

Chapter 14 Study Questions

Note: This does not cover everything. Just some questions to get you thinking about concepts.

1. How would you show $\lim_{(x,y) \rightarrow (x_0,y_0)} f(x,y)$ does not exist?
2. What is the *definition* of a partial derivative? What is the difference between a *partial derivative* and a *directional derivative*? How do you find each?
3. What is the *chain rule*? What are two applications of it?
4. What is a *gradient*? What is the difference between ∇f and ∇F ? What kinds of problems can you solve with each?
5. What is a *level curve*? What is a *level surface*?
6. How do you find & classify the critical points of a surface?