

# *Chem 41c Quiz 4*

Stoltz, Spring 2011

May 6, 2011

Due May 6, 2011 10:00 AM

You have 30 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. The quiz is worth 25 out of 20 points.

Name \_\_\_\_\_

# Chem 41c Quiz 4

Quiz Grade \_\_\_\_\_

Stoltz, Spring 2011

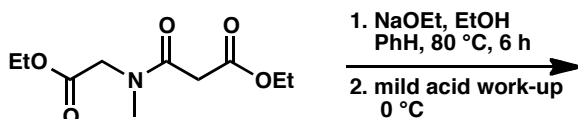
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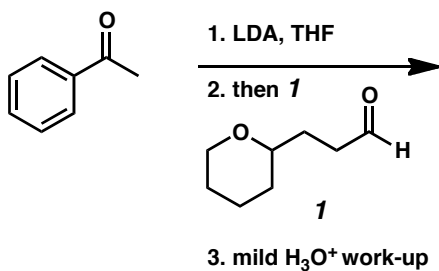
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Predict the products of each reaction. (5 points each)

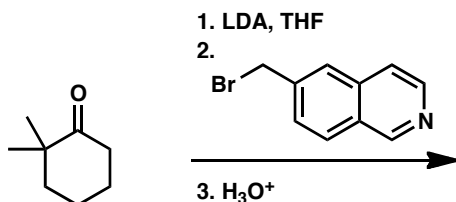
1.



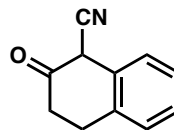
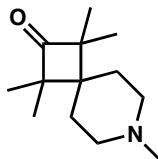
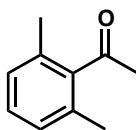
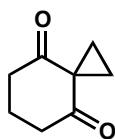
2.



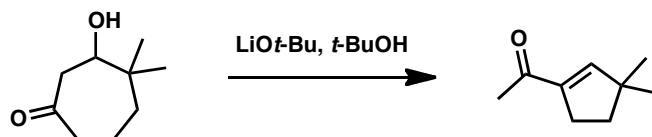
3.



4. Circle the compound with the most acidic proton.



5. Provide a plausible mechanism for the following transformation (TA's will give partial credit).



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

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

LANTHANIDE

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

La

Ce

Pr

Nd

Pm

Sm

Eu

Gd

Tb

Dy

Ho

Er

Tm

Yb

Lu

LANTHANUM

CERIUM

PRASEODYMIUM

NEODYMIUM

PROMETHIUM

SAMARIUM

EUROPIUM

GADOLINIUM

TERBIUM

DYSPROSIUM

HOLMIUM

ERBIDIUM

THULIUM

YTTERBIUM

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)

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

EINSTEINIUM

FERMIUM

MENDELVIUM

NOBELIUM

LAWRENCEIUM

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