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**Karimah Sweet\*** (ksweet@oakland.edu), **Li Li**, **Eddie Cheng**, **Laszlo Liptak** and **Daniel E. Steffy**. *A Conjecture on determining which  $(n, k)$ -star graphs are not Cayley Graphs.*

We continue previous work on classifying which of the  $(n, k)$ -star graphs are Cayley graphs. We present a conjecture for the complete classification, and prove an asymptotic version of the conjecture, that is, the conjecture is true for all  $k \geq 2$  when  $n$  is sufficiently large. For  $k = 2, \dots, 15$  we prove that the conjecture is true for all  $n \geq k + 2$  (with the exception of  $n = 17$  for  $k = 14$ ). (Received January 10, 2017)