

Chem 332
Exam 3
May 4, 2007
Prof. Fox
50 minutes
100 points

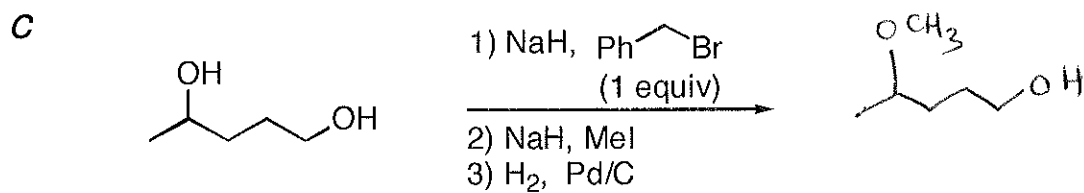
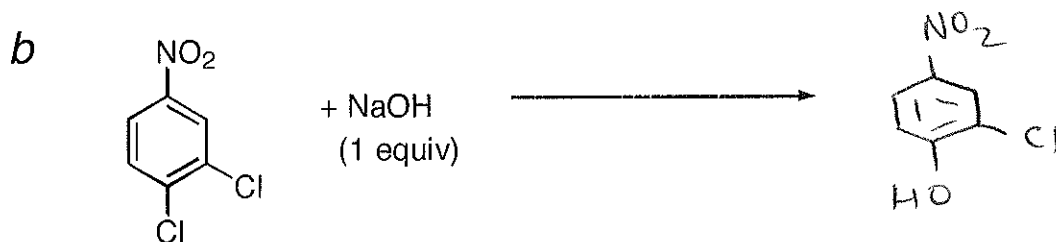
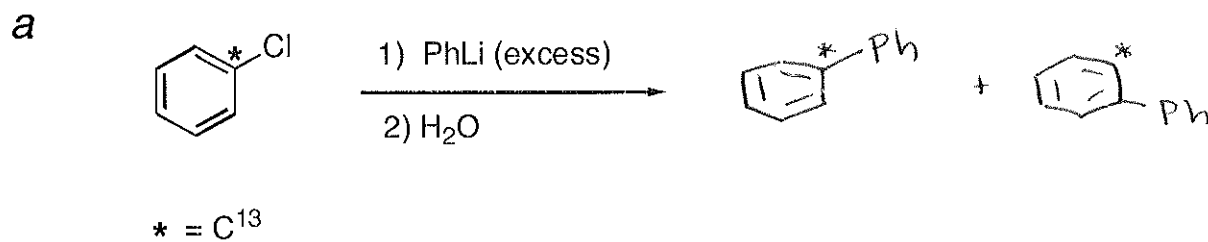
Show your work in detail

WRITE YOUR NAME ON EVERY PAGE

NAME _____

1. Provide the product or products for each of the following transformations

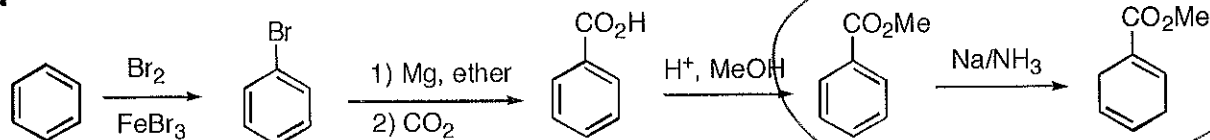
5 points each



2. There is a problem with each following syntheses. CIRCLE the problematic step, and Describe the problem in the space below.

