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Lauren Keough*, keoulaur@gvsu.edu. *A Collection of Extremal Problems for Counting Parameters of Graphs.*

In 1941 Turán proved a result about the maximum number of edges in an n vertex, K_r -free graph - that is, a graph that has no complete subgraph on r vertices. One could ask instead for the maximum number of K_r 's possible in an n vertex graph with e edges. We focus on results of this type, including minimizing matchings in graphs with n vertices and e edges and maximizing independent sets in hypergraphs with n vertices and e edges. Open problems will be mentioned. (Received September 25, 2018)