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**Include file name:** Chemistry\_Worksheet\_0048

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### Question 1

Of the following, which one is a better leaving group?

Cl-

I-

Br-

F-

### Question 2

If the following alkene were to undergo an E2 reaction, from which carbon would the hydrogen be eliminated to form the MAJOR product (recall correct IUPAC numbering)?

carbon 3

carbon 4

alkenes do not undergo E2 reactions

carbon 1

### Question 3

The following base would form what type of E2 product?

only a minor product

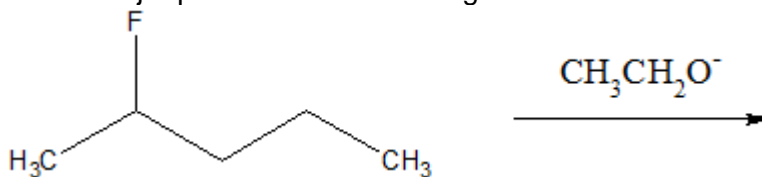
less substituted alkene

Zaitsev's product

more substituted alkene

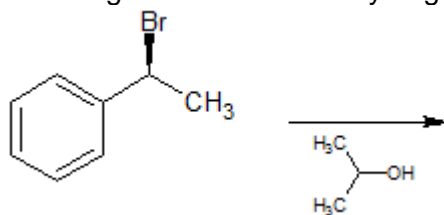
### Question 4

What is the major product of the following reaction?



### Question 5

Is the following reaction more likely to go E2 or E1?



equally both E2 and E1 possible

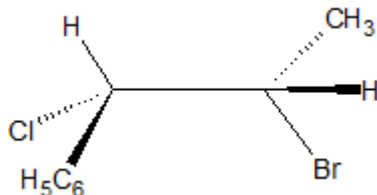
E2

E1

neither E2 nor E1

### Question 6

If the following compound undergoes an E2 reaction, what will be the major product and stereoisomer?



### Question 7

Given the following reaction, fill in the following blanks with the type of reaction the conditions favor. Conditions may or may not favor more than one type. If reactions favor only one type, put type in both blanks. If reaction favors two types of reactions, the order of the blanks does not matter. Note: OTs is a great leaving group: Substrate favors \_\_\_\_\_ and \_\_\_\_\_; Nucleophile/base favors \_\_\_\_\_ and \_\_\_\_\_; Solvent favors \_\_\_\_\_ and \_\_\_\_\_. Overall reaction likely to go \_\_\_\_\_ and \_\_\_\_\_. Use format E1, E2, SN1, or SN2 and only put these in the blanks (example, if substrate favors E2, type E2 in both blanks and nothing else. If it favors E1 and E2, type in E1 in one blank, and E2 in the other blank, and nothing else.)