

Exam P

Problem 141. (General Probability)

We have a 6×5 matrix and we want to know how many ways to choose 3 of them which are not in the same row or column.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	(30)

For the first pick, we have 30 choices

For the second one, we have $5 \times 4 = 20$ choices.

For the third round, we are left with 12 choices.

e.g.

If we pick "30" to be our first number, we are left with a 5×4 matrix.

The order of the 3 numbers is not important.

thus, the answer would be.

$$\frac{30 \times 20 \times 12}{3!} = 1,200.$$

Choose C