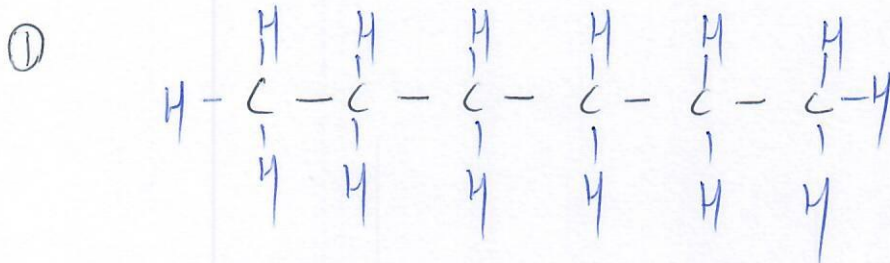


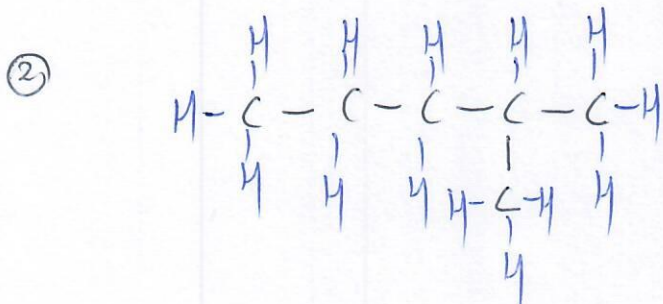
problem 3-4

Draw the five isomers of C_6H_{14}



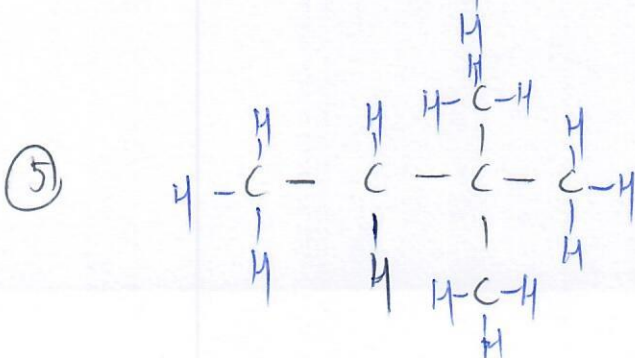
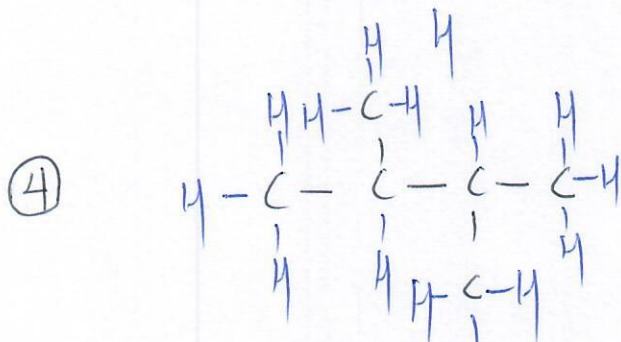
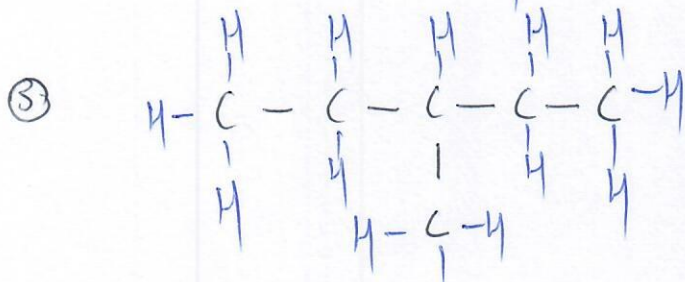
Carbon : 6

Hydrogen : 14.



