>B</b>	<b>C</b>	<b>N</b>	<b>O</b>	<b>F</b>	<b>Ne</b>									
	BORON	CARBON	NITROGEN	OXYGEN	FLUORINE	NEON									
13	26.982	14	28.086	15	30.974	16	32.065	17	35.453	18	39.948				
	<b>Al</b>	<b>Si</b>	<b>P</b>	<b>S</b>	<b>Cl</b>	<b>Ar</b>									
	ALUMINUM	SILICON	PHOSPHORUS	SULPHUR	CHLORINE	ARGON									
31	68.723	32	72.64	33	74.922	34	78.96	35	79.904	36	83.80				
	<b>Ga</b>	<b>Ge</b>	<b>As</b>	<b>Se</b>	<b>Br</b>	<b>Kr</b>									
	GALLIUM	GERMANIUM	ARSENIC	SELENIUM	BROMINE	KRYPTON									
49	114.82	50	118.71	51	121.76	52	127.60	53	126.90	54	131.29				
	<b>In</b>	<b>Sn</b>	<b>Sb</b>	<b>Te</b>	<b>I</b>	<b>Xe</b>									
	INDIUM	TIN	ANTIMONY	TELLURIUM	IODINE	XENON									
81	204.38	82	207.2	83	208.98	84 (209)	85 (210)	86 (222)							
	<b>Tl</b>	<b>Pb</b>	<b>Bi</b>	<b>Po</b>	<b>At</b>	<b>Rn</b>									
	THALLIUM	LEAD	BISMUTH	POLONIUM	ASTATINE	RADON									
												114 (289)			
												<b>Uuq</b>			
												UNUNQUADIUM			

(1) Pure Appl. Chem., 73, No. 4, 667-683 (2001)  
Relative atomic mass is shown with five significant figures. For elements having no stable nuclides, the value enclosed in brackets indicates the mass number of the longest-lived isotope of the element.  
However three such elements (Tl, Po, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

LANTHANIDE																		ACTINIDE																	
57	138.91	58	140.12	59	140.91	60	144.24	61 (145)	62 150.36	63 151.96	64 157.25	65 158.93	66 162.50	67 164.93	68 167.26	69 168.93	70 173.04	71 174.97																	
	<b>La</b>	<b>Ce</b>	<b>Pr</b>	<b>Nd</b>	<b>Pm</b>	<b>Sm</b>	<b>Eu</b>	<b>Gd</b>	<b>Tb</b>	<b>Dy</b>	<b>Ho</b>	<b>Er</b>	<b>Tm</b>	<b>Yb</b>	<b>Lu</b>																				
	LANTHANUM	CERIUM	PRASEODYMIUM	NEODYMIUM	PROMETHIUM	SAMARIUM	EUROPIUM	GADOLINIUM	TERBIUM	DYSPROSIUM	HOLMIUM	ERBIUM	THULIUM	YTTERIUM	LUTETIUM																				

ACTINIDE																	
89 (227)	90 232.04	91 231.04	92 238.03	93 (237)	94 (244)	95 (243)	96 (247)	97 (247)	98 (251)	99 (252)	100 (257)	101 (258)	102 (259)	103 (262)			
	<b>Ac</b>	<b>Th</b>	<b>Pa</b>	<b>U</b>	<b>Np</b>	<b>Pu</b>	<b>Am</b>	<b>Cm</b>	<b>Bk</b>	<b>Cf</b>	<b>Es</b>	<b>Fm</b>	<b>Md</b>	<b>Lr</b>			
	ACTINIUM	THORIUM	PROTACTINIUM	URANIUM	NEPTUNIUM	PLUTONIUM	AMERICIUM	CURIUM	BERKELIUM	CALIFORNIUM	EINSTEINIUM	FERMIIUM	MEISELIUM	LAWRENCIUM			

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