

Figure 11.16: Graph of
 $f(x, y) = x^2 + y^2$

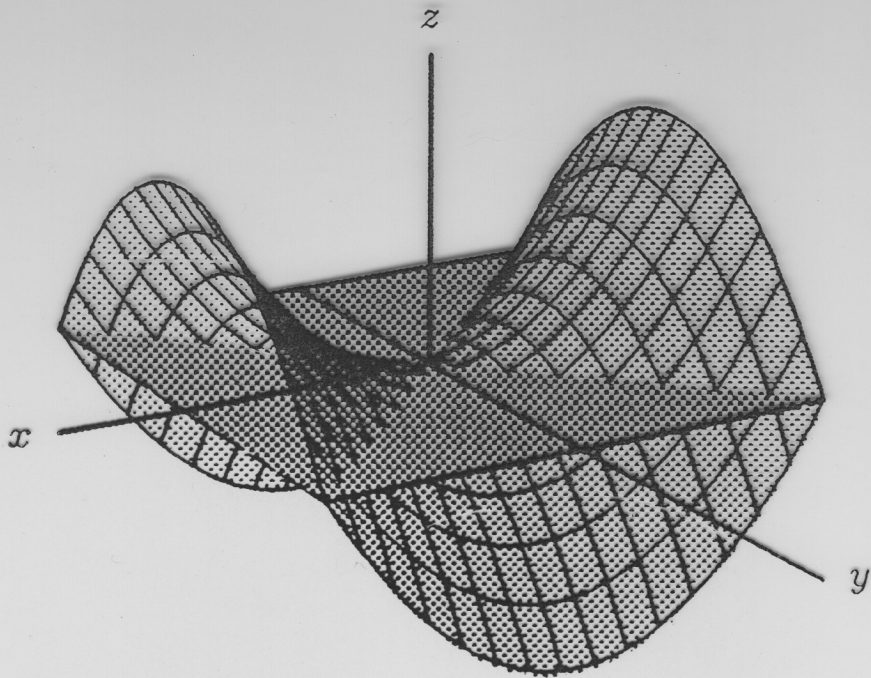
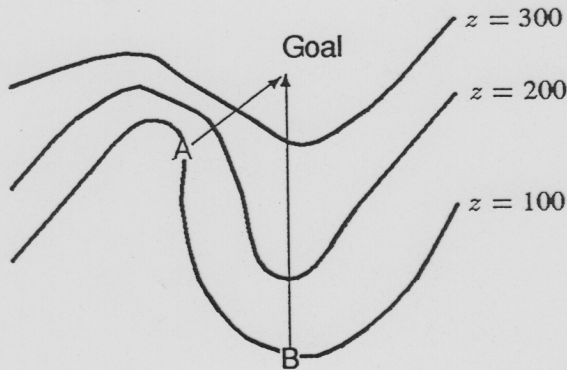
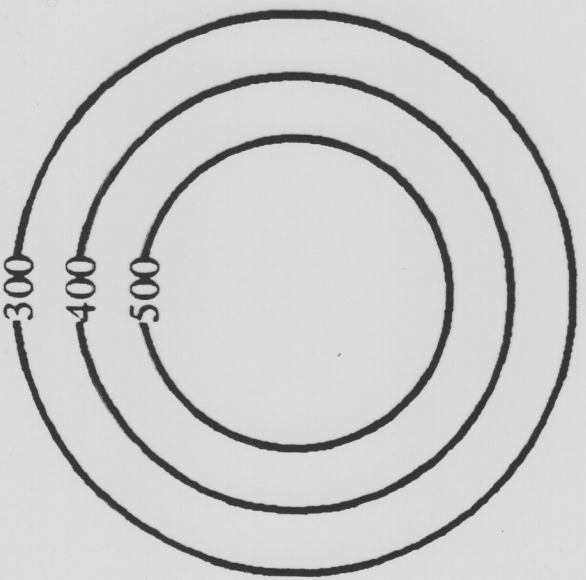
