

# Chemistry 351

## Quiz #10

November 28, 2018

Name: \_\_\_\_\_

Student Number: \_\_\_\_\_

Section Number: \_\_\_\_\_

TA: \_\_\_\_\_

### INSTRUCTIONS:

This quiz consists of 8 questions on 3 pages. Please make certain that your quiz is complete.

Write your name, student number, and section number **on both the quiz and answer sheet**. **Be certain to bubble in your PID digits on the answer sheet.** **The absence of any of these identification items will result in the deduction of 2 points from your score.**

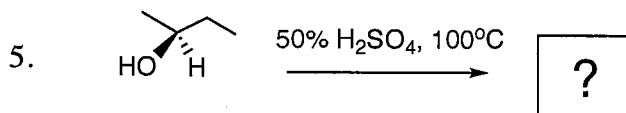
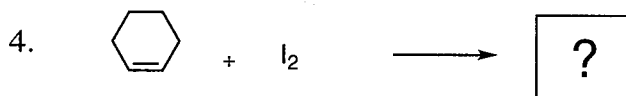
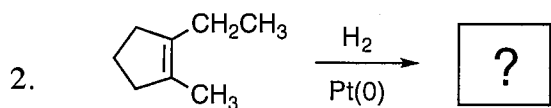
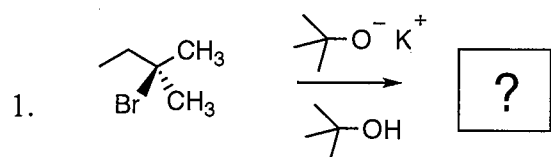
Questions 1-7 are each worth 1 point. Question 8 is worth 3 points.

Write your answers to Questions 1-7 on the enclosed answer sheet. **Write your answer to Question 8 in the space provided on this quiz.**

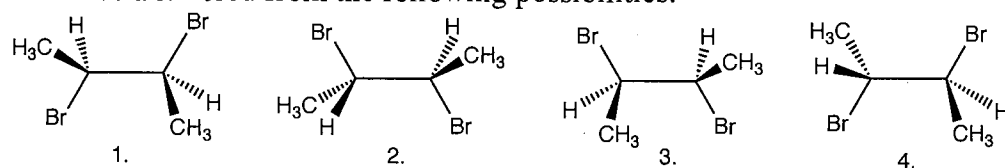
When you complete the quiz, insert your answer sheet into your quiz and then hand both in on the bench in front of the lecture hall in the spot indicated by your section number.

Questions 1-5 are to be answered from the following possibilities:

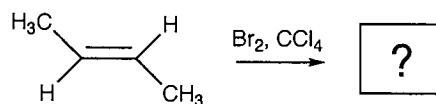
<p>A.</p>	<p>B.</p>	<p>C.</p>	<p>D.</p> <p>No Reaction</p>	<p>E.</p>
<p>F.</p>	<p>G.</p>	<p>H.</p>	<p>I.</p>	<p>J.</p>



Question 6 is to be answered from the following possibilities:

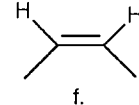
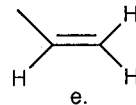
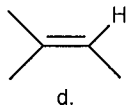
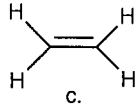
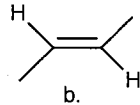
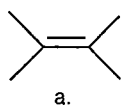


6. Identify the identical products formed in the following reaction:



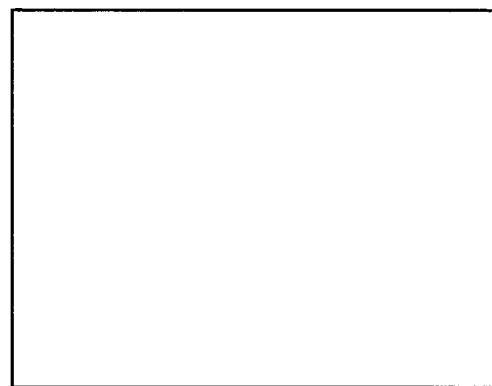
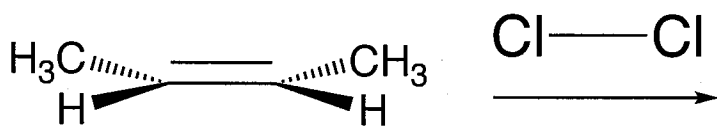
- (a) 1,2    (b) 1,3    (c) 1,4    (d) 2,3    (e) 2,4    (f) 3,4

7. Which of the following alkenes will evolve the MOST heat during hydrogenation over Pd(0)?

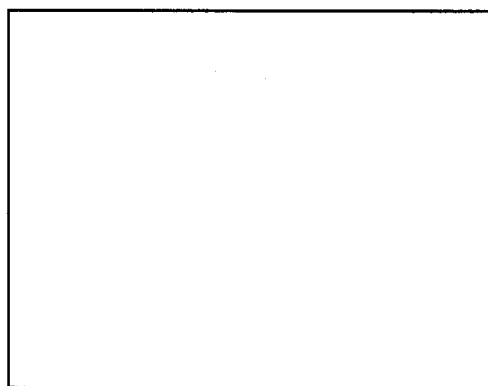


8. (3 pts)

- Draw the arrows that show the flow of electrons during the reaction of  $\text{Cl}_2$  with *cis*-2-butene leading to formation of the Reactive Intermediate.
- In the labeled box, provide the structure of the Reactive Intermediate initially formed upon reaction of  $\text{Cl}_2$  with *cis*-2-butene.
- Draw the arrows that show the flow of electrons during collapse of the Reactive Intermediate.
- In the labelled box, provide the structure of one of the enantiomers of the Product formed by reaction of  $\text{Cl}_2$  with *cis*-2-butene.



Reactive Intermediate



Product Enantiomer