

MATH 282 SPRING 2022
HOMEWORK 5
DUE MAY 4, 2022.
INSTRUCTOR: ROBERT LIPSHITZ

Required problems (quiz problems drawn from these):

- Section 16.1: 3, 6, 12, 16, 21, 25, 30.
- Section 16.2: 1, 8, 11, 14, 17, 21, 34, 39, 51.

Suggested challenge problems (conceptually interesting problems in the text to think about, but which will not be on a quiz):

- Section 16.1: 35, 36. (Flow lines are also called integral curves. I will talk about them a bit in class, but it's not a focus of the course.)

Practice matrix:

If you got help with these...	try these on your own for more practice.
16.2.8	16.2.7
16.1.3	16.1.1–6
16.1.12	16.1.11–14, webworks
16.1.16	16.1.15–18, webworks
16.1.21	16.1.22–24, 26
16.1.25	16.1.26–28
16.1.30	16.1.29–32, webworks
16.2.1, 11	16.2.2–4, 9–12
16.2.8, 14	16.2.5–7, 13–16
16.2.17	16.2.18, webworks
16.2.21	16.2.19–22, 29, 30
16.2.34	16.2.33, 35, 36
16.2.39	16.2.40–43

Comments on some of these problems:

- 16.1.12, 16, 30: It might be easier to do the whole set in each case (e.g., 11–14), so you can use elimination. I like problems like this, but there are a bunch on the webworks and the extra optional webworks.
- 16.2.8, 14: The webworks database seems not to have many problems like these, where you're taking a line integral dx rather than ds or $\vec{F} \cdot d\vec{r}$, and we will use this notation later, so be sure to do some like this.
- 16.2.34: Similarly, I didn't like the webworks database problems of this form, so take a look at this one.

Email address: lipshitz@uoregon.edu