## Math 2433 homework

25. (11/4) $13.3 \# 1,2,11,12,14,26,27$, as many as needed from 3-10, from $15-20$, and from 23, 24
26. (11/18) 13.3 \# 39-42, 51, 52, 58
27. (11/18) $13.4 \# 9-12,17-18,38,39$ (a) (all of these problems use the definition of $\vec{a} \times \vec{b}$, not direct computation of $\vec{a} \times \vec{b}$ ). If you want a more interesting one, try 45 .
28. (11/18) $13.4 \# 6,7,14,27,28$
29. (11/18) $13.5 \# 2,4,13,14$
30. $(11 / 18) 13.5$ \# as many as needed from 2-22
31. (11/18) $13.5 \# 30,34,36,37,38,42,52,57,69$

The remaining homework problems will not be collected, but doing them on an ongoing basis will enable you to derive much more benefit from the lectures, and is your first step in preparing for the final examination.
32. 13.6 \# 1, 2, 7, 8, 21-28
33. 13.6 \# 11-20: choose a few different ones, such as 12 , 15 , and 16 , and explore the traces in the directions of the three coordinate plane. Make accurate graphs of the traces in 2-dimensional coordinate systems, and put them together to make a sketch of the quadric surface that you understand well as each coordinate changes.
34. $13.7 \# 6,11,15-17,21,22,31-47,57-62$
35. 14.1 \# 7-9, 11, 12, 14, 17, 19-24, 34-36
36. $14.2 \# 6,8,12,14-17,21-24,35,37,45-47$
37. $14.3 \# 3,9,11,13,15,17,19,23,25-27$

