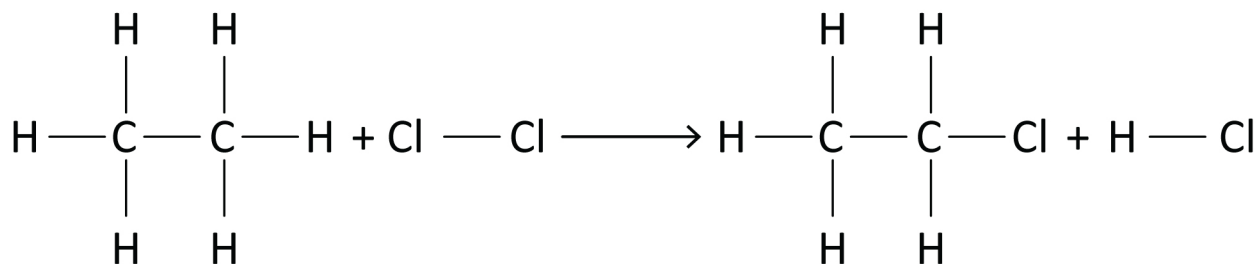


Name : \_\_\_\_\_ Date : \_\_\_\_\_

## Bond-breaking and Bond-making Activity Worksheet

What is the enthalpy change required for the following reaction to take place?



Bond	Enthalpy(kJ/mol)
C—H	413
C—C	347
Cl—Cl	239
H—Cl	427
C—Cl	339

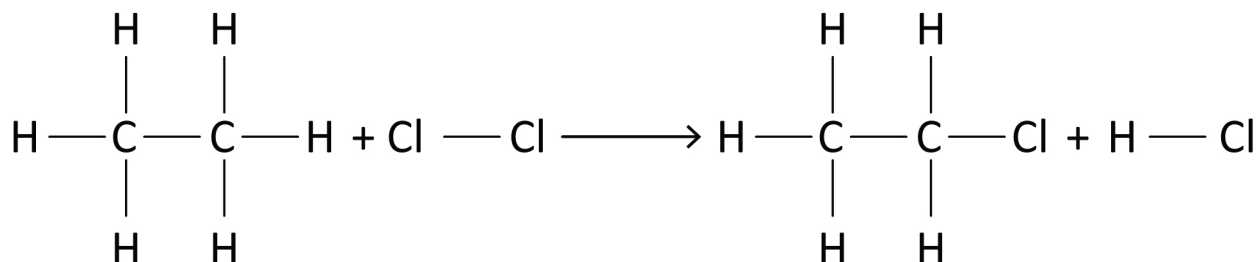
Answer:

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

## Bond-breaking and Bond-making Activity Worksheet

### Answers

What is the enthalpy change required for the following reaction to take place?



Bond	Enthalpy(kJ/mol)
C—H	413
C—C	347
Cl—Cl	239
H—Cl	427
C—Cl	339

Answer: The change in enthalpy required for this reaction to take place = Necessary energy to break C-H bond + Necessary energy to break Cl-Cl bond - Necessary energy to make C-Cl bond - Necessary energy to make H-Cl bond =  $413+239-339-427 = -114$  kJ/mol