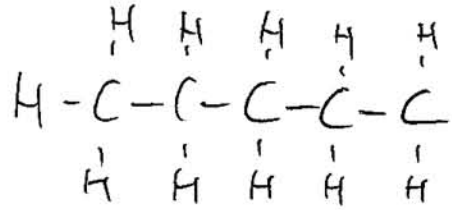
Chapter 25 – p. 768, #28-36

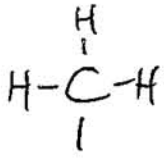
28. pentane (C_5H_{12}) – $CH_3CH_2CH_2CH_2CH_3$

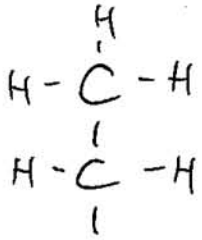
hexane (C_6H_{14}) – $CH_3CH_2CH_2CH_2CH_2CH_3$

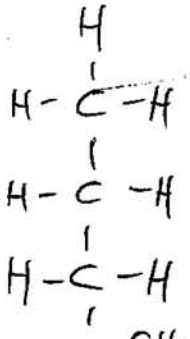
29. a. $CH_3CH_2CH_3$ – three carbon alkane = propane

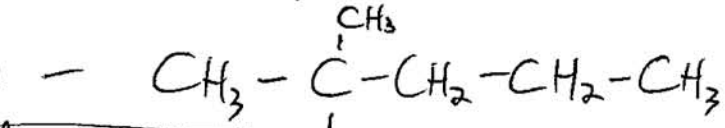
b. $CH_3(CH_2)_6CH_3$ – eight-carbon alkane = octane

c.  – five carbon alkane = pentane

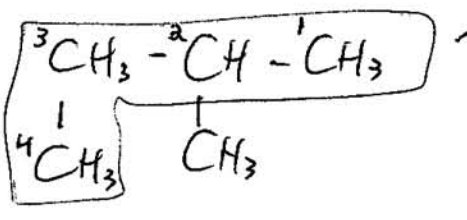
30. methyl – CH_3- = 

ethyl – CH_3CH_2- = 

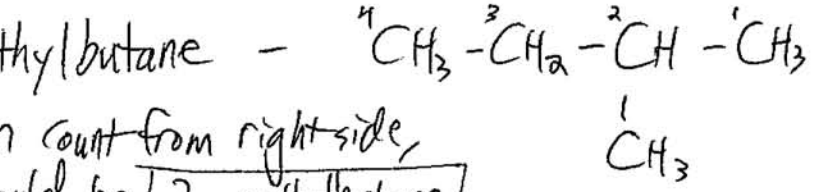
propyl – $CH_3CH_2CH_2-$ = 

31. a. 2-dimethylpentane – 

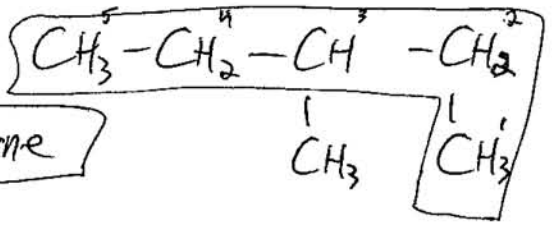
– should be 2,2-dimethylpentane

b. 1,3-dimethylpropane –  – actually butane due to four C's

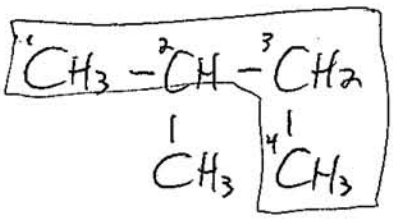
– should be 2-methylbutane

31.c. 3-methylbutane – 

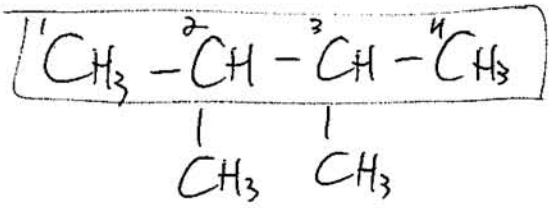
- can count from right side, should be 2-methylbutane

