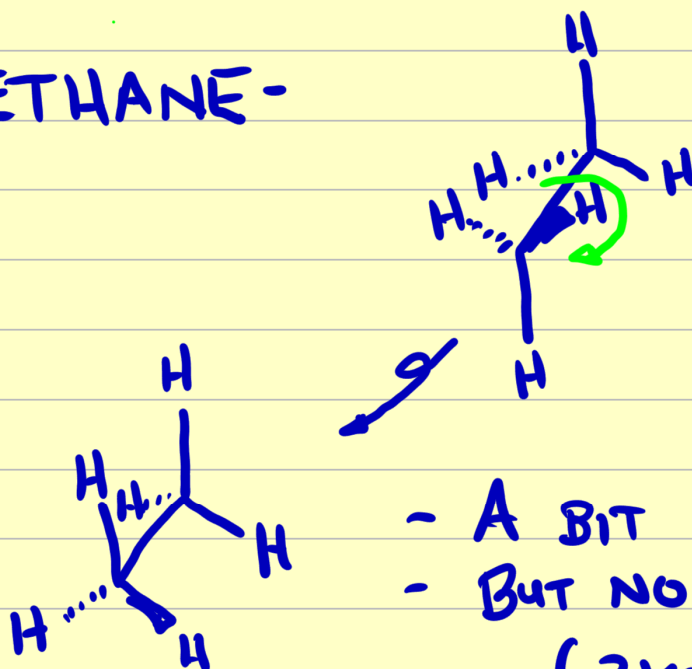


ETHANE -

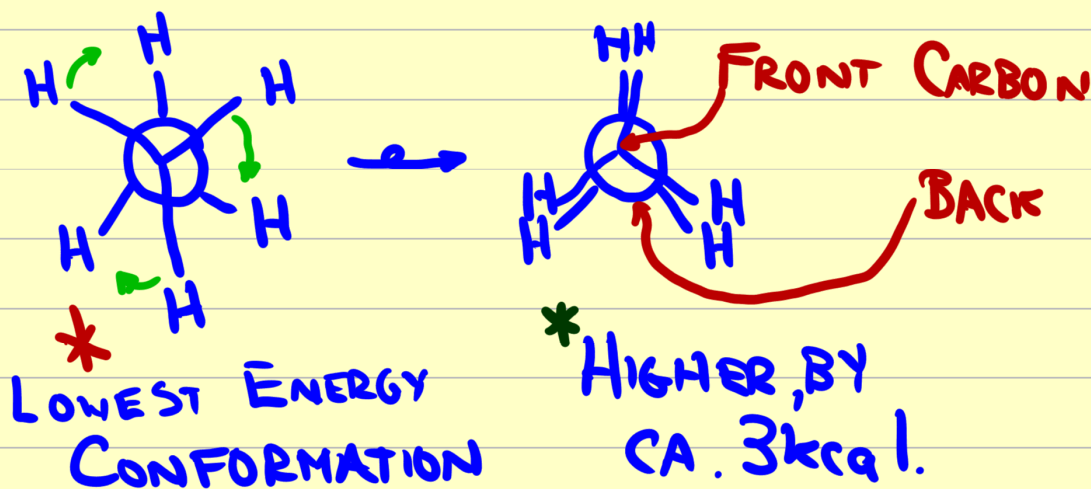


ROTATION OF
C-C
BOND IS
PRETTY EASY.

