1025-05-168 **Penny Haxell*** (pehaxell@math.uwaterloo.ca), Combinatorics and Optimization Dept., University of Waterloo, Waterloo, ON N2L 3G1, Canada. *On stable paths.*

Let G be a graph with a distinguished vertex d. Suppose that each vertex of G has a preference list of a set of paths joining it to d. A solution to the stable paths problem is a tree T in G rooted at d, with the property that for each vertex x, if x prefers some path P to the path from x to d in T, then some edge of P not incident to x is missing from T. Not every instance of the stable paths problem has a solution, but we show that every instance does have a fractional solution. (Received January 22, 2007)