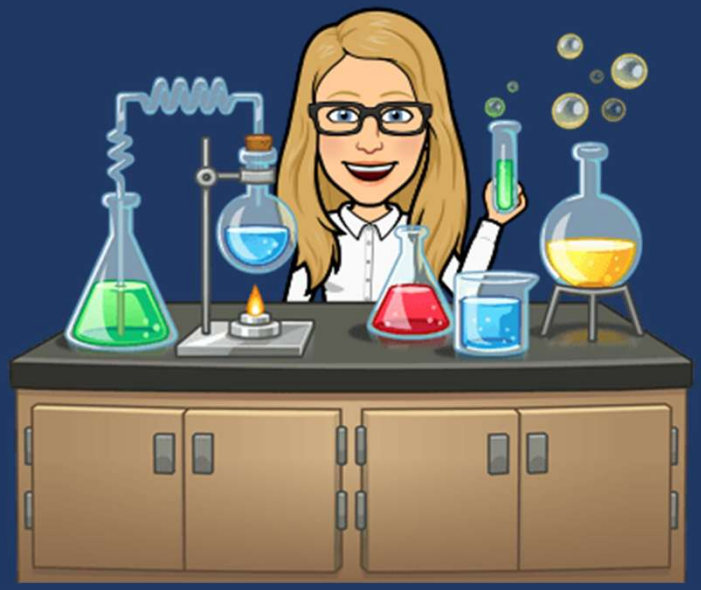
For voting, go to: https://pollev.com/lauriestarke263
or text LAURIESTARKE263 to 37607 to join poll



Dr. Laurie S. Starkey

Cal Poly Pomona

CHM 3140 Organic Chemistry I
Announcements 3/18/25

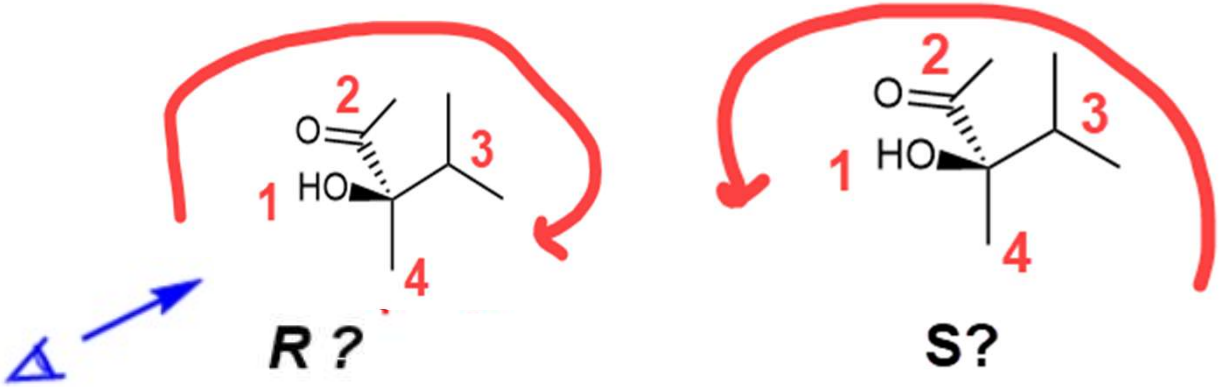
Exam II Results

A/B/C… ranges are to give you a rough idea of course grade **based only on this exam score (scaled) + homework.**

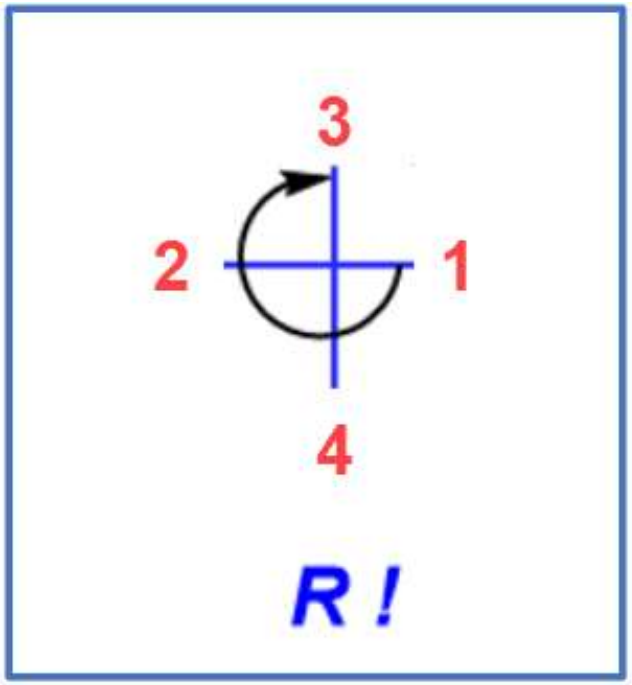
Note: lowest midterm score will be dropped!

