

Homework B

Consider the Laplace equation on the region described in polar coordinates by

$$\rho < r < R, \quad 0 < \theta < \pi/3.$$

Find the solution that satisfies the boundary conditions

$$u(\rho, \theta) = f(\theta), \quad u(R, \theta) = g(\theta), \quad u(r, 0) = 0, \quad u_\theta(r, \pi/3) = 0.$$

From the text:

4.2/4

4.3/4, 5, 6.