

# On Edge Decompositions of a Complete Graph into Smaller Complete Graphs

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The problem of decomposing the edges of a complete graph  $K_n$  to form a given number of  $K_3$ 's and  $K_4$ 's has been studied extensively. We further investigate the possibility of decomposing the edges of a complete graph  $K_n$  into a given number of smaller graphs for all possible values of  $i$  and  $j$  through elementary combinatorial techniques.