

Calc binding energy in J/nucleon for ^{12}C

→ Use 12.000 as actual mass.

Hint ① J/mole
 * ② J/atom *
 ③ J/nucleon

$\frac{\text{g}}{\text{mole}}$ $\text{J} = \frac{\text{kg} \cdot \text{m}^2}{\text{sec}^2}$

$6p = 6(1.00728)$
 $6n = 6(1.00866)$

 $12.09564 \text{ calc. mass}$
 $- 12.00000$

 $\Delta \text{mass} = 0.09564 \text{ amu or g/mole}$
 $0.09564 \times 10^{-3} \text{ kg/mole}$

① $E = mc^2$
 $E = (0.9564 \times 10^{-3})(3 \times 10^8)^2$
 $E = 8.6076 \times 10^{11} \frac{\text{J}}{\text{mole}}$

② $\frac{8.6076 \times 10^{11} \text{ J}}{\text{mole}} \times \frac{1 \text{ mole}}{6 \times 10^{23}} = 1.43 \times 10^{-11} \frac{\text{J}}{\text{atom}}$

③ $\frac{1.43 \times 10^{-11} \text{ J}}{\text{atom}} \times \frac{1 \text{ atom}}{12 \text{ nucleon}}$
 $1.19 \times 10^{-12} \text{ J/nucleon}$

Apr 27-7:44 AM

ORGANIC CHEMISTRY C

~ 750,000 inorganic compounds

~ > 6 million ⊕ organic compounds

<ul style="list-style-type: none"> - Price range # - Kind/style house - # BR's 	<p>* LOCATION</p> <p>State, town, area</p>
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Apr 27-8:09 AM

Nomenclature - Naming organic compds.

(Prefix) # C's and Bond type (Suffix)

(# H's) ↗

Hydrocarbon

—

-ane

,

-ene

=

-yne

≡

-yne

<p>① Meth-</p> <p>② eth</p> <p>③ prop-</p> <p>④ but-</p> <p>⑤ pent-</p>	<p>⑥ hex-</p> <p>⑦ hept-</p> <p>⑧ oct-</p> <p>⑨ non-</p> <p>⑩ dec-</p>
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Molecular formula
Prefix
Suffix

