

Algebraic Structures: homework #8

Due 28 October 2024, at 9am via Gradescope

To receive full credit, all work must be shown. A passage means what careful but unimaginative reader thinks it does. Add details if in doubt. The problems should be written neatly and in order they were assigned.

A typical homework assignment is graded out of 20 points: 4 points for correctness of each problem. Bonus points result in additional credit.

0. (Ungraded)

- Finish reading Section 3.4; this is what we covered by the 8th week. Did you find any mistakes or typos? If you did not, you might not have read carefully enough.
- Start reading Chapter 3.

1. Give an example of three finite rings A, B, C that have the same cardinality, but are pairwise non-isomorphic. You must justify why these rings are non-isomorphic.
2. Problem 4 on page 130.
3. Problem 6 on page 135.
4. Problem 12 on page 136.
5. Problem 20 on page 136.