

## HW 8 PROBLEMS

From Rudin Chapter 4 solve: 2,3,4,8,14,20,21

Also solve the following problem:

**Problem 1.** Assume  $f : X \rightarrow Y$  is a function that satisfies

$$d_Y(f(p), f(q)) \leq C d_X(p, q), \quad \forall p, q \in X.$$

Prove that  $f$  is uniformly continuous.