1. Munkres 26.1

2. Munkres 26.4

3. Munkres 28.6

4. Munkres 29.3

5. Munkres 29.5

6. Munkres 29.6

7. This problem will be due on the **following** homework. It needs some thought, so I want to let you start working on it now. Show that if p and q are elements of the interior of the closed unit ball

$$\mathbb{B}^n = \{x \in \mathbb{R}^n : |x| \leq 1\},$$

then there is a homeomorphism $\phi : \mathbb{B}^n \to \mathbb{B}^n$ such that $\phi(p) = q$ and such that $\phi(x) = x$ for all x with $|x| = 1$. Be as rigorous as you can, but avoid writing a tome.