MATH 223
Some Hints and Answers for Assignment 31
Exercises 15, 17, 20, 21ac, and 26 of Chapter 8.

15: $f(x, y) = ye^x$.

17: $G_x \neq F_y$ One of them is $12xe^{2x^2.+3y}$.

20: Check whether $f_{xz} = f_{zx}$.

21a: -12π.

21c -1.

23: Use Green's Theorem.

26: Gauss's Theorem in the plane

$$\int_\gamma \nabla f \cdot \mathbf{n} = \int_\gamma div\mathbf{F}$$

will be helpful.