Date: / / object:

Homework 1

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Solve:-

1- $^{250}n_2 = \frac{250!}{(250-2)!} = 62250$ ways.

2- $5! = 5*4*3*2*1 = 120$ distinct bit strings.

3- three 0's , two 1's

Start and end with 1's :-

$= 1*1*1*1*1 =$ one way.

4- 30 Players.

$\therefore 30!$

5- 3 books from 6

$\therefore {}^6n_3 = \frac{6!}{(6-3)!} = \frac{6!}{3!}$

$= \frac{6*5*4*3!}{3!} = 6*5*4 = 120$ ways.

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6- $P(E) = 0$ (impossible).

7- 3 books from 6, 2 books that should not both be chosen together.

$\therefore 6 * 4 * 3 = 72$ ways.

↳ beacuse remove one book from chosen.

8- 25 students, 2 "Ahmed", 2 "Sally", 2 "mariam", 2 "yousef", 2 "ibrahim"

(a) ~~...~~ $25\,n_{(9,2,2,2,2,2)}$

$= \frac{25!}{9! * 2! * 2! * 2! * 2! * 2!} =$

~~(b) P(E) = 5/~~ (b) ?

~~(a)~~