

Homework 3

Math 262

due at classtime on Tuesday, October 4

Write your solutions to the following problems clearly and neatly. Make sure to explain your reasoning and provide mathematical details that support your answers. For a few tips on writing solutions, see [this helpful guide for mathematical writing](#).

You may write or type your solutions electronically, or write them on paper and scan or photograph them. Upload a single file containing your solutions to the [Homework 3](#) assignment on Moodle.

Book Problems

- Section 1.4 #76 (page 42)
- Section 1.5 #91, 93 (pages 48–49)
- Section 2.1 #5, 7abdef (pages 70–71)
- Section 2.2 #13, 16, 22 (pages 79–82)
- Section 2.3 #29, 32, 33, 37 (pages 91–95)

Additional Problem

Show that $\binom{n}{k} = \binom{n-1}{k-1} + \binom{n-1}{k}$, where $1 \leq k \leq n$.