

9 people

A B C D E F G H I

A B C

D E F

G H I

If we tried to use 6 out of 9 threshold  
then 2 groups can band together  
ie D E F - G H I get together and can break  
the code with out anybody from A B C.

Since we need a majority from all groups  
then it must be 8 out of 9 because  
if its 7 out of 9, you could have  
all of 2 subgroups and just 1 member  
from the last group, and 1 isn't a majority  
of that last group. 8 out of 9 is the  
only way to gaurntee what we want.