

<b>Thesis Title</b>	Finding Lower Bounds of Some Bipartite Ramsey Numbers Using Probabilistic Method
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### ABSTRACT

The bipartite ramsey number  $br(G_1; G_2)$  is the smallest positive integer  $b$  such that every (red,blue) coloring of the edges of  $K_{b,b}$  contains either a red  $G_1 = K_{l_1, l_2}$  or a blue  $G_2 = K_{k_1, k_2}$ . We find that  $br(G_1; G_2) > n$  where  $n$  is largest integer such that

$$\binom{n}{l_1} \binom{n}{l_2} 2^{1-l_1, l_2} + \binom{n}{k_1} \binom{n}{k_2} 2^{1-k_1, k_2} < 1.$$

Also, we obtain more general results for the cases when more colorings are used.

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