Carbon : 6

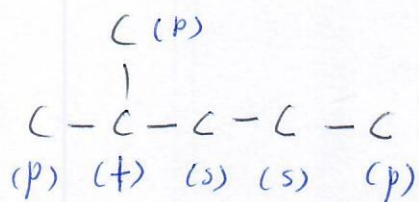
Hydrogen : 14



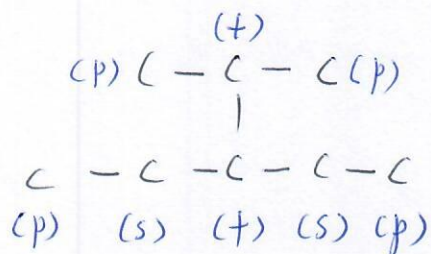
Problem 3-8

I identify the carbon atoms as primary, secondary, tertiary, or quaternary,

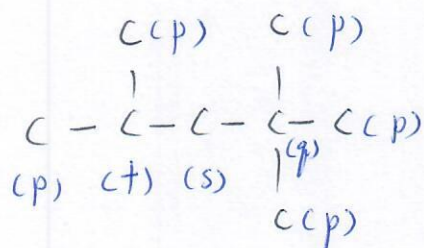
(a)



(b)

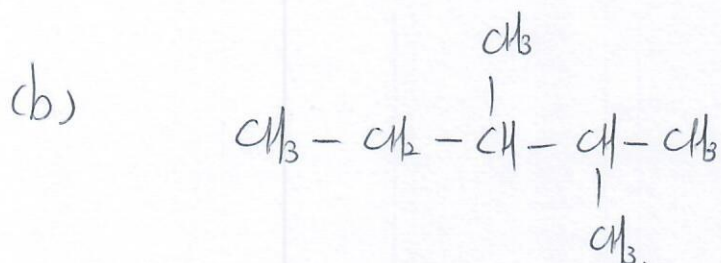


(c)

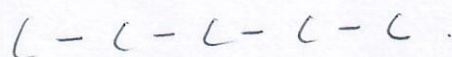


problem 3-11.-1

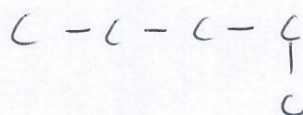
IUPAC name?



① Find the longest chain that is parent hydrocarbon.



or



) same.

The parent name is "pentane".

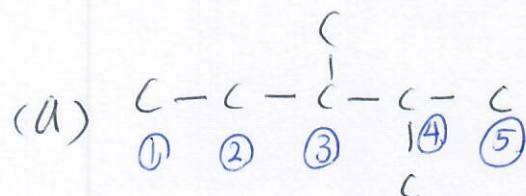
② Find the substituents.



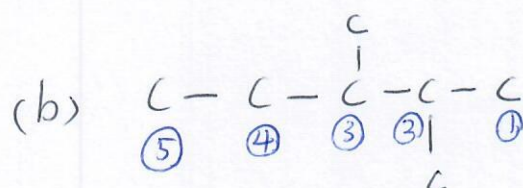
Parent hydrocarbon has two methyl groups.

Problem 3-11-2.

(3) Give the ~~number~~ number.



or



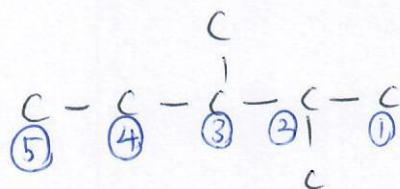
The sum of ~~no~~ numbers on substituents in (a) is

$$\textcircled{3} + \textcircled{4} = 7.$$

The sum of numbers on substituents in (b) is

$$\textcircled{2} + \textcircled{3} = 5.$$

So choose the (b)



2, 3 - methyl - methyl pentane.

problem 3-1-3.

④ Use the prefix.

~~2.3~~ 2.3 - methyl-methyl pentane
dimethyl

2.3 - dimethyl pentane.

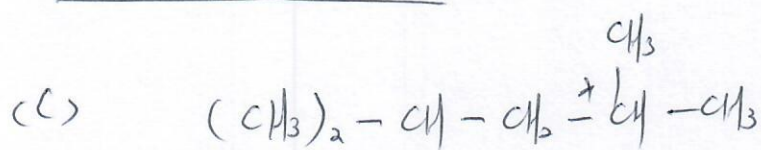
⑤ Find the functional groups.

⇒ This molecule has no functional groups.