Almost done grading…

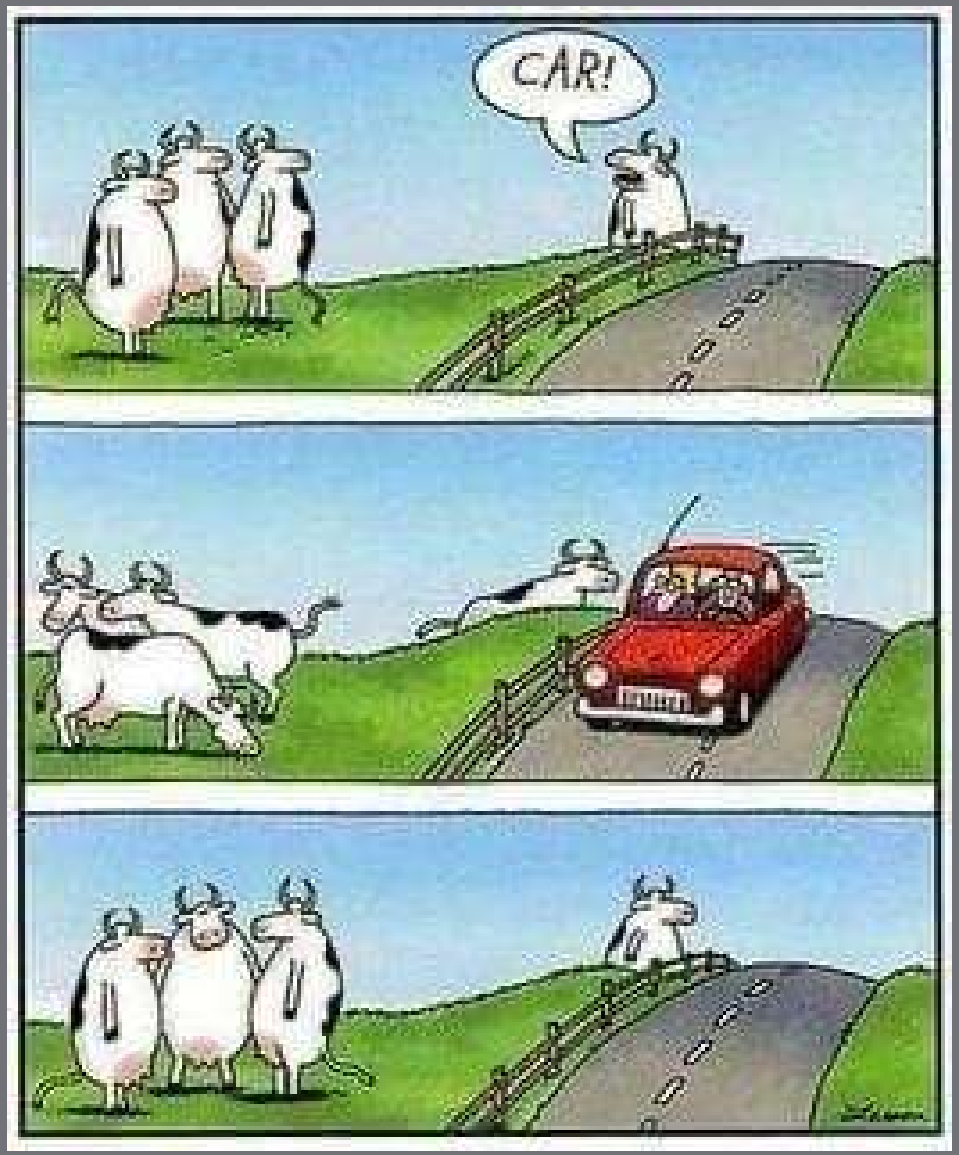
The Problem with Problem 2D on Exam II



Neither!
Wrong POV with #4 in plane!
CANNOT be answered with given drawing!



