A. Due at the start of class on Day 15 (but not collected): Complete these exercises, just to practice basic skills. If you want more practice, then do more problems from the book.

Section 14.8 Exercises 7, 13, 16, 27.

B. Due at the start of class on Day 17, as part of your weekly homework packet: Submit polished solutions, including all necessary work and no unnecessary work, in the order assigned.

1. 14.8 Exercise 50
2. 14.8 Exercise 51
3. 14.8 Exercise 55. (This is the mini-version of Exercise 56. Exercise 56 explains why this example is important. I am not requiring you to solve Exercise 56.)
4. Use Lagrange multipliers to prove that, among all triangles with given perimeter P, the one with largest area is equilateral. You may find Heron's formula for the area A useful:

$$A = \sqrt{s(s-x)(s-y)(s-z)},$$

where x, y, and z are the lengths of the triangle's sides and $s = (x+y+z)/2$ is the semi-perimeter.