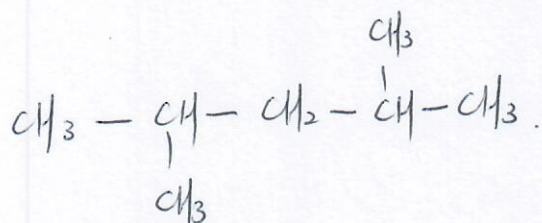
So the ^{IUPAC} name of this molecule is

2.3 - dimethyl pentane.

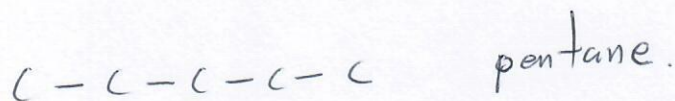
Problem 3-11-4.



rewrite



① Find the longest chain

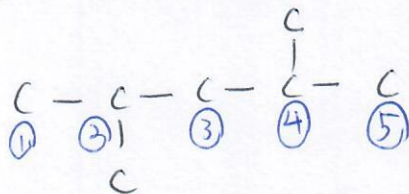


② Find the substituents.

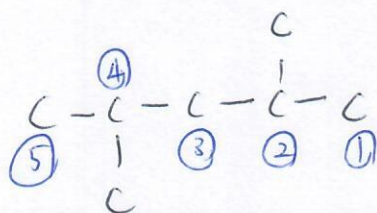


Two substituents. (~~dimethyl~~ dimethyl-)

③ Give the number.



or



Sum of numbers on substituents
is same.

$$\textcircled{2} + \textcircled{4} = \textcircled{6}$$

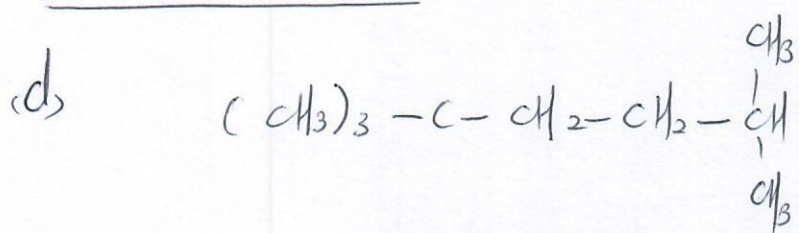
problem 3-11-5

④ Find the functional groups. \Rightarrow No.

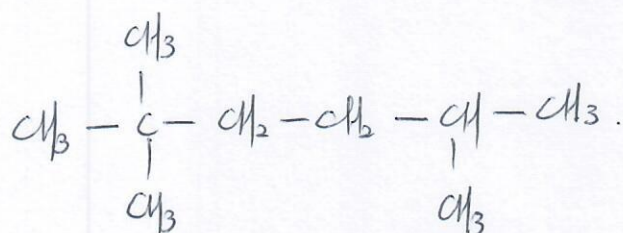
The name of molecule is

2, 4 - dimethyl pentane.

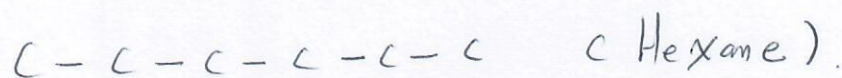
Problem 3-11-86



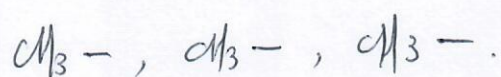
rewrite.



① Find the longest chain.

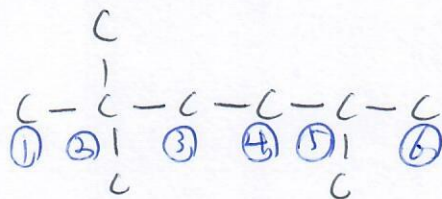


② Find the substituents.



The parent has three methyl groups.

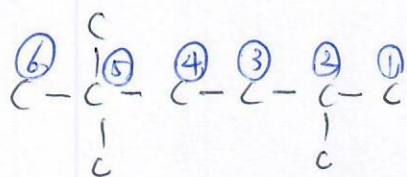
③ Give the number



The sum of numbers on substituents is

$$\textcircled{2} + \textcircled{2} + \textcircled{5} = 9.$$

Problem 3-1-97



The sum of numbers on ~~substitution~~ substituents is

$$(2) + (5) + (5) = 12$$

So the first one is correct.

④ Find the functional groups \Rightarrow n/o.