Questions about grading? Please submit a regrade request so I can look into it.



Stereochemistry Question…

From our point of view (POV), would we be able to tell if the driver is turning the wheel in a clockwise or counterclockwise direction? **Yes.**

Could you determine the direction of the rotation from the cow's POV? **No!**

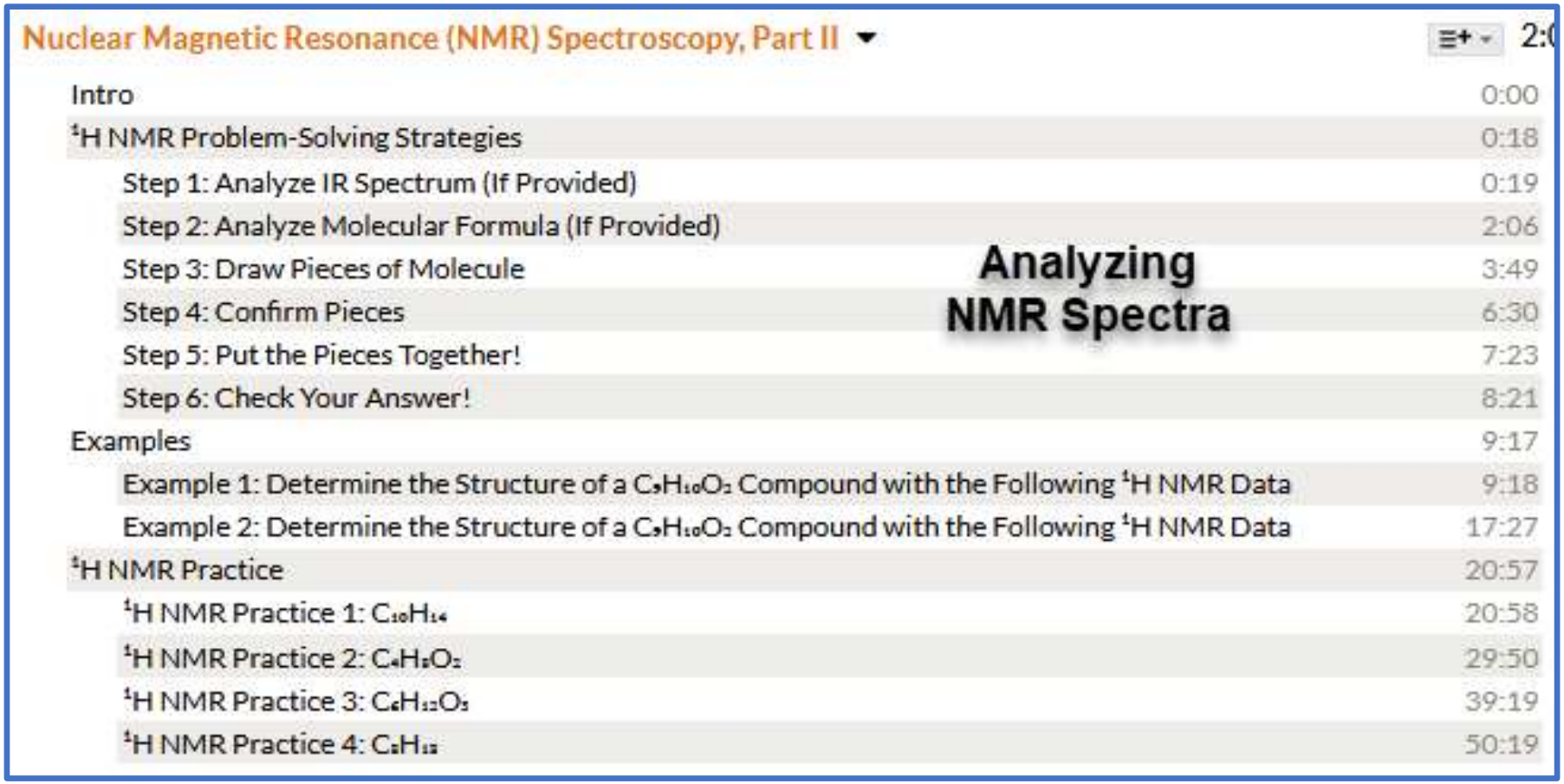
Gary Larson, The Far Side

Today's Topic:
NMR, Part 2 (Ch. 15)

