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 \(k = 2, \cdots, 15\) 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)