

Problem List 2

1. 15.Rev.19 and 15.Rev.34. In problems like these, you are not given a region, but rather the equations that describe the region. The answer to 15.Rev.34 is $\pi/6$.
2. 15.Rev.25. Hint: use cylindrical coordinates in y, z .
3. 15.Rev.27. This is basic.
4. 14.Rev.39. Make sure that you know how to use the multivariable chain rule.
5. 14.Rev.31. Don't forget the basics about lines and planes.
6. 14.Rev.47. What does the interpretation of gradient vector?
7. 14.Rev.55. To find the "absolute" extremum, derivative tests are not enough. You also need to know what happens at the boundary.