

Name: _____

Chem 41c Quiz 3

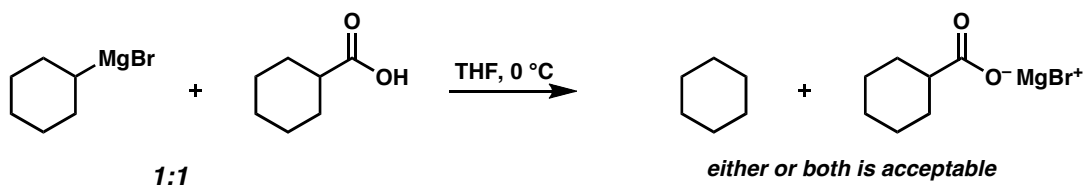
Stoltz, Spring 2009

April 24, 2009

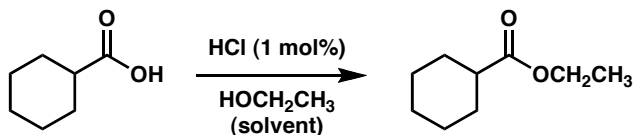
You have 25 min to take this quiz. It is closed note, closed book, and no collaboration is allowed. Please do not discuss the quiz with anyone until you receive it back graded. Place a box around your answers. There is no partial credit.

Predict the products (if any) of the following reactions: (5 points each)

1.

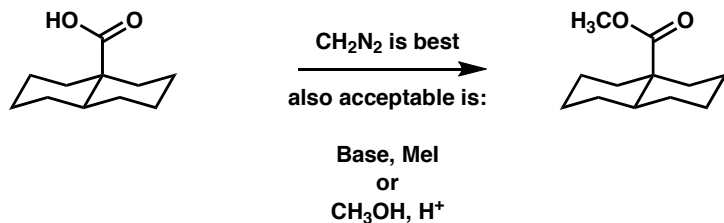


2.

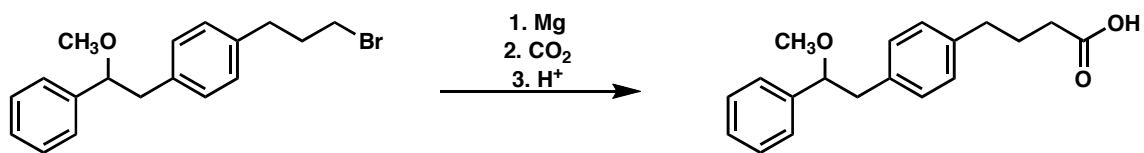


3. Provide reagents for the following transformations. (5 points each)

a.



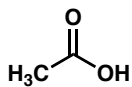
b.



(also accept without the acid in the last step)

Bonus (5 points)

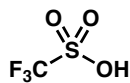
Rank the following in terms of relative acidity.



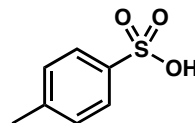
A



B



C



D

Most Acidic



Least Acidic

C

D

A

B

Which has the lowest pKa?

C

GROUP		PERIODIC TABLE OF THE ELEMENTS																18 VIIIA	
PERIOD	1 IA																	2 VIIIA	
	1 H HYDROGEN																	2 He HELIUM	
	3 Li LITHIUM	4 Be BERYLLIUM																	
	11 Na SODIUM	12 Mg MAGNESIUM																	
	19 K POTASSIUM	20 Ca CALCIUM	21 Sc SCANDIUM	22 Ti TITANIUM	23 V VANADIUM	24 Cr CHROMIUM	25 Mn MANGANESE	26 Fe IRON	27 Co COBALT	28 Ni NICKEL	29 Cu COPPER	30 Zn ZINC	31 Ga GALLIUM	32 Ge GERMANIUM	33 As ARSENIC	34 Se SELENIUM	35 Br BROMINE	36 Kr KRYPTON	
	37 Rb RUBIDIUM	38 Sr STRONTIUM	39 Y YTTORIUM	40 Zr ZIRCONIUM	41 Nb NIOBIUM	42 Mo MOLYBDENUM	43 Tc TECHNETIUM	44 Ru RUTHENIUM	45 Rh RHODIUM	46 Pd PALLADIUM	47 Ag SILVER	48 Cd CADMIUM	49 In INDIUM	50 Sn TIN	51 Sb ANTIMONY	52 Te TELLURIUM	53 I IODINE	54 Xe XENON	
	55 Cs CAESIUM	56 Ba BARIUM	57-71 La-Lu Lanthanide	72 Hf HAFNIUM	73 Ta TANTALUM	74 W TUNGSTEN	75 Re RHENIUM	76 Os OSMIUM	77 Ir IRIDIUM	78 Pt PLATINUM	79 Au GOLD	80 Hg MERCURY	81 Tl THALLIUM	82 Pb LEAD	83 Bi BISMUTH	84 Po POLONIUM	85 At ASTATINE	86 Rn RADON	
	87 Fr FRANCIUM	88 Ra RADIUM	89-103 Ac-Lr Actinide	104 Rf RUTHERFORDIUM	105 Db DUBNIUM	106 Sg SEABORGIUM	107 Bh BOHRIUM	108 Hs HASSIUM	109 Mt MEITNERIUM	110 Uun UNUNNIUM	111 Uuu UNUNUNIUM	112 Uub UNUBIUM	113 Uuq UNUNQUADIUM						

GROUP NUMBERS
IUPAC RECOMMENDATION
(1985)

GROUP NUMBERS
CHEMICAL ABSTRACT SERVICE
(1986)

ATOMIC NUMBER
5

RELATIVE ATOMIC MASS (1)
10.811

SYMBOL
B

ELEMENT NAME
BORON

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Editor: Aditya Vardhan (adivar@netinc.com)

(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 (Th, Pu, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

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)
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
ACTINIUM	THORIUM	PROTACTINIUM	URANIUM	NEPTUNIUM	PLUTONIUM	AMERICIUM	CURIUM	BERKELIUM	CALIFORNIUM	ENSTENIUM	FERMIUM	MENDELEVIUM	NOBELIUM	LAWRENCIUM