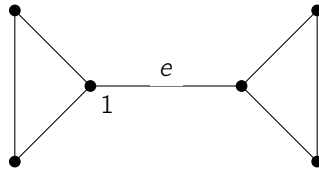


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By Theorem 5.3, every Eulerian walk in a connected graph  $G$  must traverse each bridge of  $G$  twice. Suppose that  $G$  is a connected graph containing exactly one bridge  $e$ . Is it possible that  $G$  has an Eulerian walk that traverses  $e$  twice and all other edges of  $G$  once?

It is possible. The Eulerian walk in the following graph starting from vertex 1, satisfies the property.



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What is the length of an Eulerian walk in a tree of order  $n \geq 2$ ?

A closed Eulerian walk in a tree must traverse every edge of the tree once, meaning that the length of the walk is  $2(n - 1)$ .