10 points each

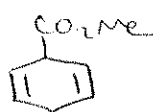
a



The flaw in synthesis **A** is:

Birch reduction

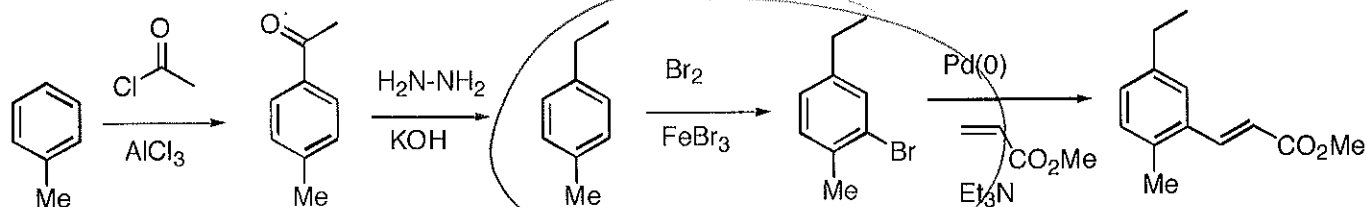
GIVES



VIA MOST STABLE
RADICAL
ANION!

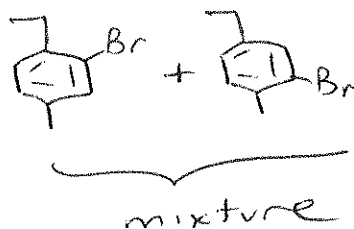
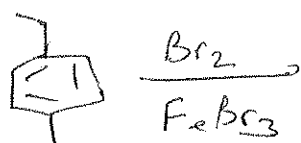


b

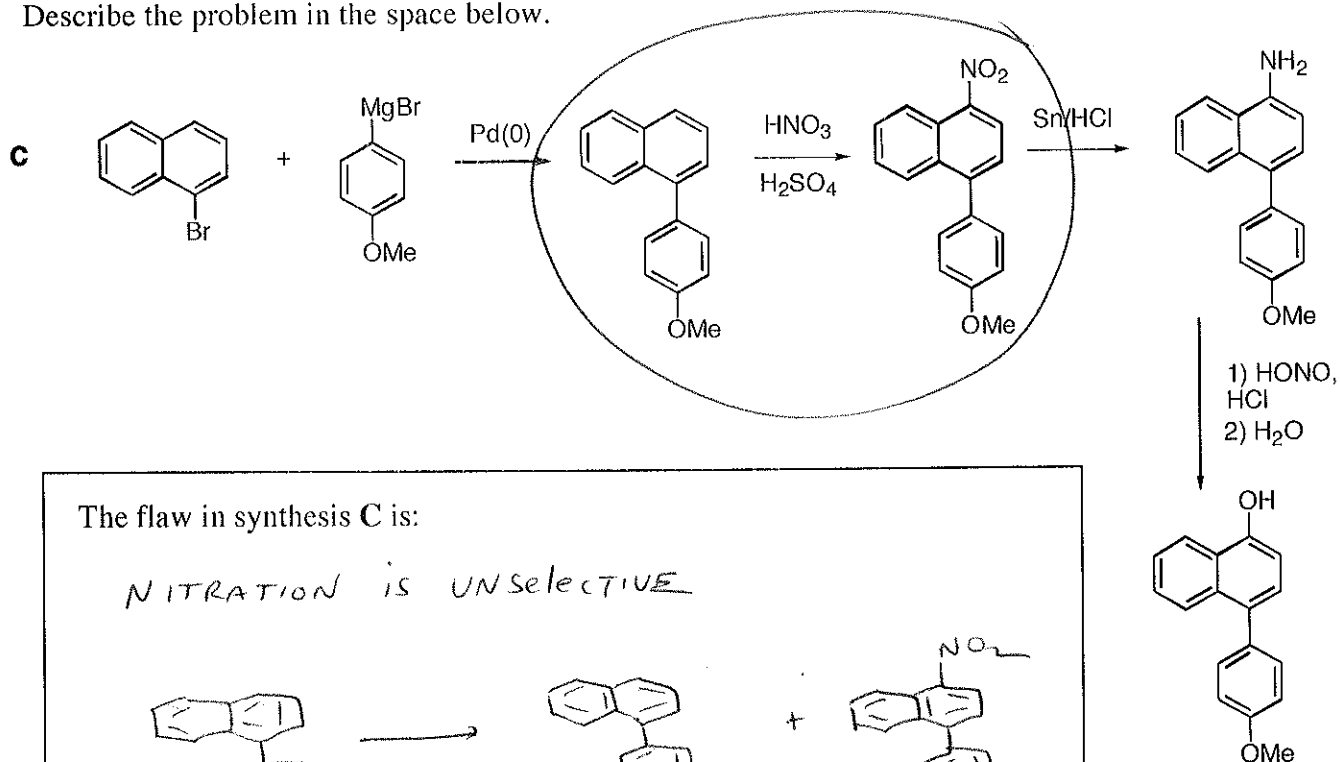


The flaw in synthesis **B** is:

