

5. EXTRA CREDIT 5.

Let  $[1]$  be the set with two elements called 0 and 1.

Let  $X$  be any set.

Let  $Fun(X, [1])$  be the set of all functions from  $X$  to  $[1]$ .

Show that there is a bijection between the power set  $\mathcal{P}(X)$  of  $X$ , and the set  $Fun(X, [1])$ .