10. Find and sketch the domain of the function:

   (a) $f(x, y) = \sqrt{x - 1} + \ln(y + 2)$.

   (b) $f(x, y) = \ln(9 - x^2 - y^2)$.

   (c) $f(x, y) = \sqrt{4 - x^2} - \sqrt{1 - y^2}$.

11. Sketch the graph of the function:

   (a) $f(x, y) = 2y$.

   (b) $f(x, y) = 10 - 4x - 2y$.

   (c) $f(x, y) = \sqrt{4 - x^2 - y^2}$. What symmetries does the graph have?

12. Problem 32 of text: do all, write the solution for two.

13. Problem 35 of text.

14-15. Choose two of 45–52 (and do more on your own).

16–18. Problems 53-66: choose three of the syllabus problems.

19. Describe the level surfaces:

   (a) $g(x, y, z) = x + 3y - 2z$.

   (b) $g(x, y, z) = x^2 - y^2 - z^2$. How does the level value affect the number of sheets the surface has?

20. Problem 71 p.903.