- A BIT HIGHER IN ENERGY
- BUT NOT MUCH
(3kcal, 12kJ/mol)
HIGHER

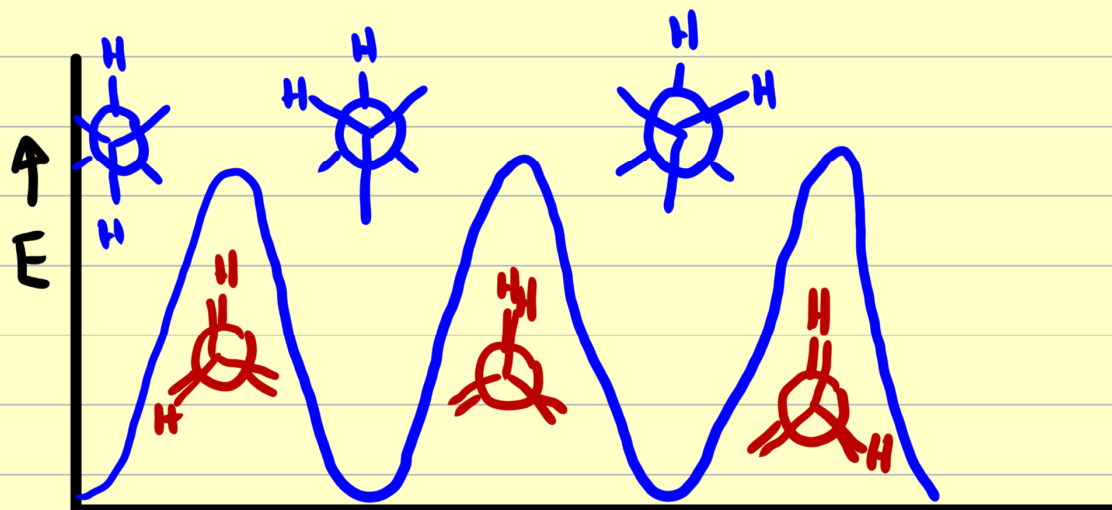
NEWMAN PROJECTION -

- BETTER WAY TO LOOK AT A CARBON-CARBON SINGLE BOND - AND ROTATION

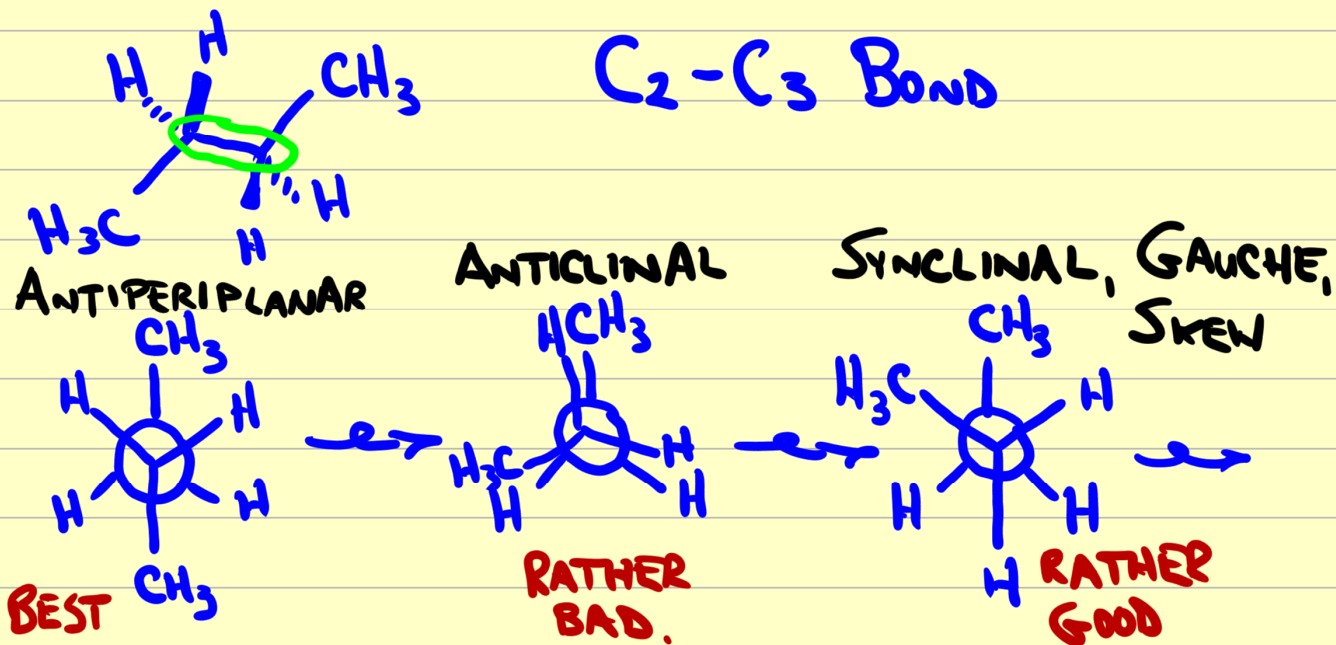


NAMES - BETTER ONE IS CALLED
STAGGERED *

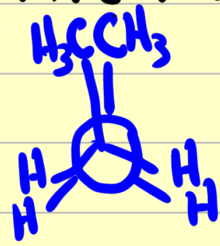
- WORSE ONE IS CALLED ECLIPSED *



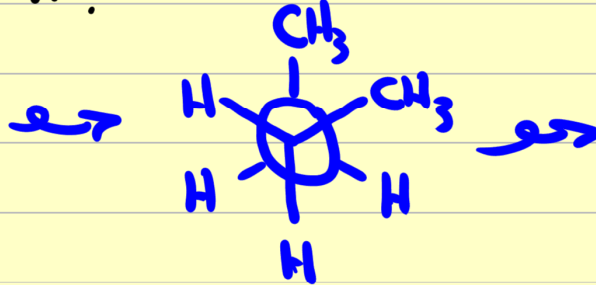
- WHAT ABOUT BUTANE?



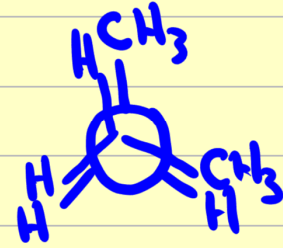
SYNERPLANAR.



