

Physics 451: Homework #20

Due Tuesday, Dec. 2, 5:00PM, 2008

5.1

5.2

5.4

5.6

Note: $\int x \sin(\alpha x) \sin(\beta x) dx = \frac{1}{2} \left[\frac{\cos[(\alpha - \beta)x]}{(\alpha - \beta)^2} + x \frac{\sin[(\alpha - \beta)x]}{(\alpha - \beta)} - \frac{\cos[(\alpha + \beta)x]}{(\alpha + \beta)^2} - x \frac{\sin[(\alpha + \beta)x]}{(\alpha + \beta)} \right]$