Chapter 15
- ✓ **Watch**
- ✓ **Read**
- ✓ **Practice**

Daily To-Do	Flipped Lectures
Part 2 (AFTER Exam II) • Read Klein Chapter 15, section 10 • Watch flipped lecture • Work through **SkillBuilder 15.8** (5th ed.)	5th edition PDF provided! NMR Part 2 (**57 minutes**)

Flipped Lecture



CHM 3140 Organic Chemistry I, Dr. Laurie S. Starkey, Spring 2025

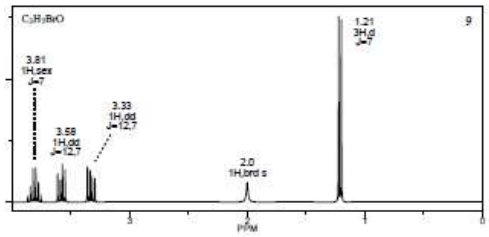
Tentative Schedule (Chapter and *Worksheet/Step #* given for each day)

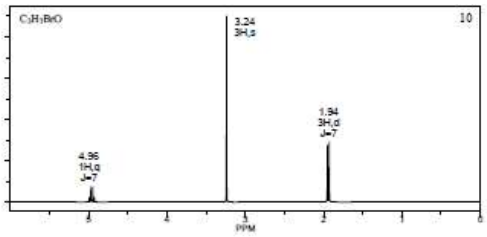
Week	Mon	Tues	Wed	Thurs	Fri
1	1/20	1/21 Ch. 1 *#1*	1/22	1/23 Ch. 1 *#2*	1/24
2	1/27	1/28 Ch.1 *#3* Ch. 2 *#1*	1/29	1/30 Ch. 2 *#2*	1/31
3	2/3	2/4 Ch. 3 *#1*	2/5	2/6 Ch. 3 *#2*	2/7
4	2/10	2/11 Exam Review	2/12	2/13 **Exam I**	2/14
5	2/17	2/18 Ch. 4 *#1*	2/19	2/20 Ch. 4 *#2*	2/21
6	2/24	2/25 Ch. 5 *#1*	2/26	2/27 Ch. 5 *#2*	2/28
7		3/4 Ch. 5 *#3*	3/5	3/6 Ch.15 *#1*	3/7
8	3/10	3/11 Exam Review	3/12	3/13 **Exam II**	3/14
9	3/17	3/18 Ch.15 *#2*	3/19	3/20 Ch. 6 *#1*	3/21
10	3/24	3/25 Ch. 7 *#1*	3/26	3/27 Ch. 7 *#2*	3/28
SPRING BREAK 3/31 – 4/4					
11	4/7	4/8 Ch. 7 *#3*	4/9	4/10 Ch. 7 *#4*	4/11
12	4/14	4/15 Exam Review	4/16	4/17 **Exam III**	4/18

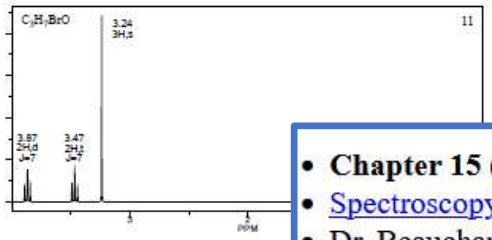
You are Here

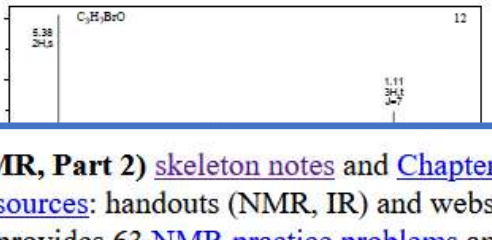
Making progress, CHM 3140

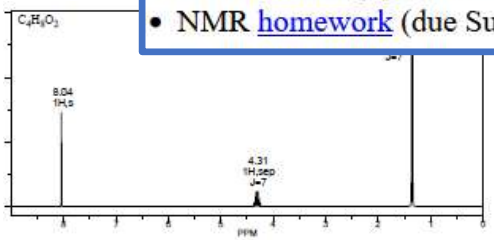
Want NMR practice problems? See Homepage!

