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Cory Palmer* (cory.palmer@umontana.edu) and **Daniel Gerbner**. *Counting subgraphs in F -free graphs.*

For a fixed graph F we say that a graph is F -free if it contains no copy of F as a subgraph. The standard question in extremal graph theory is to determine the maximum number of edges possible in an n -vertex F -free graph. In this talk we will discuss a generalization of this problem. Given fixed graphs F and H , determine the maximum number of copies of a subgraph H in an n -vertex F -free graph. We will survey what is known about this problem and present some new results. (Received February 15, 2016)