HOMEWORK 8

MATH 253A

16.6.64

Make sure your explanation for (a) is convincing. For (b), interpret "several" as three. Choose values so that your three pictures look quite different from each other. You can use any software you like, but `https://www.wolframalpha.com/examples/mathematics/plotting-and-graphics/` is one option.

16.9.26

You can see a picture of this vector field in 16.1 Exercise 18. The vectors point outward away from the origin, and their magnitudes represent the distance from the origin. This vector field $\langle x, y, z \rangle$ comes up a lot because it is fairly fundamental; the book calls it $\mathbf{x}$ in 16.1 Example 4.

The point of this problem is that it gives you a 3D counterpart to Equation 5 in 16.4, which used Green's theorem to compute the area of a 2D region.