A. Due at the start of class on Day 22 (but not collected): Complete these exercises, just to practice basic skills. If you want more practice, then do more problems from the book.

   Section 16.2 Exercises 5, 7, 33, 39, 41, 45

B. Due at the start of class on Day 26, as part of your weekly homework packet: Submit polished solutions, including all necessary work and no unnecessary work, in the order assigned.

   1. Section 16.2 Exercise 26

   2. Section 16.2 Exercise 48

   3. Let X be the set of points in the plane other than the origin:

$$X = \{(x, y) : x \neq 0 \text{ or } y \neq 0\}.$$

Let $\vec{F} = \langle -y/(x^2 + y^2), x/(x^2 + y^2) \rangle$. Recall from earlier homework that $\vec{F}$ is defined on all of X and $\frac{d}{dy} F_1 = \frac{d}{dx} F_2$ everywhere on X, but $\vec{F}$ is not conservative on X. Let C be the circle of radius R centered at the origin, oriented counterclockwise.

   Compute the line integral of $\vec{F}$ along C. How can you conclude, from this integral, that $\vec{F}$ is not conservative?