Activity 8:

Among the 4 different algorithms we used (quick find, quick union, weighted quick union, weighted quick union with path compression) the best algorithm which we can solve the problem with less time complexity is weighted quick union with path compression. The complexity is M + N log\*N. where the time taken to solve the problem is 6 seconds. We can solve that algorithm with less iterations with less array access.

When compared with the remaining algorithms weighted quick union with path compression takes less amount of time to calculate the union-find cost.