Math 216 Assignment 5

READ ME: Merely finding the answer to a problem is not enough to receive full credit; you must show how you arrived at that answer.

Problems from the book:

Section 8.3 #'s 2,4,20

Section 8.6 #'s 6,8,26

Solve the Heat Equation in three spatial and one temporal variables in the cylinder $x^2 + y^2 \leq 4$ if solutions $u = u(r, \theta, z, t)$ are assumed independent of z and θ (so in fact, $u = u(r, t)$) with the boundary condition

$$u(4, t) = 1.$$