C₃H₈

Propane

③ ⑤B

hydrocarbons

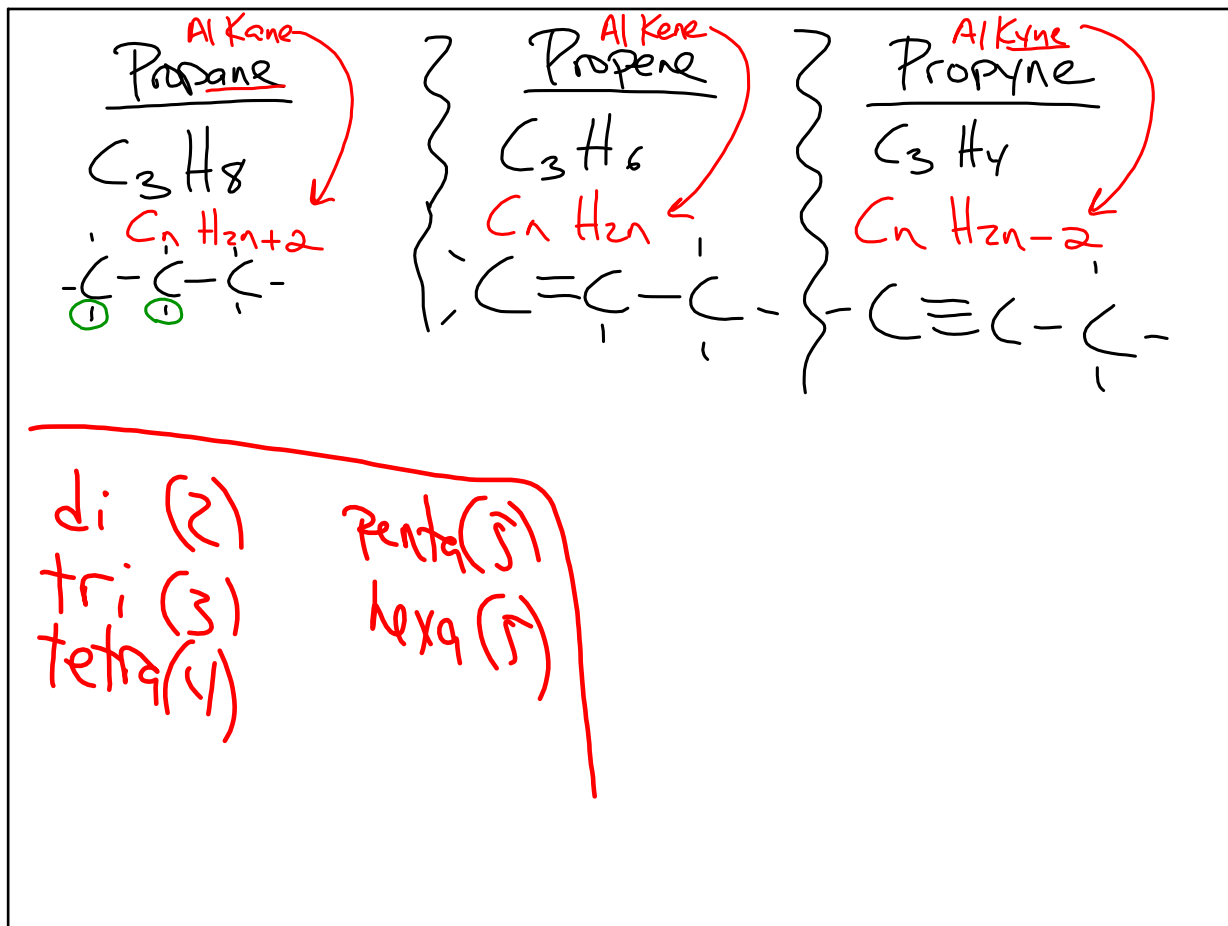
Structural formula

condensed structural

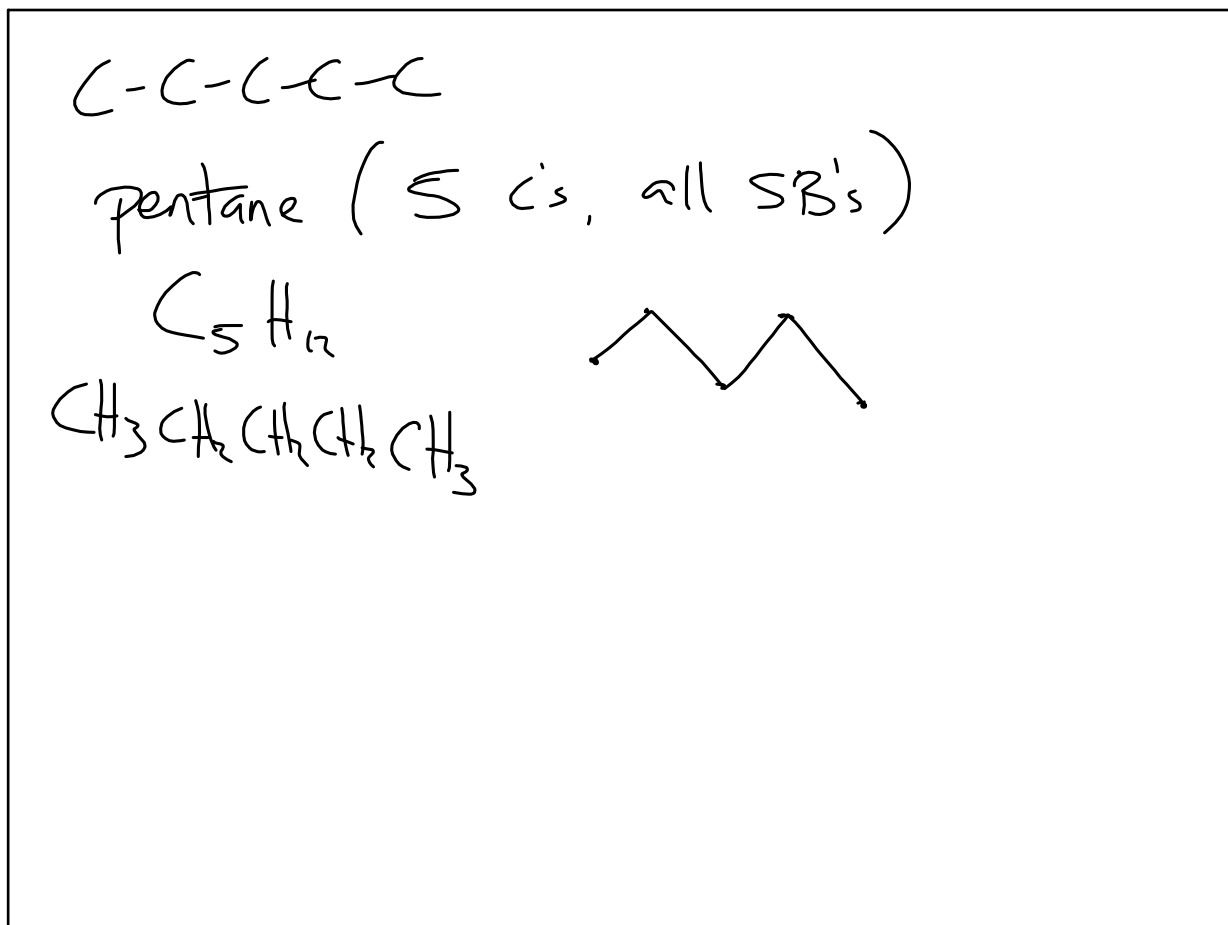
