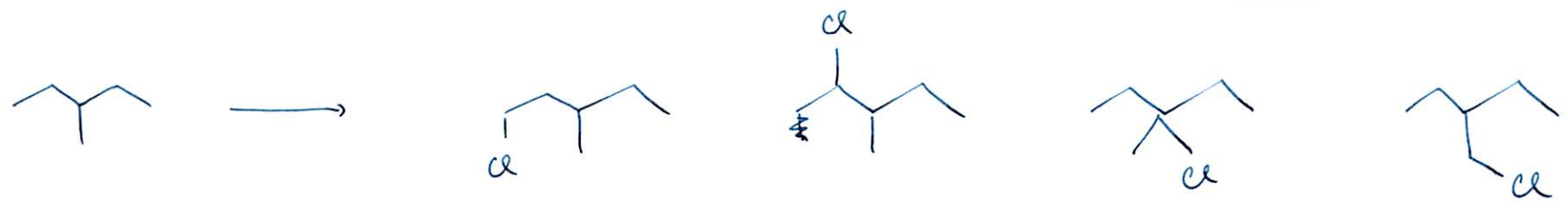


1



①

1°/2°/3°
= 9H/4H/1H

1-chloro-~~(11)~~

2-chloro-~~(22)~~

3-chloro-~~(2)~~

3-(1-chloromethyl) pentane

3-methyl pentane

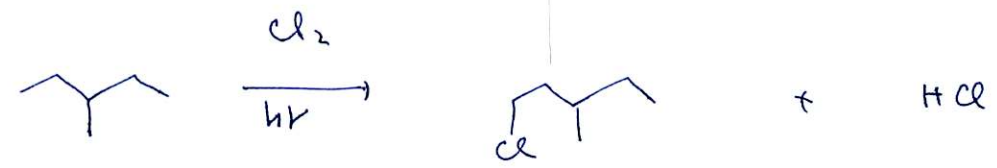
②

9 : 4 × 3.5 : 1 × 4.9 = 9 : 14 : 4.9
(6 : 3)

x1

6 : 14 : 4.9 : 3 = 27.9
21.57. : 50.17. : 17.67. : 10.87.

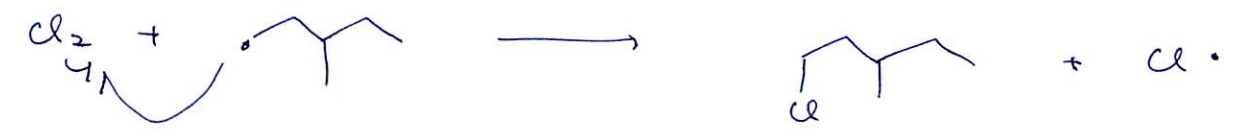
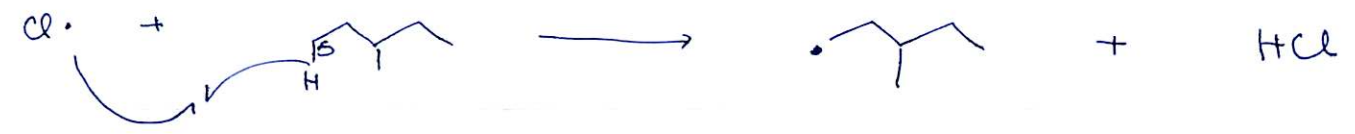
③



1
開始



2
成長

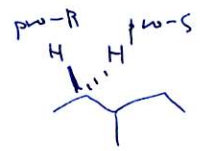
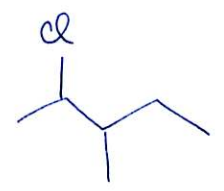


3
停止



④

キラール



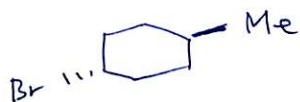
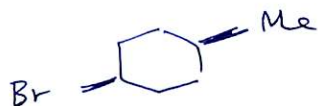
3-methylpentane は 2位炭素が
2°キラル中心。この炭素を
中心

pro-S 基の置換は

(S)-2-chloro-3-methylpentane

が得られる

2



①

cis-1-bromo-4-methylcyclohexane

②



③



Σ 軸Σ軸 3.8 kJ/mol

Σ 軸Σ軸 1.0 kJ/mol

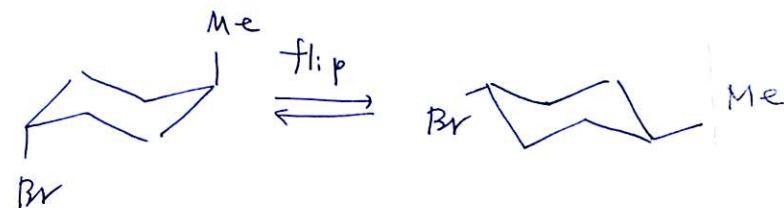
$$3.8 \times 2 - 1.0 \times 2$$

$$= 5.6 \text{ kJ/mol}$$

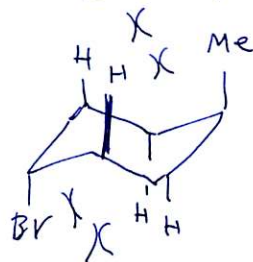
= 5.6 kJ/mol 安定

(不安定)

trans-1-bromo-4-methylcyclohexane



$2 \times 3.8 \text{ kJ/mol}$

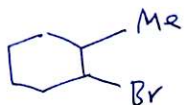


$2 \times 1.0 \text{ kJ/mol}$

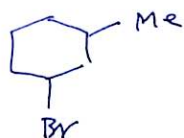
no 1,3-diaxial interactions

(不安定)

4.6 kJ/mol
= 5.6 kJ/mol 安定



≠



と違った場合、解答はより複雑になる。

3

butane
isomers



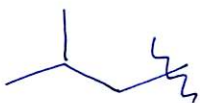
butyl
groups



butyl group



sec-butyl group



isobutyl group



tert-butyl group