

# Common abbreviations

methyl  $\text{CH}_3 \rightarrow$

Me

ethyl  $\text{CH}_3\text{CH}_2 \rightarrow$

Et

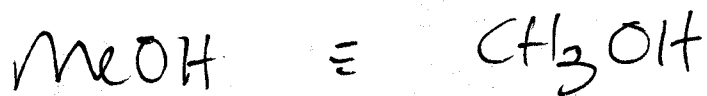
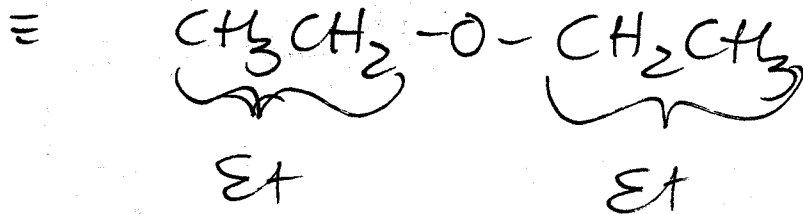
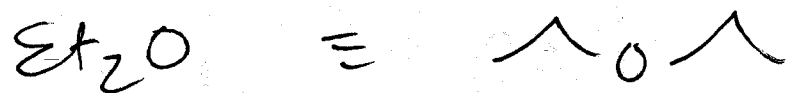
iPr isopropyl

iBu isobutyl

tBu tert-butyl

sBu sec-butyl

Pr propyl



# Branched Alkanes

1. Find longest chain.

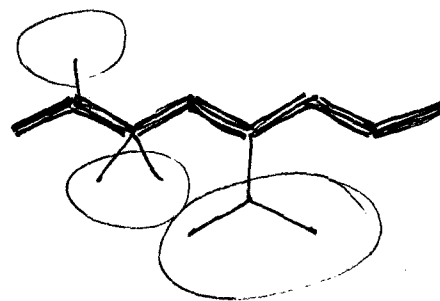
=> base name

2. Identify the substituents

3. Number the base chain so as to get the lowest set of #s for substituents.  
(#s called locants)

4. Put it together:

- combine like substit.
- alphabetize substs.
- numbers precede their associated subst.



octane

three methyl groups  
one isopropyl group

L → R: 2, 3, 5

R → L: 4, 6, 7

e.g., trimethyl

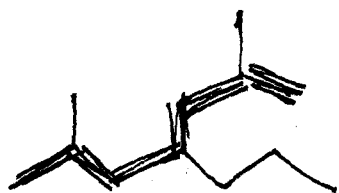
isopropyl trimethyl octane

also; one number for every subst.

- d. separate numbers w/ commas  
separate a number + letter w/ dash.

\* 5-isopropyl-2,3,3-trimethyloctane

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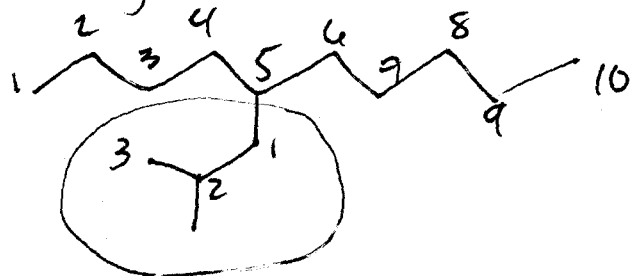


If >1 chain of same length,  
choose the one w/ more substs

2,6-dimethyl-4-propyl heptane

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Naming branched alkyl substs.



