Exercises from *Matrix Groups for Undergraduates* by Kristopher Tapp

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Chapter 1

Matrices

1.1 Exercises

Exercise 1.1. State and prove (or reference) a fundamental fact related to matrix groups.

Solution. Placeholder for your solution. □

Chapter 2

All matrix groups are real matrix groups

2.1 Exercises

Exercise 2.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 3

The orthogonal groups

3.1 Exercises

Exercise 3.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 4

The topology of matrix groups

4.1 Exercises

Exercise 4.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 5

Lie algebras

5.1 Exercises

Exercise 5.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 6

Matrix exponentiation

6.1 Exercises

Exercise 6.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 7

Matrix groups are manifolds

7.1 Exercises

Exercise 7.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 8

The Lie bracket

8.1 Exercises

Exercise 8.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 9

Maximal tori

9.1 Exercises

Exercise 9.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 10

Homogeneous manifolds

10.1 Exercises

Exercise 10.1. Another exercise goes here.

Solution. Placeholder for your solution. □

Chapter 11

Roots

11.1 Exercises

Exercise 11.1. Another exercise goes here.

Solution. Placeholder for your solution. □