Problem ◇–12
Due in DSC 222 by 12 noon, **Friday, April 12**, *2019*

Problem: Let X be the set $\{1, 2, \ldots, 20\}$ and let P be the set of all 9–element subsets of X. Show that for every function $f : P \longrightarrow X$ we can find a 10–element subset Y of X, such that $f\big(Y \setminus \{k\}\big) \neq k$ for any $k \in Y$.