

Collected Assignment on Sections 13.3, 13.4 and 14.1

Math 232 Section 1

Due: March 3, 2006 10:10AM

Name (Print): _____

Remember that you are not to discuss this homework with anyone other than Prof. King. Be sure to justify your answers. Use full sentences.

1. Problem 42 from Section 13.3 of the text (pg. 869). Note that while the unit tangent vector and binormal vector can help you find these planes, you don't have to use them...you may use vectors that are parallel to them! That is, these vectors can get a bit messy, but you can always use nicer ones that are not so messy.

2. Problem 16 from Section 13.4 of the text (pg. 879).

3. Problem 6 on page 898, Section 14.1.

4. Problem 18 on page 898, Section 14.1.

5. Sketch a contour map for $f(x, y) = x^2 - y^2$ (that is, sketch some curves for fixed values of z). Also sketch cross sections of f for fixed values of x and fixed values of y . (Thus you should have three separate graphs at this point.) Now sketch the graph of f and accompany your picture with a verbal description.