

Mathematics 105 — Spring 2004 — M. Christ

Problem Set 2 — Due Friday February 6

Solve the following problems from Spivak Chapter 2:

1,5,7,8,10(f),13,15,16,18(c),20(a),22,24.

Comments: #5: You're asked to show that the given function is not differentiable at $(0, 0)$, but that for any $x \in \mathbf{R}^2$, the function $\mathbf{R}^1 \ni t \mapsto f(tx)$ is differentiable at $0 \in \mathbf{R}^1$. (The latter means that f has directional derivatives at $(0, 0)$, in all directions.)