

## Problem Set One

### Exercises

0.6: 12,15,22,53

0.7: 8,9,16

4.5: 13,15,21,26,37,40,46,55,60

### Problems

If you have little trouble with these questions, the course should take about 6 hours per week outside of class. If you do have trouble, it could take a lot more. Please plan your schedule accordingly.

- (1) Evaluate  $\ln(e)^2$  and  $\ln(e^2)$ .
- (2) Find an angle  $\theta$  such that  $\sin(\theta) = -1/\sqrt{2}$  and  $\cos(\theta) = -1/\sqrt{2}$ .
- (3) Suppose that  $\sin(x) = 2/5$ ,  $\cos(x) = \sqrt{21}/5$ . Find  $\sin(2x)$  and  $\cos(2x)$  *exactly* (a calculator only gives an approximation.)
- (4) Graph  $\frac{e}{1+x}$ .
- (5) Graph the inverse function of the function  $f(x)$  shown below.