

# Reading Assignment # 17

Math 13 - Prof. Orellana

May 14, 2010

Read Sections 6.2

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. State Green's Theorem. Now tell me in your own words what it says.
2. What does the symbol  $\oint_C$  mean?
3. In Example 1, which integral seems easier to compute? Why?
4. Give the vector formulation of Green's Theorem.
5. What does the line integral  $\oint_{\partial D} \mathbf{F} \cdot d\mathbf{s}$  represent?
6. Read the paragraph after Proposition 2.2 and tell me how to understand Proposition 2.2.
7. What is the name of the theorem that will generalize this to dimension three?
8. State the Divergence Theorem in the plane.
9. What is  $\int_C \mathbf{F} \cdot \mathbf{n} ds$  called?
10. Read the paragraphs after the proof of theorem 2.3 and tell me what does Theorem 2.3 tell us.
11. What are the three main steps when proving Green's Theorem?