① Stereoisomerism

for double bonds:

Cis 

or

trans 

* must have 2 identical groups to use cis/trans!

E "opposite side"

or

Z "same side"

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for Chiral carbons

(carbons attached to 4 diff. things)

R clockwise

or

S counter clock-wise

Shown in ( )'s in front of name

*will have a # but no dash

ex: (3R, 2S)

② Substituents

- add "-yl" to the end of a group of carbons
- for halogens:
  - Cl = chloro
  - Br = bromo
  - F = fluoro
  - I = iodo
- for multiples add: di, tri, tetra, penta, hexa
- list in "a,b,c" order for add'l functional Groups

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aldehyde = aldo
ketone = keto
alcohol = hydroxy
amine = amino

* some groups may have "iso" or "tert" if connected diff.

③ Parents Chain

1. meth
2. eth
3. prop
4. but
5. pent
6. hex
7. hept
8. oct
9. non
10. dec

Include:

① functional groups
② double bonds
③ triple bonds

* when numbering pick the longest chain w/ the most substituents } if 2 possible "longest chain" options are the same

*add "cyclo" for rings

④ Unsaturation (single, double, triple bonds)

Single - "an"
double - "en"
triple - "yn"

* use the smaller # carbon for 2x + 3x bonds

- list double before triple bonds
- for multiples add di, tri, tetra, penta, hexa

⑤ Functional Group

①  Carboxylic acid "-oic acid"

②  ester "-oate"

③  aldehyde "-al"

④  Ketone "-one"

⑤ R-OH alcohol "-ol"

⑥  amine "-amine"

⑦ NO functional Group "-e" "end of molecule"