

Answer on Question #42824 – Math - Combinatorics | Number Theory

You have five friends. In how many ways can you invite them ?

a) 51 b) 36 c) 25 d) none of these.

Solution:

First invitation can receive any of 5 friends.

Second invitation – only 4, because one of previous friends has already been invited.

Third invitation – only 3, because two of previous friends have already been invited.

Fourth invitation – only 2, because three of previous friends have already been invited.

Fifth invitation – can receive the last friend.

Hence, number of all possible ways to invite 5 friends is equal to

$$N = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120$$

Answer: d) none of these.