1042-03-167 **Daniel D Turetsky*** (turetsky@math.wisc.edu), Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706. *Intrinsically Complete Relations on Linear Orders*.

"Adjacent" and "infinitely far apart" are natural Δ_2^0 and Δ_3^0 relations to consider on linear orders. We extend these up the hyperarithmetical hierarchy and prove the existence of a computable linear order on which the relation at level α is intrinsically Δ_{α}^0 complete. (Received August 18, 2008)