Section 2.2 Worksheet: Fixed Point Iteration

1. Take a look at theorem 2.2, and try to concoct a function which satisfies the two conditions, but fails to have a unique fixed point. (You should fail! But hopefully you'll see why the conditions are necessary.)

2. What's the upshot of Example 3, p. 57?

3. Follow the "cobwebs" of Figure 2.6, and try to understand what's going on. [Why do you suppose they call them cobwebs?!;)]

4. Now: draw a corresponding version of Figure 2.6 in which the function (this is the important choice you need to make) and the fixed point lead to a cobweb diagram in which the iterations **fail** to converge. What makes the difference?