

Exercises

Consistent and focused exercise is important in the development of mathematical proficiency. The following exercise sets have been selected to help you know where to focus your practice. You will be graded according to how many of the listed exercises you complete; however, you may need to do more if you are still struggling with a particular skill.

Instructions:

- Consult the Presentation of Work requirements in the syllabus.
- Complete each exercise:
 - Write enough of the question so you do not have to consult the textbook to know what was being asked.
 - Show your work. Answers without support are not typically enough.
 - Check your answer after each question. Answers to odd numbered problems can be found in the appendices of your textbook.
 - Correct any incorrect work. The exercise set you turn in should reflect your own work. However, you may consult other people or the solutions posted in Canvas to help you correct your thinking. After seeking help, rework the problem on your own to make sure you understand the concept.
 - ✱ Hint: Make a habit of checking your answer and correcting your work after completing each exercise before going on to the next. This habit can speed up learning.
- Mark off each completed exercise on the Exercise Set Cover Sheet.
- Submit your exercise set.
 - Complete the table on the Exercise Set Cover Sheet.
 - Scan the Exercise Cover Sheet and all pages of your work into a single pdf file.
 - Upload the file to Canvas before the due date.
 - Late submissions will not be accepted.
 - ✱ Hint: Give yourself plenty of time in case of technical problems.

Grading Scheme: Out of 5 points.

- Full Marks (5 pts): $\geq 90\%$ complete
- Substantial (4.5 pts): $\geq 80\%$ complete
- Passable (3.5 pts): $\geq 70\%$ complete
- Unacceptable (0-0.5 pts): $< 70\%$ complete
- Presentation of Work penalty (-0.5 pts)
- Late penalty (grade of 0)

Exercise Cover Sheet – Matrices: Chapters 1-3

By crossing out an exercise below, you are indicating that you have not only worked the exercise but also checked your answer against the answer in the back of the book, and if your answer was incorrect, you have reworked the problem so that it is correct.

Exercises	Number Complete per Section	% Complete per Section
1.1 – 69, 70, 71, 72, 77, 78, 79, 81, 83, 85, 91, 93	_____ / 12	_____ %
1.2 – 3, 7, 11, 13, 15, 17, 19-21*, 22-24*, 33, 35, 37, 39, 41, 43, 59, 63	_____ / 16	_____ %
2.1 – 7, 11, 15, 17, 21, 23, 29, 31, 33, 35, 41, 43, 47, 49, 51, 55, 57, 59, 61, 63, 65, 67, 69	_____ / 22	_____ %
2.2 – 7, 13, 15, 27, 29, 37, 41, 45, 49, 51, 53, 55, 59, 69, 71, 73	_____ / 16	_____ %
2.3 – 5, 7, 13, 15, 25, 27, 41, 45, 47, 53, 55, 57, 59, 69, 71, 75	_____ / 16	_____ %
2.4 – 1, 3, 5, 7, 9, 11, 15, 17, 19, 21, 23, 25, 31, 33, 35, 41, 53	_____ / 17	_____ %
3.1 – 1, 5, 9, 15, 17, 19, 27, 29, 31, 39, 41, 43, 44, 45, 47, 51, 67	_____ / 17	_____ %
3.2 – 1, 5, 9, 11, 15, 21, 23, 25, 27, 31, 35, 37, 39, 41, 45	_____ / 15	_____ %
3.3 – 3, 5, 13, 17, 21, 23, 25, 33, 37, 39, 41, 47, 57, 59, 65, 71, 75	_____ / 17	_____ %
Special Instructions * count as one exercise		Average % Complete _____ %

Exercise Cover Sheet – Vector Spaces: Chapter 4

By crossing out an exercise below, you are indicating that you have not only worked the exercise but also checked your answer against the answer in the back of the book, and if your answer was incorrect, you have reworked the problem so that it is correct.