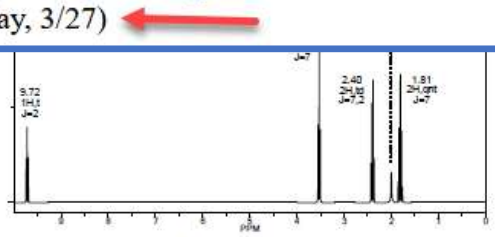


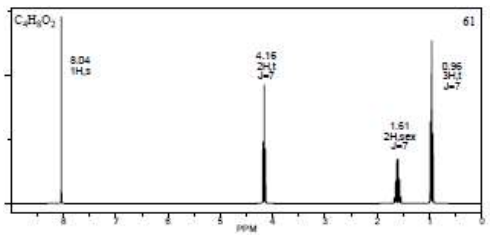


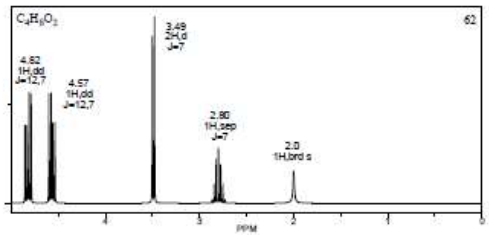




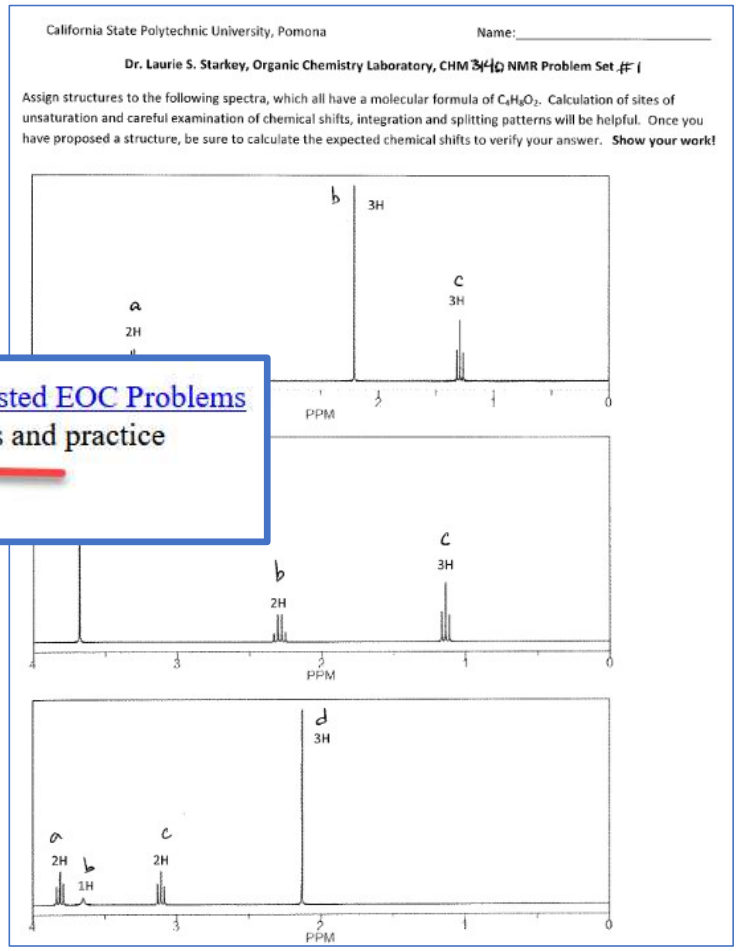








- **Chapter 15 (NMR, Part 2)** skeleton notes and Chapter Summary and Suggested EOC Problems
- Spectroscopy resources: handouts (NMR, IR) and websites for NMR tutorials and practice
- Dr. Beauchamp provides 63 NMR practice problems and 63 solutions!
- NMR homework (due Sunday, 3/27)



California State Polytechnic University, Pomona Name:_____

Dr. Laurie S. Starkey, Organic Chemistry Laboratory, CHM 3~~4~~0 NMR Problem Set #1

Assign structures to the following spectra, which all have a molecular formula of $C_4H_8O_2$. Calculation of sites of unsaturation and careful examination of chemical shifts, integration and splitting patterns will be helpful. Once you have proposed a structure, be sure to calculate the expected chemical shifts to verify your answer. **Show your work!**

Exam Wrapper Survey

due Sunday 3/30

CHM 3140 Exam Wrapper - Post-Test Survey (Due 3/28/21) Name:_____

Metacognition By taking a step back and thinking about the way you learn, you can improve your learning! The following survey will guide you through an exercise in self-reflection, with the goal of improving your performance on the next exam. You will earn 3 points credit if you complete this survey, and 3 points for corrections (*include written reflection, if score <55). It analyzes the following three areas

1. How did you prepare for this exam?
2. What kinds of mistakes did you make?
3. How will you prepare differently next time?

