

CHM 3150 Organic Chemistry II, Dr. Laurie S. Starkey, Cal Poly Pomona
Ch. 11 (Klein-Starkey): Synthesis, Textbook Problems Cover Sheet

Name: _____ Signature: _____
By signing, you are confirming that the work you are submitting is your own.

To earn 5 points course credit, you must write and sign your name above, check one of the boxes below, and submit this page to Gradescope. If you worked problems by hand on paper (or tablet), complete this cover page and include it as the first page of the pdf you submit. Use Genius Scan (or equivalent app) to convert your handwritten homework to a clean, readable pdf: ***please crop your pages and apply a Black & White filter.***

Handwritten and/or WileyPLUS textbook problems? Please mark the appropriate box below.

☐

hand-written only

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hand-written problems & WileyPLUS

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WileyPLUS only

For hand-written work, students need to do at least 25 problems for full credit. You are expected to use the SSM to self-grade your hand-written work, and it should not be error-free or without corrections! *Students who simply copy answers from the Solutions Manual and submit them as their own work will not earn credit on this assignment.* In WileyPLUS, there are over 145 points that can be earned (~2 points per problem). **A WileyPLUS score of 50 or higher will earn full homework credit.** Partial homework credit will be given for scores below 50 (40 = 4 points, etc.).

Suggested Ch. 11 problems (be sure to work on synthesis problems by hand – on paper!)

In-Chapter Problems (includes SkillBuilders 11.1–11.4)

11.1	11.3 a–f	11.5 a–f	11.7 a–f	11.9 a–f
11.2	11.4	11.6	11.8	11.10




A sample's volatile organic compounds (VOCs) can be collected for analysis from the air above the sample, called the *headspace*.

Problem 11.10

End-of-Chapter (EOC) Problems


11.11 a–d	11.17	11.22	11.29
11.12 a–e	11.18 a–e	11.23	11.30
11.13 ab	11.19 ab	11.26	11.31
11.14	11.20 a–d	11.27	11.32
11.15 a–d	11.21 a–e	11.28	11.39



Problem 11.8

Colonies of *L. magnifica* avoid becoming fish food by producing a deadly toxin. If the sponge is squeezed, the smelly, red fluid that is released causes fish to flee.

11.16



"If I have seen further, it is by standing on the shoulders of Giants" Isaac Newton, 1675

Advancing Science by Standing on the Shoulders of Giants (Vitamin and B₁₂ Milestones)

1889	1906	1911	1926	1933	1947	1956	1972
Beriberi linked to refined rice - Eijkman	Diet experiment reveals "vital" component needed - Hopkins	The term "vitamine" is coined - Funk	First vitamin (B ₁) is isolated - Jansen Donath	Anemia treated with liver diet - Murphy and Minot	Vitamin C is synthesized - Haworth	Vitamin B ₁₂ is isolated - Folkers, Rickes, Shorbe	Vitamin B ₁₂ structure elucidated - Hoeghkin
							Vitamin B ₁₂ total synthesis - Woodward and Eschenmose

Read about the story of Vitamin B-12 in Section 11.7 Natural Product Synthesis