CH₃(CH₂)CH₃

Stick Model

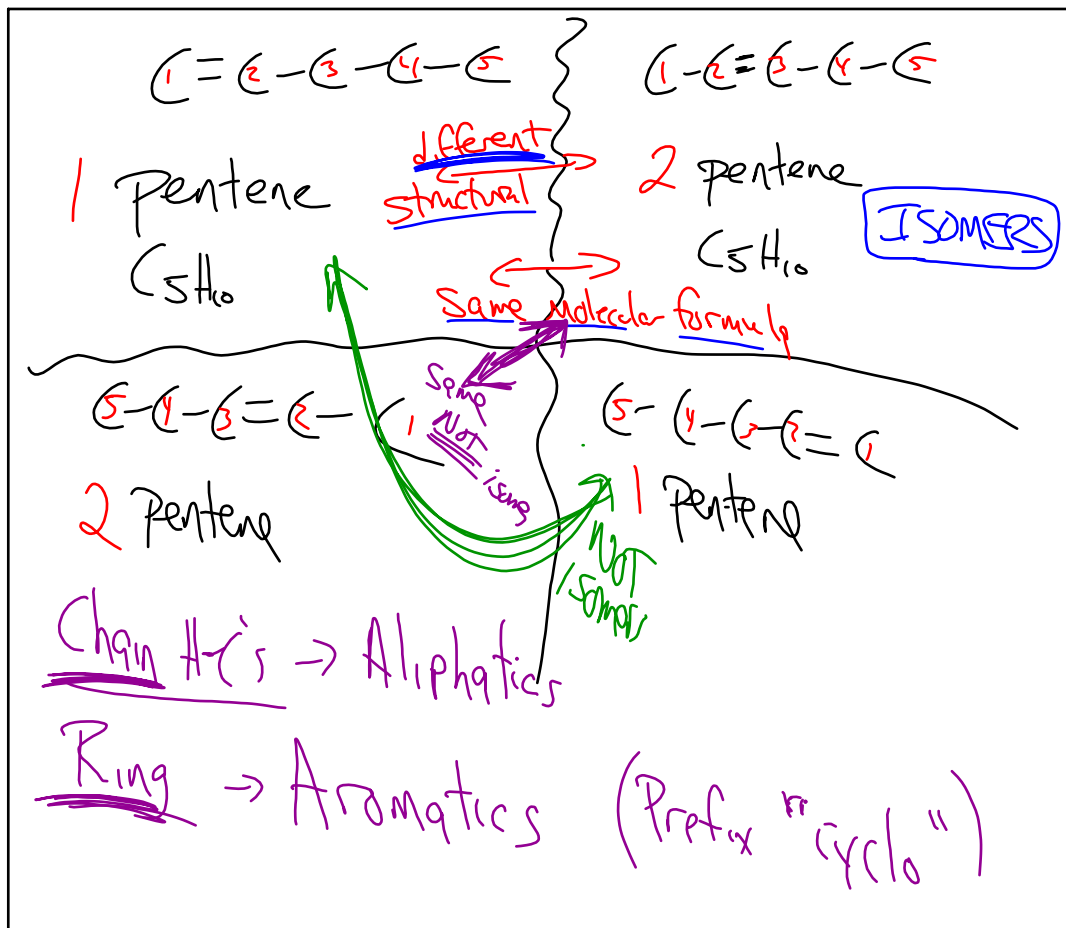
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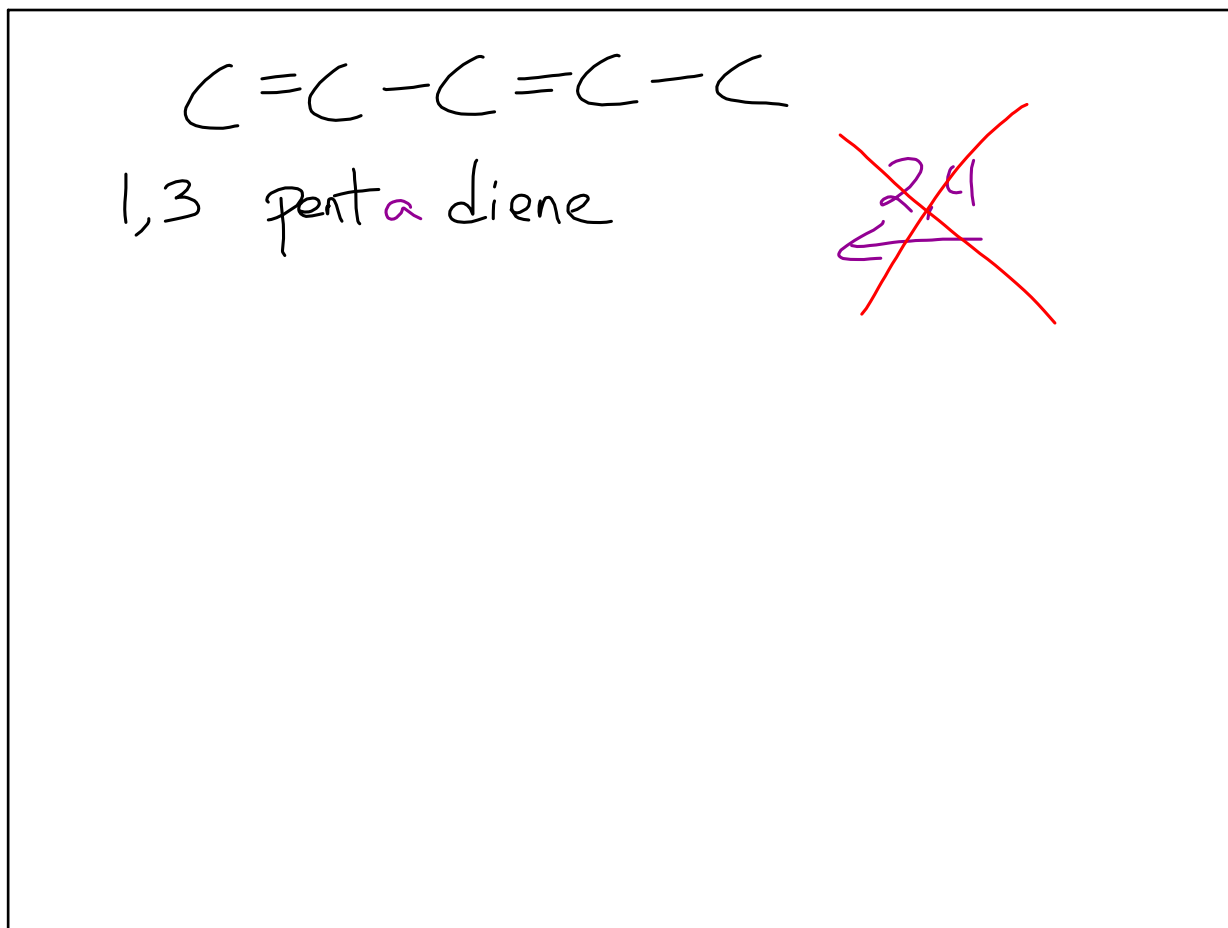
