1027-05-156 **Kendra S Killpatrick*** (Kendra.Killpatrick@pepperdine.edu), Natural Science Division, 24255 Pacific Coast Highway, Malibu, CA 90263-4321. *Multi-ordered Differential Posets.*

Richard Stanley first introduced the idea of an r-differential poset in 1988. There are two well known types of differential posets: the first is the 1-differential poset of partitions, Young's lattice, and its generalization to the k-differential k-ribbon poset and the second is the 1-differential Fibonacci lattice ($Z(1)$) and its generalization to the r-differential Fibonacci lattice $Z(r)$. I will discuss a new kind of poset called a multi-ordered poset and define what it means for a multi-ordered poset to be differential. The standard example of a differential multi-ordered poset is an analogue of Young's lattice. I will also discuss several open questions about these multi-ordered posets related to the number of chains in the poset. (Received February 25, 2007)