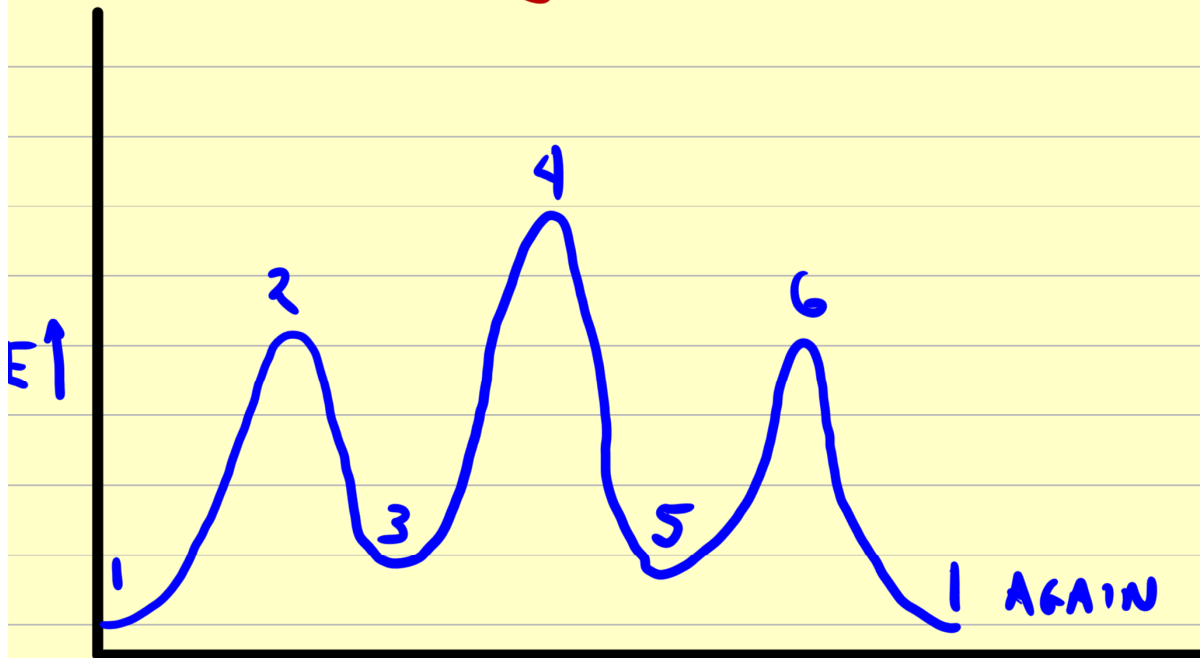
WORST



RATHER
GOOD

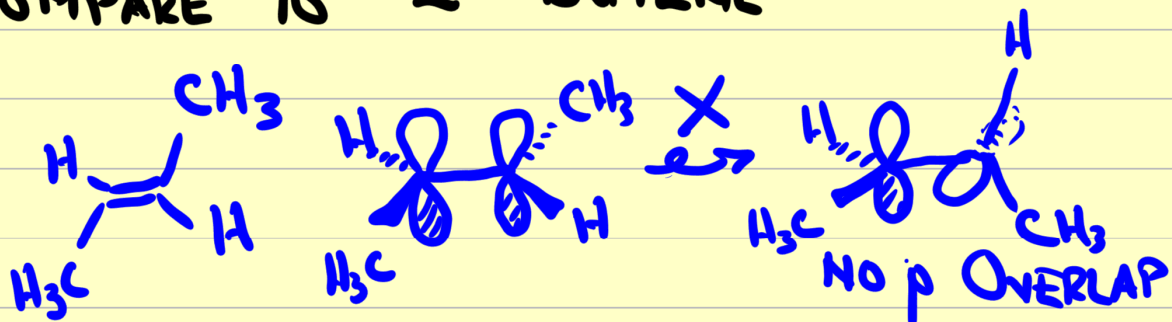


RATHER
BAD



CONFORMATIONS - ROTATIONS ABOUT
SINGLE BONDS, MOLECULE CAN
DO THIS AT NORMAL TEMPERATURE

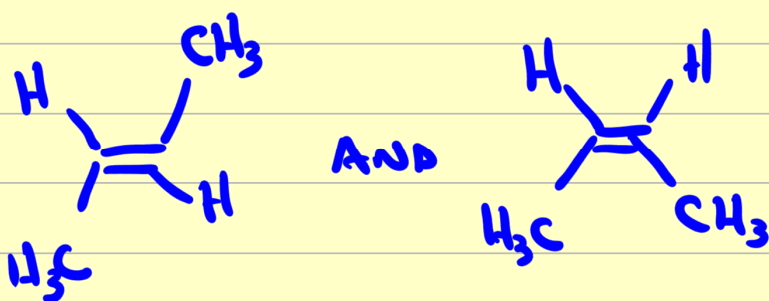
COMPARE TO 2-BUTENE



COSTS 60 kcal/mol

- MOLECULE WON'T DO THIS

So



ARE DIFFERENT MOLECULES

- DON'T INTERCONVERT AT REASONABLE T.