Quiz 3

1. a. (10 pts. each) Adding an H^+ to an alkene models the initial step of an electrophilic addition reaction. For the model alkene plus H^+ reactions below draw all possible intermediates, even if they are unlikely, that could form during an electrophilic addition reaction.

b. (10 pts. each) Circle the lower energy intermediate.

a.

b.

2. (10 pts. each) Predict the major product(s) for the following reactions

a.

b.

c.

$$\begin{array}{c} & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

d.

^{*}D is a deuterium, an isotope of hydrogen that has one proton and one neutron in its nucleus. Chemically, deuterium reacts just like hydrogen.