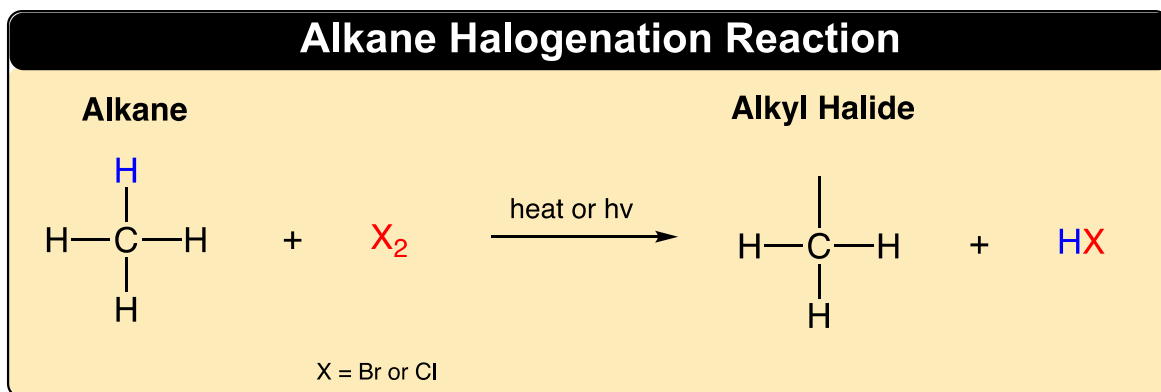


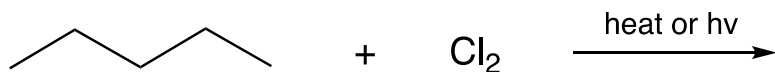
## CONCEPT: ALKANE REACTIONS

- Alkanes are the \_\_\_\_\_ reactive of the hydrocarbons.
  - Common types of reactions: (1) \_\_\_\_\_; (2) \_\_\_\_\_.
- (1) **Combustion:** hydrocarbons react with  $O_2$  to produce  $CO_2$  and water.
- (2) **Halogenation:** a \_\_\_\_\_ reaction where  $Br_2$  or  $Cl_2$  replaces one of the Hs.
  - Reaction requires \_\_\_\_\_ or \_\_\_\_\_ light (hv) to break the bond between \_\_\_\_\_ (X).



- Alkanes can be \_\_\_\_\_ substituted: only \_\_\_ H is substituted; or \_\_\_\_\_ substituted: \_\_\_\_\_ than 1 H is substituted.

**EXAMPLE:** What are all the major products of the following halogenation reaction? (Assume monosubstitution.)



**PRACTICE:** Determine the major product(s) of the following alkane reaction. (Assume monosubstitution.)

