

Math 250: Daily Preparation

Overview

The main goal of today's daily preparation assignment is to understand how to construct and interpret Cartesian products, and how these arise in the context of sets. The primary emphasis is on reading some important sections of the text and responding to the questions posed below.

Basic learning objectives

These are the tasks you should be able to perform with reasonable fluency **when you arrive at our next class meeting**. Important new vocabulary words are indicated *in italics*.

- Recognize and understand the significance of *ordered pairs*.
- Be able to construct the *Cartesian product* of two sets.
- Be able to sketch regions in the *Cartesian plane*.

Advanced learning objectives

In addition to mastering the basic objectives, here are the tasks you should be able to perform in the near future **with practice and further study**:

- Construction and interpret products of more than two sets.
- Understand the role of Cartesian products in functions.

Resources

Reading: Read pages 254-262.

Watching: Here are some additional resources that have been developed to support your learning:

- Screencast 5.4.1: <https://youtu.be/knwM9OWK3oA>
- Screencast 5.4.2: https://youtu.be/ux_xqiX7eBE

Questions

Respond to the following questions on separate paper, as explained in the document that describes guidelines and expectations for daily preparatory assignments. You should be prepared to show me your responses at the start of class; I will review your work briefly sometime before the end of class.

1. Complete Preview Activity 2, on pages 255-256.
2. Complete Progress Check 5.23 (a)-(e) on pages 257-258.
3. Complete Progress Check 5.24 on page 259.