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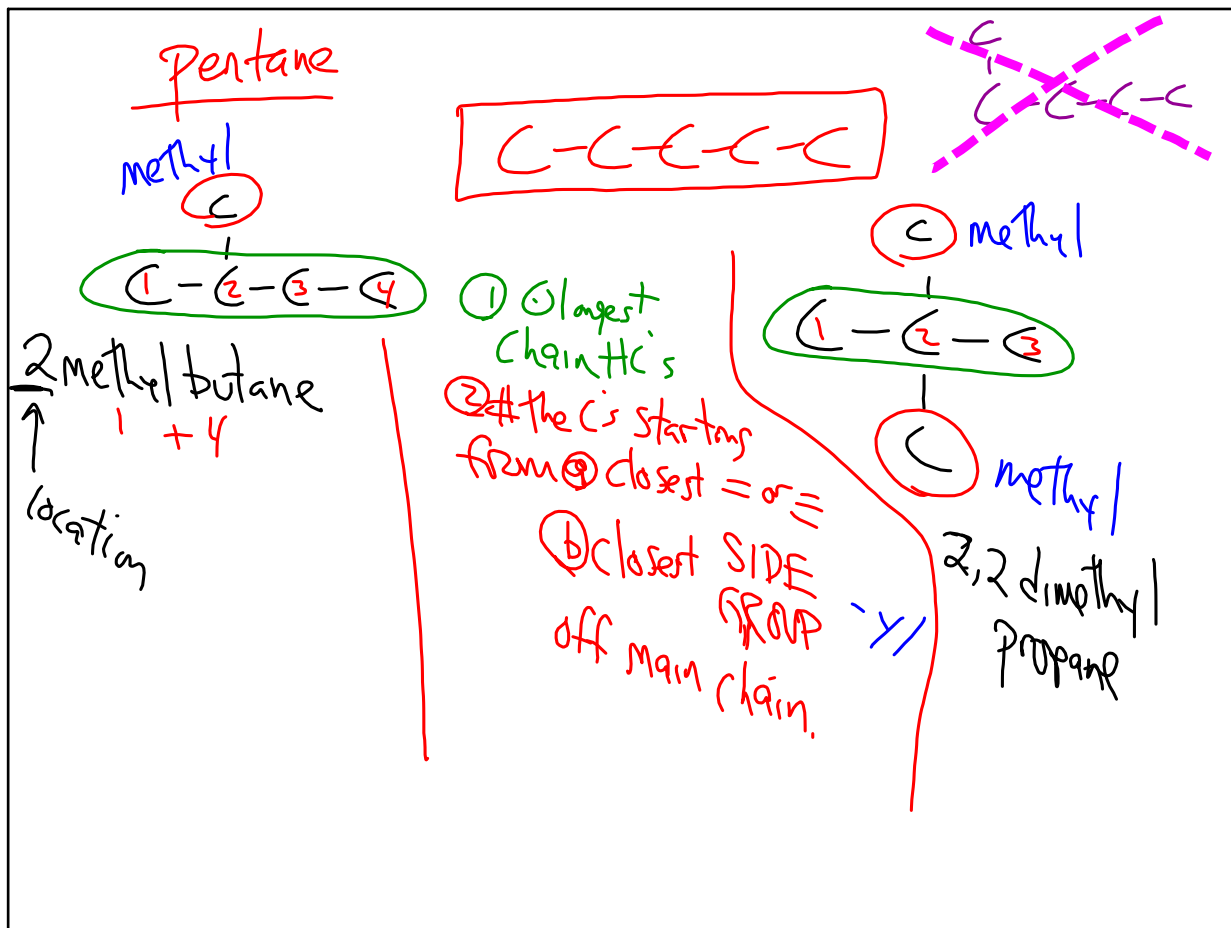
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