The name of molecule is

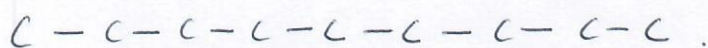
2,2,5 - Trimethyl hexane.

Problem 3-12-1

(a) The parent's name is nonane.

The "nona" is 9.

"ane" means alkane



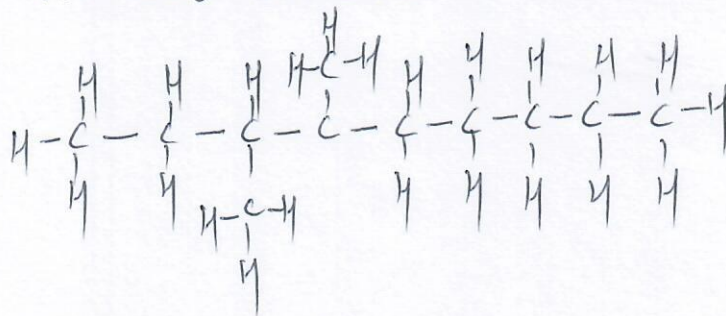
"3" and "4" are position of substituents.

"di" means "two"

"Methyl" means $CH_3 -$

So two "methyl" groups are located on ~~"3" and "4"~~
"3" and "4" position in nonane.

The molecule's structure is.



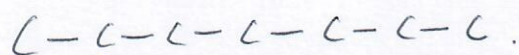
problem 3-12-2

(b) 3-Ethyl-4,4-dimethyl heptane.

The "hepta" means "7"

The "ane" means alkane.

So the parent's structure is



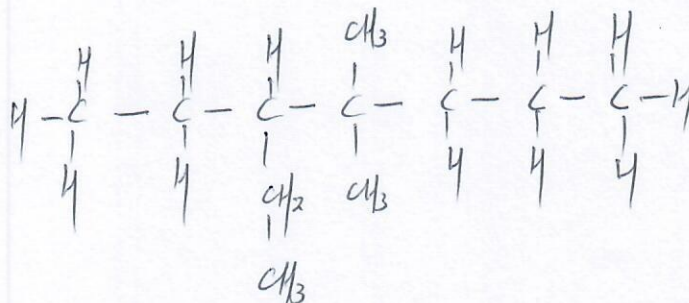
"3" and "4" are position of ~~substrate~~ substituents.

"Ethyl" means " CH_3-CH_2- ".

"methyl" means " CH_3- ".

"di" means "two".

The structure is



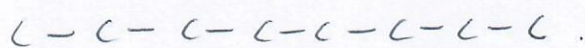
Problem 3-12-3.

(c) 2,2-dimethyl-4-propyloctane.

The "octa" means "8"

The "ane" means "alkane".

The parent's structure is

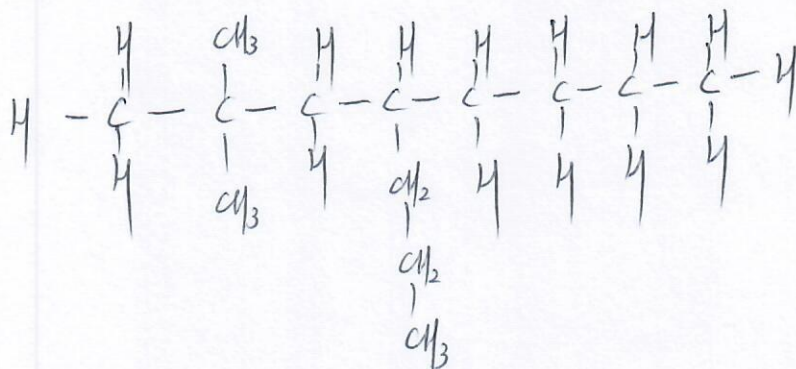


"2" and "4" are position of substituents.

"Methyl" means " CH_3- "

"propyl" means " $CH_3-CH_2-CH_2-$ "

The structure is



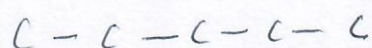
Problem 3-12-4

(d) 2,2,4 - Trimethyl pentane.

The "penta" means "5"

The "ane" means "alkane"

The parent's structure is



"2" and "4" are position of substituents.

"methyl" means " CH_3 ".

The structure is

