

## DECOMPOSITION OF CERTAIN COMPLETE BIPARTITE GRAPHS INTO PRISMS

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### Abstract

Häggkvist [6] proved that every 3-regular bipartite graph of order  $2n$  with no component isomorphic to the Heawood graph decomposes the complete bipartite graph  $K_{6n,6n}$ . In [1] Cichacz and Froncek established a necessary and sufficient condition for the existence of a factorization of the complete bipartite graph  $K_{n,n}$  into generalized prisms of order  $2n$ . In [2] and [3] Cichacz, Froncek, and Kovar showed decompositions of  $K_{3n/2,3n/2}$  into generalized prisms of order  $2n$ . In this paper we prove that  $K_{6n/5,6n/5}$  is decomposable into prisms of order  $2n$  when  $n \equiv 0 \pmod{50}$ .

**Keywords:** graph decomposition, bipartite labeling.

**2010 Mathematics Subject Classification:** 05C70, 05C78.

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Received 26 January 2015  
Revised 13 February 2016  
Accepted 13 February 2016