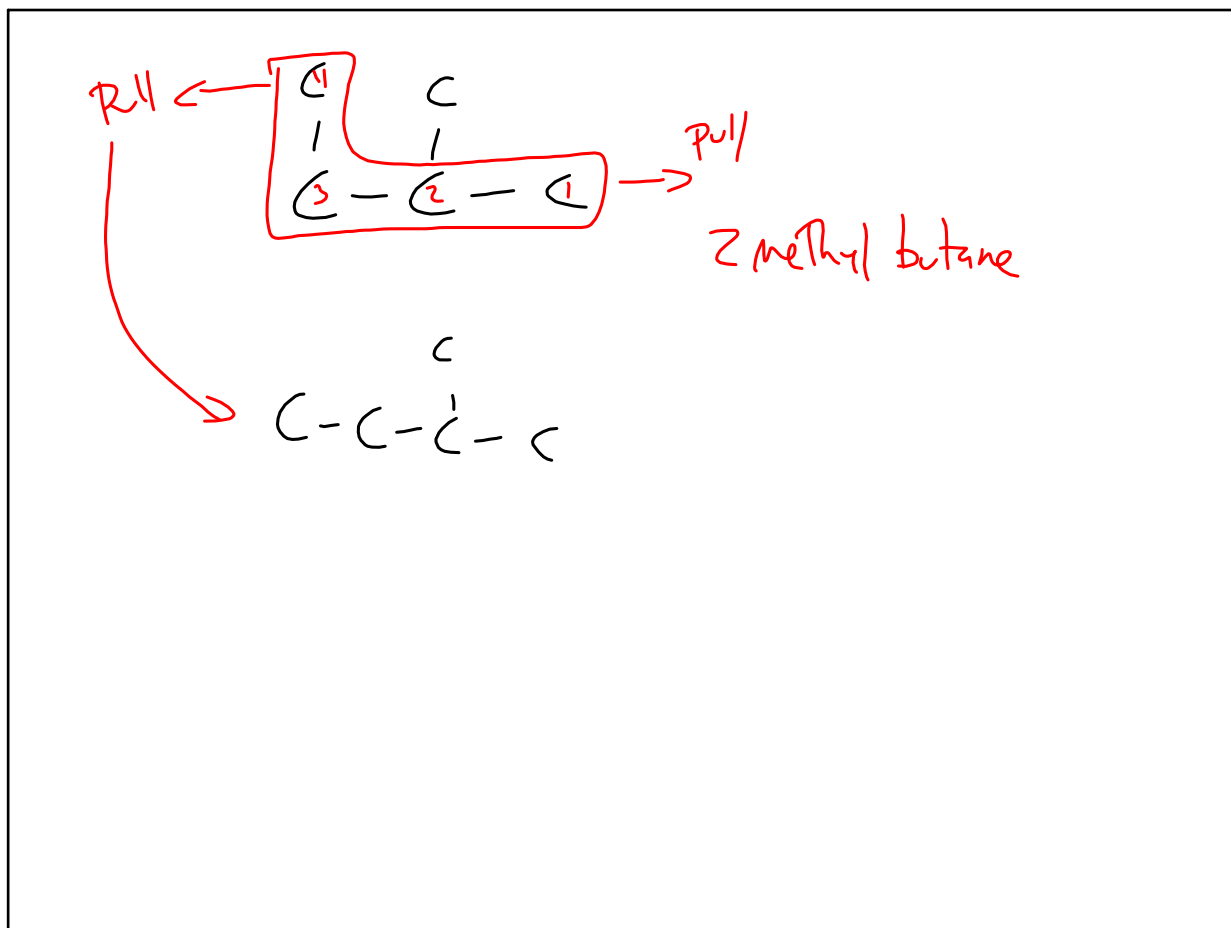
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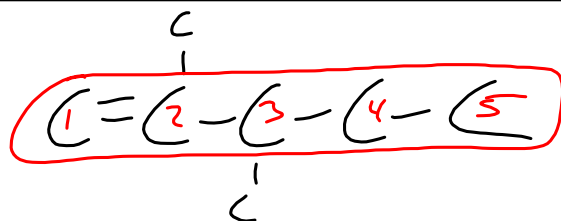
