



ON (2-D)-KERNELS IN GENERALIZED PETERSEN GRAPHS

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A subset $D \subseteq V(G)$ is called a p -dominating set of a graph G if every vertex from $V(G) \setminus D$ has at least p neighbours in D . If $p = 1$, then we obtain classical dominating set. If $p = 2$, then we get 2-dominating set.

In [2] A. Włoch introduced and studied the concept of a 2-dominating kernel ((2-d)-kernel in short). A subset $J \subseteq V(G)$ is a (2-d)-kernel of a graph G if J is independent and 2-dominating.

In the talk we present the complete characterization of generalized Petersen graphs having a (2-d)-kernel. Moreover, we consider the number of (2-d)-kernels in these graphs.

References

- [1] P. Bednarz, *The existence and the number of (2-d)-kernels in generalized Petersen graphs*, submitted
- [2] A. Włoch, *On 2-dominating kernels in graphs*, Australasian Journal of Combinatorics 53 (2012) 273-284.