

**THEORY**

1. The reaction of an alkene with a halogen is an example of an electrophilic addition reaction. The pi electrons of the double bond attack the halogen molecule, forming a cyclic intermediate called a halonium ion. This intermediate is then attacked by a halide ion to form the final halogenated product.

Step	Reaction	Intermediate
1	$C_2H_4 + Br_2 \rightarrow$	$C_2H_5Br$
2	$C_2H_4 + HBr \rightarrow$	$C_2H_5Br$

**QUESTION**