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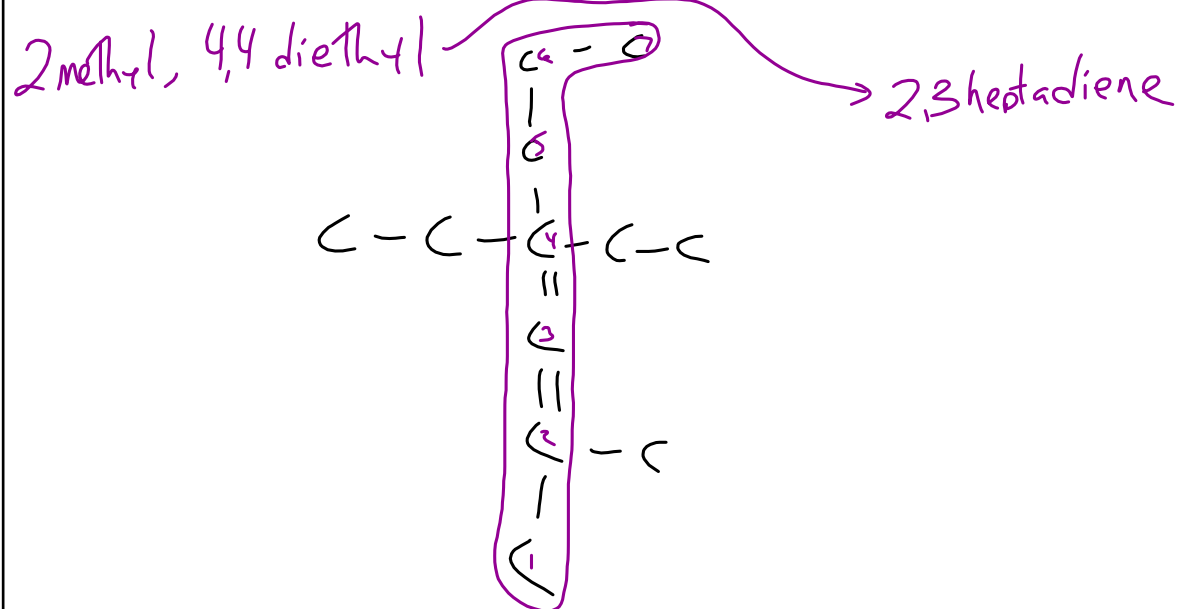
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2,3 dimethyl
 Sides

1 pentene
 Main chain

Apr 27-9:11 AM



Apr 27-9:13 AM

$$25 / 18 + 22$$

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