Noah Arbesfeld* (nma@mit.edu). Partial Permutations Avoiding Pairs of Patterns. 

We continue the study of pattern avoidance in partial permutation initiated in [A. Claesson, V. Jelínek, E. Jelínková, and S. Kitaev. Pattern avoidance in partial permutations. Electronics Journal of Combinatorics, 18(1):#P25, 2011]. Namely, we extend previous definitions of shape-Wilf equivalence and $\star$-Wilf equivalence to sets of patterns, and determine new shape-Wilf equivalences and shape-$\star$-Wilf equivalences among pairs of patterns of length 3. Using these results, we deduce infinite classes of shape-Wilf equivalent and shape-$\star$-Wilf equivalent pairs of patterns. We also find all $\star$-Wilf equivalence classes among pairs of permutations of length at most 4. (Received September 19, 2011)