MATH 241 — HOMEWORK 10.

due on Friday, November 13.

Textbook: *"Applied Partial Differential Equations with Fourier Series and Boundary Value Problems"*, fifth edition
   by Richard Haberman

Topics:
- Chapter 7. Higher-Dimensional Partial Differential Equations
    - 7.7 Vibrating Circular Membrane and Bessel Equation
        * 7.7.7 Eigenvalue Problem Involving Bessel Functions
        * 7.7.8 Initial Value Problem for a Vibrating Circular Membrane
    - 7.8 More on Bessel Functions
    - 7.9 Laplace's Equation in a Circular Cylinder
        * 7.9.2 Separation of Variables
        * 7.9.3 Zero Temperature on the Lateral Sides and on the Bottom or Top

Tenth Homework Assignment.

Reading:
- Read and Subsections 7.7.7, 7.7.8, 7.9.2 and 7.9.3 from the book.
- Read your notes.

Exercises: **Problems:**
- Page 317: problems: 7.8.1, 7.8.5, (only as $z \mapsto \infty$.), 7.8.13
- Page 328: problems: 7.9.2 (b)(c), 7.9.3 (b)