Reading Assignment # 16

Math 13 - Prof. Orellana

February 12, 2006

Read Sections 6.1 - Review integration by parts.

Don't forget to let me know the pages where you found the answers. You should write full sentences when you do these assignments to help you study from them before the next exam.

1. What is the definition of a reparametrization? What must two reparametrizations have?

2. Give two different reparametrizations of the circle. Explain what the function u in the definition 1.3 should be in your example.

3. Why isn't the path $\mathbf{z}$ in Example 6 a reparametrization?

4. Define what we mean by "orientation-preserving" and "orientation-reversing" when we talk about parametrizations.

5. What is the objective of Example 7?

6. Read the last half of page 370 and explain what are the possible effects of reparametrization.

7. What does Theorem 1.4 say about the scalar line integral over two different parametrizations of the same curve?

8. Theorem 1.5 explains the effect of reparametrization on vector line integrals, tell me in detail what are the possibilities.

9. What is a curve? What does it mean for a curve to be simple? What is a closed curve? Give examples.

10. What is the significance of Theorems 1.4 and 1.5?

11. How many orientations does a curve have? What do we mean when we say that a curve is oriented? What is the reason for introducing this terminology at the bottom half of page 373?