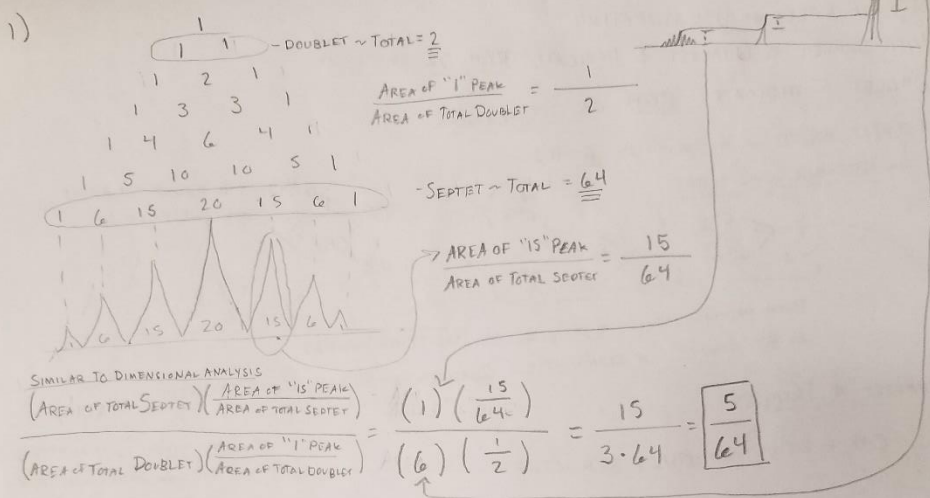


9) Increase
↳ Already high
10) Faster RTG
↳ Synthesis Effects
DIAS
i.e. PEB T
SUPPLEMENTAL HW 3 Q's



2) REFERENCE MOLECULE $C_n H_{2n+2} + (\# \text{ of N}) = C_{17} H_{17(2)+2+1} = C_{17} H_{37}$ → REFERENCE MOLECULE
 ACTUAL MOLECULE $C_{17} H_{19}$
 $18 \frac{1}{2} = 9 \text{ DEGREES OF UNSATURATION}$

3) NO₂ MEANS N IS PRESENT
 MI = 70 amu → EVEN MASS + N MEANS EVEN # OF N
 SINGLE H₁ MEANS ONLY ONE TYPE OF EQUIVALENT H
 DOWNFIELD ¹³C (@ 146 δ) DISAPPEARS SO IT HAS NO H'S
 UPFIELD ¹³C (@ 23 δ) STAYS SO IT HAS 1 OR 3 H'S
 ANALYSIS FOR SURE FACTS
 IF 2 N, 70 - 28 = 42 amu
 IF 4 N, 70 - 56 = 14 → IF ONLY 14 amu ISN'T N, THEN CAN ONLY HAVE ONE C & 2 H'S BUT 42 amu TO SPARE SO WE MUST HAVE 2 N
 IF 2 C, 42 - 24 = 18 → MEANS 18 H
 IF 3 C, 42 - 36 = 6 → 1 C & H
 H C NOT POSSIBLE
 ONLY 1 H₁ PEAK MEANS ALL H'S ARE EQUIVALENT, SO ALL ON N OR C. SINCE WE HAVE A "POSITIVE" ¹³C PEAK, ALL H'S ARE ON C!
 $\frac{15H}{2C} = 9H \text{ PER } C? \text{ NOPE!}$
 $C_3 H_6 N_2$ → 2 DEGREES OF UNSAT.
 $\frac{C_3 H_6}{4/2}$
C#N=C=N C#N=C