Exercises	Number Complete per Section	% Complete per Section
4.1 – 1, 5, 9, 13, 15, 17, 21, 23, 27, 31, 33, 37, 39	_____ / 13	_____ %
4.2 – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17, 21, 25, 29, 31, 33, 35, 37, 41	_____ / 22	_____ %
4.3 – 3, 4, 7, 9, 11, 17, 23, 27, 29, 33, 37, 39, 43, 55	_____ / 14	_____ %
4.4 – #1, 3, 5, 9, 13, 17, 19, 23, 25, 31, 33, 35, 37, 41, 49, 53, 55, 57, 63	_____ / 19	_____ %
4.5 – 1, 3, 5, 7, 13, 15, 17, 21, 25, 27, 31, 33, 35, 37, 39, 43, 45, 49, 53, 59, 61, 63, 65	_____ / 23	_____ %
4.6 – 5, 7, 9, 15, 17, 21, 23, 25, 33, 39, 41, 43, 47, 51, 53, 57, 59, 67, 71, 73, 75	_____ / 21	_____ %
4.7 – 7, 9, 13, 15, 17, 19, 21, 23, 27, 31, 33, 39, 41, 45, 49, 55, 57	_____ / 17	_____ %
Special Instructions * none		Average % Complete _____ %

Exercise Cover Sheet – Inner Product Spaces: Chapter 5

By crossing out an exercise below, you are indicating that you have not only worked the exercise but also checked your answer against the answer in the back of the book, and if your answer was incorrect, you have reworked the problem so that it is correct.

Exercises	Number Complete per Section	% Complete per Section
5.1 – 5, 7, 9, 11, 13, 15, 21, 25, 29, 33, 37, 41, 45, 47, 53, 57, 61, 65, 73	_____ / 19	_____ %
5.2 – 5, 13, 17, 23, 27, 29, 31, 33, 37, 41, 45, 49, 51, 59, 65, 75, 81, 85	_____ / 18	_____ %
5.3 – 5, 11, 13, 19, 23, 29, 39, 55, 56, 67	_____ / 10	_____ %
5.4 – 7, 9, 11, 19, 21, 43	_____ / 6	_____ %
5.5 – 7, 11, 13, 15, 19, 23, 35	_____ / 7	_____ %
Special Instructions * none		Average % Complete _____ %

Exercise Cover Sheet – Linear Transformations: Chapter 6

By crossing out an exercise below, you are indicating that you have not only worked the exercise but also checked your answer against the answer in the back of the book, and if your answer was incorrect, you have reworked the problem so that it is correct.

Exercises	Number Complete per Section	% Complete per Section
6.1 – 3, 15, 19, 21, 23, 25, 29, 31, 33, 39, 49, 53, 65, 67	_____ / 13	_____ %
6.2 – 1, 3, 5, 9, 11, 15, 17, 19, 23, 27, 31, 33-36 all, 41-44 all, 49, 51, 53, 65	_____ / 23	_____ %
6.3 – 1, 5, 7, 9, 11, 15, 19, 23, 25, 27, 33, 35, 41, 43, 53	_____ / 15	_____ %
6.4 – 3, 7, 13, 15, 17, 21, 25, 41	_____ / 8	_____ %
6.5 – TBD	_____ / ____	_____ %
Special Instructions * none		Average % Complete _____ %

Exercise Cover Sheet – Eigen Sachen: Chapter 7

By crossing out an exercise below, you are indicating that you have not only worked the exercise but also checked your answer against the answer in the back of the book, and if your answer was incorrect, you have reworked the problem so that it is correct.

Exercises	Number Complete per Section	% Complete per Section
7.1 – 1, 3, 5, 9, 11, 15, 19, 23, 27, 33, 51, 53, 59, 67, 69, 71, 79	_____ / 17	_____ %
7.2 – 3, 7, 9, 11, 15, 19, 23, 27, 29, 37	_____ / 9	_____ %
7.3 – 9, 13, 17, 23, 27, 35, 41, 45, 49, 51, 53	_____ / 11	_____ %
7.4 – TBD	_____ / ____	_____ %
Special Instructions * none		Average % Complete _____ %