1. Oprea 3.1.6

2. Oprea 3.1.7

3. Oprea 3.2.5

4. Write a Maple procedure to compute Gauss and mean curvatures of surfaces.

5. Use your procedure from the previous problem to complete exercises 3.2.13–3.2.16

6. Oprea 3.2.18 (Use Maple).

7. Oprea 3.3.4

8. Oprea 3.3.6 (Use Maple).

9. Let $\alpha(t) = (t, g(t), 0)$ be a curve. Compute a formula for the mean curvature of the surface of revolution of this curve about the y-axis. Use your formula to find a curve such that $\alpha(0) = (0,1,0)$, $\alpha'(0) = (1,0,0)$ and such that its surface of revolution is a minimal surface (i.e. $H = 0$)