1. Suppose $T : X \to Y$ is continuous and has a continuous inverse. Show that if one of X or Y is a Banach space, the other must be as well.

2. R & Y 4.6

3. R & Y 4.13

4. R & Y 4.17

5. R & Y 4.18

6. R & Y 4.19

7. R & Y 4.21 (Hint: You first need to show that the map from ℓ^1 to $\mathbb{R}$ is continuous. Look at Corollary 4.53.)