

## Practice Problems

### Written Problems

**Problem 1** Consider the function

$$f(x) = x^2 + y^2 - 4.$$

- (a) Draw at least five level curves of  $f$ .
- (b) Use these level curves to sketch the graph of  $f$ .

**Problem 2** Draw the graph of the surface in  $\mathbb{R}^3$  determined by the equation

$$x = y^2/4 - z^2/9.$$

Use level curves and/or sections to justify why your drawing is correct.