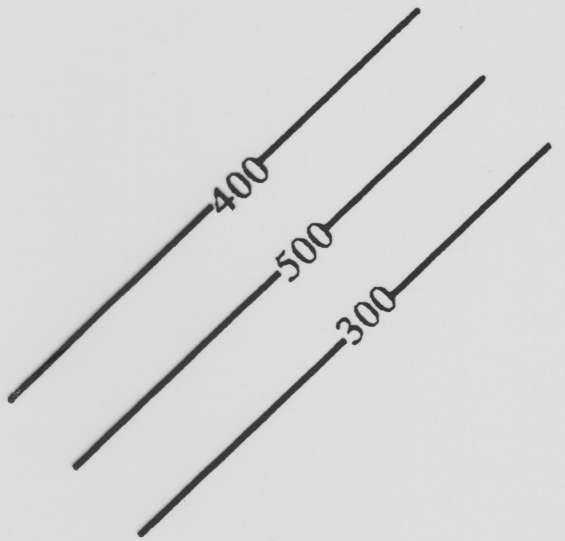
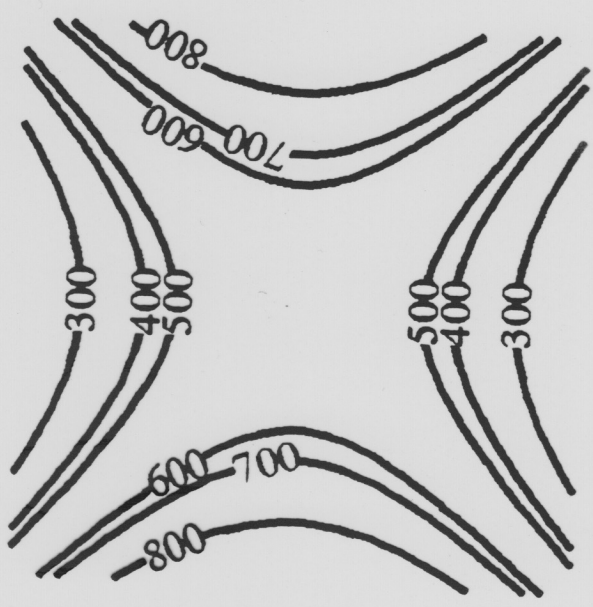
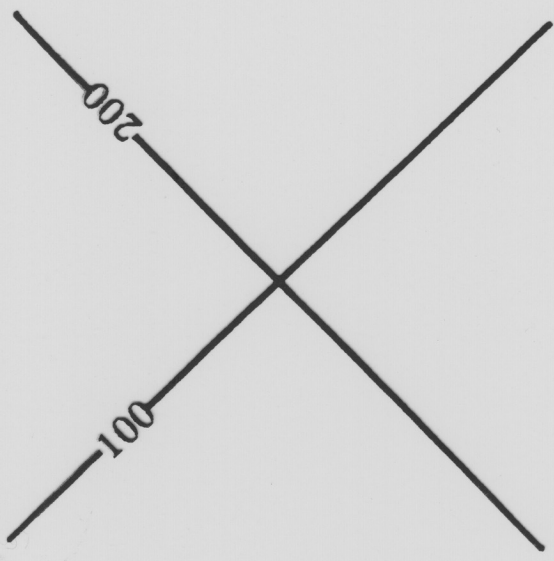
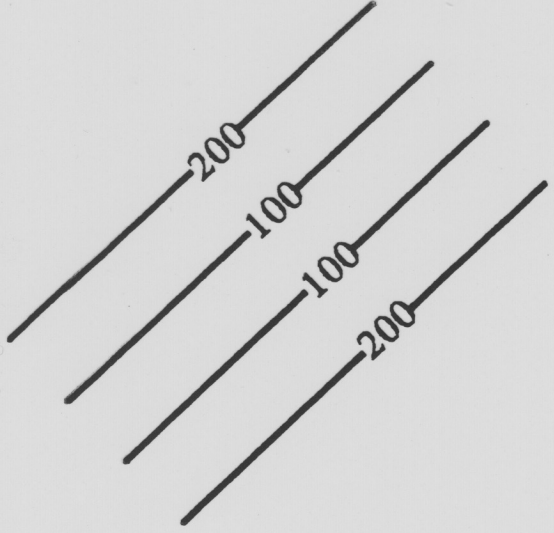


