Problem A - Too Many Devices

You are moving to a new apartment and bringing all you stuff. You turn out to have a lot of electrical appliances that you are bringing with you. Your new apartment has a very long hall in which you place all your devices on the ground. However, after placing your devices, you notice that your previous apartment had a lot more power outlets than your new apartment, so it is unlikely that you can connect all of your devices into the wall. You are not in the mood to move all devices, so you just want to see how you can connect the most devices to the current power outlets. Due to the length of the power cables, not every socket can be connected to every device. Furthermore, you have one more trick up your sleeve, you also have one power strip (Figure 1). The cable of this power strip is so short that it does not make it possible to connected devices to outlets that couldn't be connected before. Thus, the main benefit is that 3 devices can be connected to one socket.

Figure 1: An example power strip

Input

The input consists of:

- one line with three integers m ($1 \leq n \leq 1000$), n ($1 \leq m \leq 1000$), and k ($0 \leq k \leq 10000$), where m is the number of power outlets, n is the number of electrical devices, and k is number of possible connections between outlets and devices.
- k lines, each with two integers i, j ($1 \leq i \leq m, 1 \leq j \leq n$) representing a possible connection between outlet i and device j.

Output

Output one integer representing the largest number of devices that can be plugged into outlets.

Sample Input 1	**Sample Output 1**
3 6 8 1 1 1 2 1 3 2 3 2 4 3 4 3 5 3 6	5