d. 3,4-dimethylbutane –  – five carbon chain, should be pentane

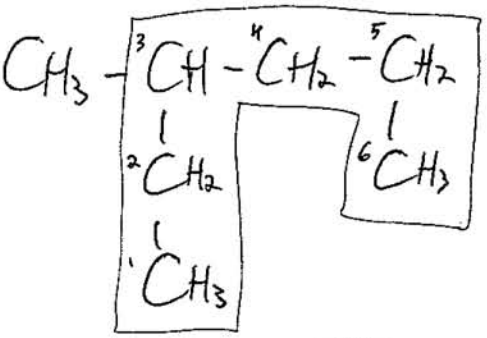
- should be 3-methylpentane

32a.  – four carbon chain = butane

= 2-methylbutane

b.  = butane

= 2,3-dimethylbutane

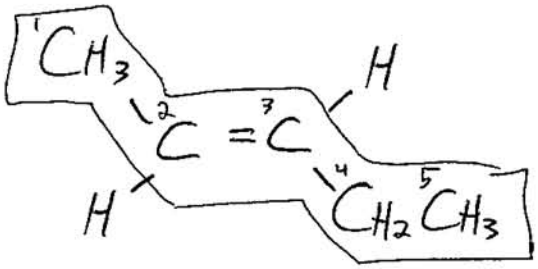
c.  – longest chain = hexane

= 3-methylhexane

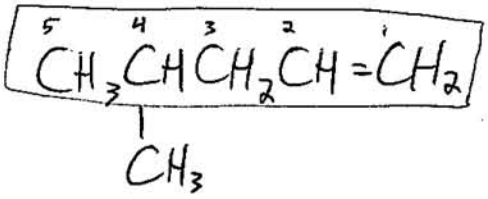
33. see p. 751

34. see p. 752 + Table 25.2 on p. 753

35a. $CH_3CH=CH_2$ – three carbons = propene

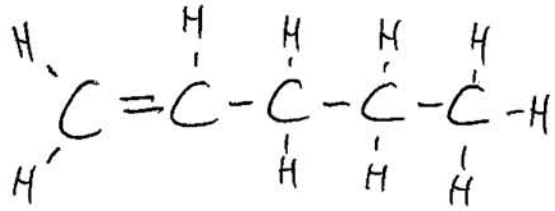
b. 

– five carbons = pentene
– double bond at 2nd carbon
= 2-pentene

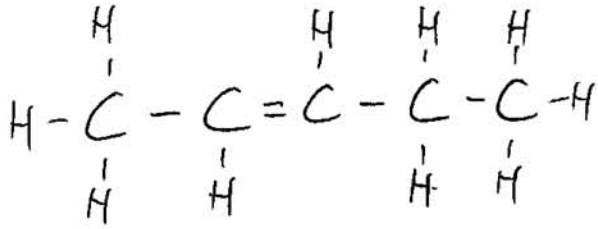
c. 

– five carbons = pentene
– double bond at 1st carbon, methyl at 4th carbon
= 4-methyl-1-pentene

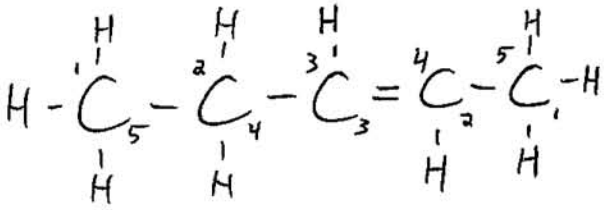
36. alkenes with molecular formula C_5H_{10}:



1-pentene



2-pentene



looks like 3-pentene, but if you count from the right side, it's the same as above
= 2-pentene