

MA 241
Homework #6
Due Thursday, October 20, in class

The numbered problems come from *Filling and Wrapping*. Be sure to justify your answers.

1. p. 18, #11.
2. p. 24, #32.
3. p. 24, #33.
4. p. 40, #15.
5. p. 40, #16.
6. p. 40, #17.
7. p. 41, #19.
8. p. 42, #20.
9. p. 42, #21.
10. p. 42, #22.
11. p. 42, #23.
12. p. 46, #31.
13. Consider an open-topped box in the shape of a rectangular prism of length x , width y , and height z . Suppose the surface area equals 300 square centimeters—remember, there is no top to this box, so only five sides contribute to the surface area. Experiment with various values of x, y, z (they do not have to be whole numbers) to try to find the dimensions of such a box with the largest volume.