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Tristan M Denley* (tdenley@olemiss.edu), Hume Hall, Department of Mathematics,
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At a meeting in Memphis in 1996 just a few months before his death, Erdős posed the following problem. **Problem** Given a graph G , let $\mathcal{C}(G)$, the *cycle spectrum of G* , be the set of the lengths of the cycles in G . Now let $\mathcal{C}(n)$ be the total number of distinct cycle sets over all possible graphs on n vertices. How does $\mathcal{C}(n)$ behave? Is $\mathcal{C}(n) = o(2^n)$ or is $\mathcal{C}(n) = \Theta(2^n)$? Little progress seems to have been made on the problem in its most general sense. But the same problem still seems of interest if attention is restricted to specific classes of graphs. This talk will be concerned with this question for several fundamental classes of graphs, and questions about the structure of cycle spectra. (Received October 03, 2000)