a decane

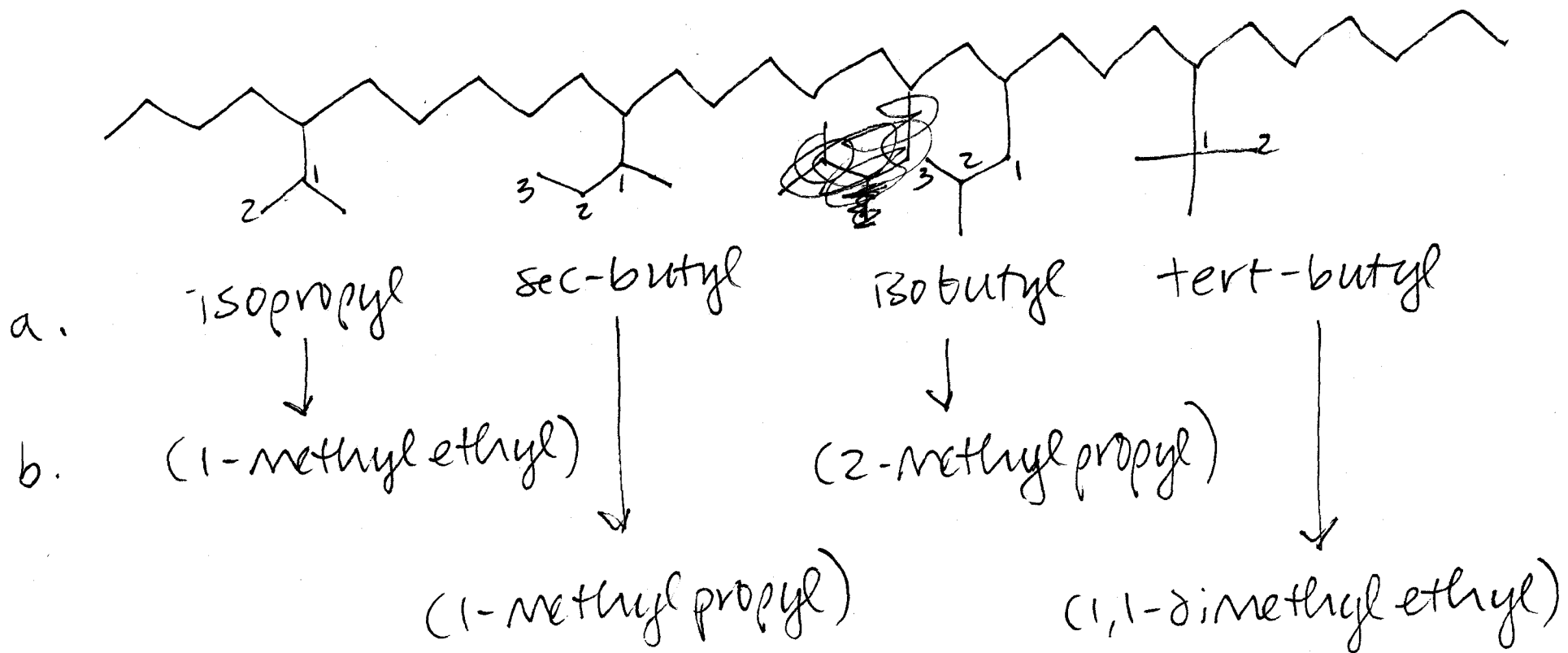
5-( ) decane

focus on subst. Start @ pt. of attachment -

find longest chain; find substs. on that chain - use #s to locate them, just as before.

This is a 2-methylpropyl group.

5-(2-methylpropyl)decane



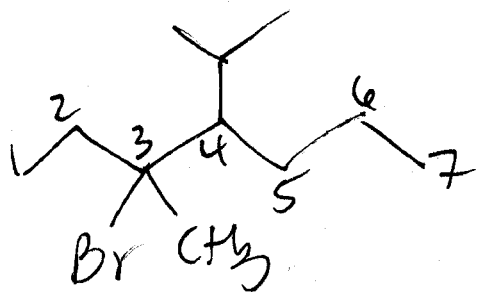
Alkyl Halide Nomenclature - just like alkanes.

Cl - chloro

I - iodo

Br - bromo

F - Fluoro



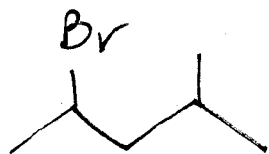
heptane.

3-bromo

3-methyl

4-isopropyl

3-bromo-4-isopropyl-3-methylheptane



2-bromo-4-methylpentane

is marginally better than  
4-bromo-2-methylpentane

Alcohols

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cyclo alkanes + cyclic alcohols

Bicyclic compounds

alkenes

alkynes