Figure 11.27: Graph of $g(x, y) = x^2 - y^2$.

Figure 11.59 shows a contour map of a hill with two paths, A and B.

- On which path, A or B, will you have to climb more steeply?
- On which path, A or B, will you probably have a better view of the surrounding countryside? (Assuming trees do not block your view.)
- Near which path is there more likely to be a river?





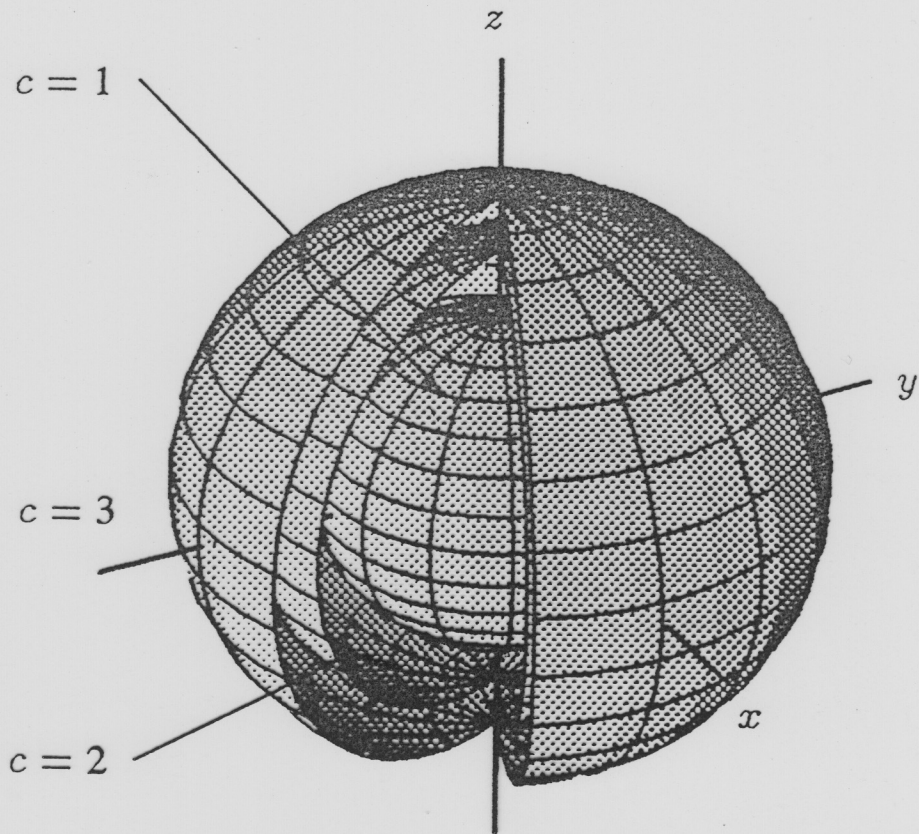


Figure 11.87: Level surfaces of
 $f(x, y, z) = x^2 + y^2 + z^2$.

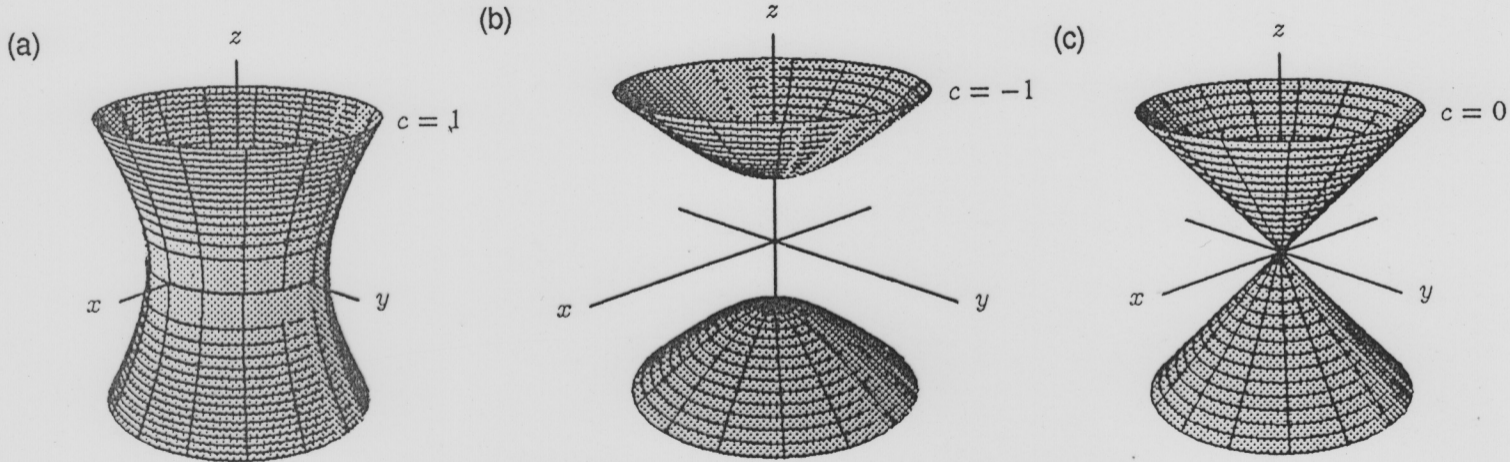


Figure 11.88: Level surfaces for $f(x, y, z) = x^2 + y^2 - z^2$