

P1 Pseudocode:

Pass in: 2d array board, row, size, array colstaken,
piecesleft, int pointer combinations

if row == size // past final row
if piecesleft == 0 // if piecesleft < 0, then it's not valid
increment combination count
return

for each column c // this will account for each combination
if space not taken or empty // with a piece on this row
mark column c taken
call function with row+1 and piecestaken-1
mark column c not taken
call function with row+1 // this accounts for combinations that
return // skip this row

There are ways to make this more efficient,
but this is all you really need