Bromination is NOT
selective

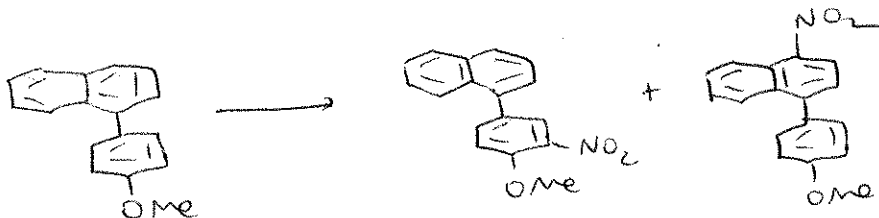


2(cont) There is a problem with each following syntheses. CIRCLE the problematic step, and Describe the problem in the space below.



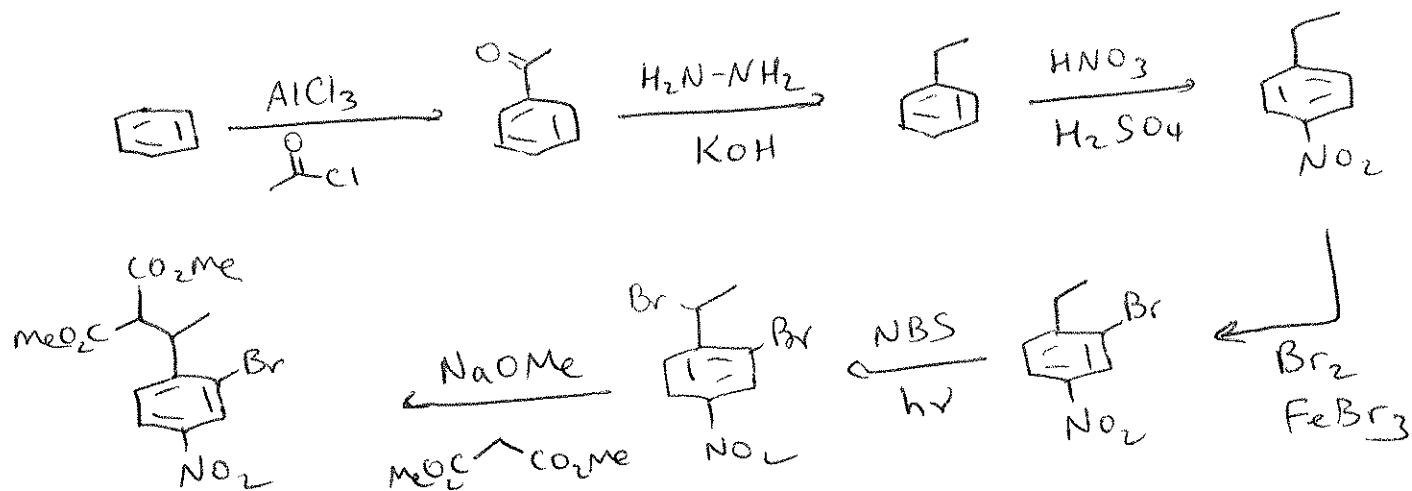
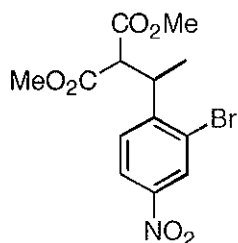
The flaw in synthesis C is:

NITRATION IS UNSELECTIVE



3. Provide a multistep synthesis starting from benzene and any materials that contain 5 carbons or less.

25 points



4. Provide a detailed arrow pushing mechanism (30 points)

