Assignment #9

Due on Wednesday, October 21, 2009

Read Section 7.4 on *The Derivative,* pp. 187–197, in Bressoud.

Do the following problems

1. Exercises 7(a) and 7(b) on pages 197 and 198 in the text.

2. Exercise 7(c) on page 198 in the text.

3. Exercise 8 on page 198 in the text.

4. Exercises 14(b) and 14(c) on pages 198 and 199 in the text.

5. Find the mixed partial derivatives

$$\frac{\partial^2 f}{\partial x \partial y}, \ \frac{\partial^2 f}{\partial y \partial x}, \ \frac{\partial^2 f}{\partial x \partial z}, \ \frac{\partial^2 f}{\partial z \partial x}, \ \frac{\partial^2 f}{\partial y \partial z}, \ \frac{\partial^2 f}{\partial z \partial y},$$

for the scalar fields given in Exercises 14(b) and 14(c) on pages 198 and 199 in the text.