** If exam score is below 55, you must submit a written reflection with your exam corrections (what will you do differently for the rest of the semester?)*

What was your score* on the exam? ☐

What was your grade in CHM 123/1220? ☐ Are you repeating CHM 3140? Y / N

1. Leading up to the exam, approximately how many hours per week outside of class (on average) did you spend studying Organic Chemistry? ☐

2. Given the approximate # of textbook problems in each chapter (#), about how many did you work on?

Ch. 4 (# problems) **(Alkanes, Conformers)**		**Ch. 5** (# problems) **(Stereochemistry)**		**Ch. 15** (# problems) **(NMR)**	
12 SkillBuilders (**33**)		6 SkillBuilders (**28**)		8 SkillBuilders (**28**)	
End-of-Chapter (EOC) (**81**)		EOC (**106**)		EOC (**47**)	

3. Approximately how much of your studying was spent doing each of the following activities?

5 major contributor | 4 moderate amount | 3 some time spent | 2 minimal amount | 1 not done at all

___Reading textbook section(s) for the first time

___Rereading textbook section(s)

___Writing key concept or chapter summaries

___Reviewing sample exams

Advice for "How to Earn an A (or B…)"

1. **Attend Lecture -** Come to class, take g
   questions, try problems presented in
2. **Read the Book -** As soon as possible a
   closely look through any examples tha
   problems you will encounter on exam
   compare two compounds (e.g., Highe
   mechanism, explain something (e.g., r
3. **Work on In-Chapter Problems** - After
   examples (sometimes there are also S
   learned skills to the problem(s) in tha
   problem down onto the page and *wri*
   is the only way to practice and *provid*
   book and/or lecture notes for help as
   Manual (or at the back of the book), a
   a. If your answer was perfect, th
      a break before moving on to t
   b. If you made mistakes, do you
      problem. If there are no mor
      answer perfect, *without referring to your notes or the book*.
   c. If you don't understand the Solutions Manual answer, or you don't even know how to get started on the problem, then go back to your class lecture notes. Read through your notes and try to work on the example(s) we did in class (i.e., copy it down on a blank page and attempt the problem on your own). Next, re-read or skim through the textbook again and work on the

Strategies for Earning an A (or B…) in Organic Chemistry
Dr. Laurie Starkey, Cal Poly Pomona

"Miriam, a freshman calculus student at Louisiana State University (LSU), made 37.5% on her first exam but 83% and 93% on the next two exams. Robert, a first-year general chemistry student at LSU, made 42% on his first exam and followed that up with three 100%s in a row. Matt, a first-year general chemistry student at the University of Utah, scored 65% and 55% on his first two exams and 95% on his third exam. I could go on. I could tell you scores of stories like this from the last 15 years of my teaching career. Something happened to all of the students between their last failing grade and their first good grade. They learned something new. **No Miracles, Just Strategies**" Saundra McGuire, author of *Teach Students How to Learn*

And one more story to share: Laurie, a first-year graduate student at UCLA, scored 12% on her first Organic Synthesis midterm…but then she succeeded in the course, earned her Ph.D. in Organic Chemistry, developed a rewarding teaching career, and even wrote a textbook on Organic Synthesis! So if you are not yet having success in Organic Chemistry, the good news – the GREAT news – is that you can still improve by learning how to learn. Let's explore various strategies that can help you learn Organic Chemistry and reach your desired goal. **Formative Assessment** is the feedback you get while learning and studying. It comes from *writing down* an answer and checking to see if it is right. **Summative Assessment** is what you do at the end of a unit – taking a quiz or exam for a grade. Formative assessment provides *evidence of your learning*…it helps you steer in the right direction and positions you to do well on summative assessments.

CPP Grad & Chemist at Pfizer
Joyann Donaldson

- BS Chemistry, 2014 Cal Poly Pomona
- PhD Chemistry, 2019 UCLA
- "I am a medicinal chemist focused on making new small molecule oncology medicines!"

What will your story be?