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**Sylvia R. Naples\*** (sn552@bard.edu), Bard College, P.O. Box 5000, Annandale-on-Hudson, NY 12504. *An upper bound for the number of graceful labelings of a path with  $n$  edges.*

The concern of this talk is to provide an effective way to measure the rate of growth for the number of graceful labelings of a path graph with  $n$  edges, as  $n$  increases. We introduce the *graceful labeling diagram*, which we use to systematically construct graceful labelings, and develop analytical tools that exploit the structure of the diagram to compute an upper bound on the number of graceful labelings of a path. We conjecture that a path with  $n$  edges has order of  $\sqrt{n}\sqrt{n-1}\cdots\sqrt{2}$  graceful labelings. (Received August 25, 2008)