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*The Edge-Distinguishing Chromatic Number of Spider Graphs with Three Legs or Bounded Leg
Lengths.*

The edge-distinguishing chromatic number $\lambda(G)$ of a simple graph G is the minimum number of colors k assigned to the vertices in $V(G)$ such that each edge $\{u_i, u_j\}$ corresponds to a different set $\{c(u_i), c(u_j)\}$. Al-Wahabi et al. derived an exact formula for the edge-distinguishing chromatic number of a path and of a cycle. We derive an exact formula for the edge-distinguishing chromatic number of a spider graph with three legs and of a spider graph with Δ legs whose lengths are between 2 and $\frac{\Delta+3}{2}$. (Received July 16, 2018)