

This assignment is in two parts. The first part is due at the start of class on Day 25. It will not be collected, but you are expected to complete these exercises, just to practice basic skills. If you feel that you need more practice, then do more problems or talk to me.

17.2 Exercises 13, 15.

The second part is due on paper at the start of class on Day 28. Submit polished solutions, including all necessary work and no unnecessary work, in the order assigned.

A. Page 1043 (Chapter 17 Review) Exercise 35.

B. Remember integration by parts? It's a theorem about integrals of scalar functions on closed intervals $[a, b]$ in the real line:

$$\int_a^b u \frac{dv}{dx} dx = [uv]_a^b - \int_a^b \frac{du}{dx} v dx.$$

Invent and prove a new kind of integration by parts, for integrals of vector fields along surfaces.