Name_____ ID_____ Section_____

1	/20
2	/30

MATH 253 Maple Quiz Fall 2003

Sections 505 P. Yasskin

TO BEGIN THE EXAM:

1. WRITE your NAME, ID and SECTION at the top of this paper.
2. TYPE your NAME, ID and SECTION at the top of the Maple Worksheet.
3. EXECUTE **`with(VecCalc): VCalias:`**
4. SAVE your worksheet as **`yourlastname.mws`** NOW and AFTER EACH PROBLEM.
5. NUMBER EACH PROBLEM.
6. Decimal values are OK.

THE EXAM:

1. Compute the mass of the donut given in spherical coordinates by $\rho = \sin\varphi$ if the density is $\delta = x^2 + y^2$.
2. Plot the contour plot of the function $f(x,y) = x^4 + x^2y^2$ for $-2 \le x \le 2$ and $-4 \le y \le 4$ with 20 contours. Find the parametric equation of the line thru $(1,2)$ in the direction of the maximum increase of f at $(1,2)$. Plot the line in blue and then display it with the contour plot with scaling=constrained.

TO TURN IN YOUR EXAM:

1. Reduce the font to the first magnifying glass. Reduce any plots to about 1.5 inches high.
2. SAVE your file again.
3. EXECUTE: File + Print + Output to File + Print to make a postscript file in your home directory.
4. PRINT your file using **X-Print**.
   - Open a terminal window. (The monitor with a prompt >_ on the bottom toolbar)
   - TYPE: **`xprint -J holdout -C Yasskin -d blocker yourlastname.ps`** (or the exact name of your postscript file)
   - Press RETURN. The system will ask for your xprint userid and password.
   - Write the Print Identifier here: _____
5. EXECUTE: **Edit + Remove Output + From Worksheet**
6. SAVE your file again.
7. EMAIL your file as follows:
   - To: **`yasskin@calclab.math.tamu.edu`**
   - Attachment: **`yourlastname.mws`** (or the exact name of your Maple file)
   - Subject: **`Sec 505`**
   - Call Dr. Yasskin or your TA over to check your mailing.
   - Send the mail.
8. Turn in this paper, with your name on it, as a grading sheet.
9. Before you leave, check that Dr. Yasskin has received your printout and your email.