

Alternative to Final Exam

Introduction to Differential Equations, Sections 5-8

April 21, 2008

1. Section 2.1, p. 39: 14
2. Section 2.2, p. 48: 24
3. Section 2.5, p. 89: 12
4. Section 3.6, p. 184: 18
5. Section 3.8, p. 204: 24
6. Section 3.9, p. 215: 17 (You can check your answer in the back of the book.)
7. Solve the problem

$$u_{tt} + u_t = u_{xx}, \quad u(0, t) = 0 = u(\pi, t), \quad u(x, 0) = 2 \sin 3x, \quad u_t(x, 0) = 0.$$

(Hint: Almost the same problem appeared on Test 2.)