

## Algebraic Topology (Fall 2025): Homework 7

- You **must email your submission** as a **PDF file** to kbala@wsu.edu. You are welcome to write answers by hand, and scan or take photos of the writings. Put all the images on a PDF file, though.
- Your file name should identify you **in the following manner**. If you are Leopold Butters Stotch, you should name your submission LeopoldStotch\_Hw7.pdf (and **NOT** “Leopold Stotch\*pdf” or Leostotch\_\*pdf or ...). **Please avoid white spaces in the file name :-).**
- **Begin the SUBJECT of your email submission with the same FirstnameLastname, expression, e.g., “LeopoldStotch Hw7 submission”.**
- The book of Munkres (Elements of Algebraic Topology) is denoted [M].
- **This homework is due by 11:59 PM on Thursday, Nov 20.**

1. (15) [M] Problem 1, Page 135. Drawing some diagrams should help.
2. (15) [M] Problem 3, Page 136.
3. (30) [M] Problem 3, Page 141.
4. (20) [M] Problem 4, Page 141.
5. (20) [M] Problem 1, Page 144.