

BRANDON  
N B R D O R

5x5

146

$$10) \frac{48 \times 47 \times 46 \times 45 \times 44 \times 43}{6!} = 12,241,512.$$

ferences.

11) Nob starts

$$\cancel{10 \times 9!} = 210 \quad \binom{10}{4} = 210$$

12. Yogi starts

$$10 \times 9! = 210 \quad \binom{10}{4} = 210$$

and Brenda

13. Both doesn't start

$$\binom{10}{5} = 252.$$

uses serve

14. All ways

$$210 + 210 + 252 = 672$$

$$15) \binom{6}{4} x^2 (2y^2)^4 = 240 x^2 y^8.$$

$$! = 4$$

orange

# Homework N9

1)  $3 \cdot 4 = 12$  outfits

$$2) \begin{array}{ccccccc} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \downarrow & & & & & & \downarrow \\ (0-9) \rightarrow 10 & & & & & & \end{array}$$

$\text{red}(6, 3) \rightarrow$

$$254 \quad (0-9) \rightarrow 10 \cdot 25 \rightarrow 35$$

$$10 \cdot 25 \cdot 35^5 = 13,130,468,450$$

3) a)  $25 \cdot 24 \cdot 23 \cdot 22 = 303,600$

b)  $25 \cdot 25 \cdot 25 = 25^4 = 390,625$

$(4, 0) \rightarrow$

4) N1. One word <sup>letters</sup> words  $\rightarrow 5 \times 1 = 5$

N2. Two words letters words  $\rightarrow 5 \times 5 = 25$

N3. Three letters words  $\rightarrow 5 \times 5 \times 5 = 125$

All possible words  $\rightarrow 5 + 25 + 125 = 155$

?

5) N1. No two boys next to each other: BGBGBGBG

?

$$4! \times 3! = 144$$

N2. All possible ways to sit 4 children:

$$7! = 5040$$

N3. All possible ways that work for us (at least two boys)

next to each other).

$$4! \cdot (3! \times 4!) = 5040 - 144 = 4896$$

6)  $5 \times 4^6 = 20480$  possible ways of sequences.

7) N1 Way to choose officers without restrictions:

$$20 \times 18 \times 18 = 6840$$

N2. Picking officers to everybody, but Ali and Brenda  
not do not have same officer.

$$3 \times 2 \times 18 = 108$$

N3. Picking officers to fill offices if Ali refuses serve  
as an officer wif Brenda is also an officer?

$$6840 - 108 = 6732.$$

$$\text{P}_1 A_4 P_3 A_2 \cdot \text{P}_3 A_2 \text{P}_1 A_4 \cdot \text{P}_1 A_2 \text{P}_1 A_1 \rightarrow 2! \times 2! = 4$$

$$\frac{4!}{(2! \times 2!)} = 24/4 = 6 \text{ ways to distinguishably arrange}$$

word DADAH.

$$3) \frac{n(n-1)}{2} - n$$

$$2) \frac{n(n-3)}{2}$$

$$10) \frac{48 \times 4!}{10 \times 4!} =$$

$$11) N1. \text{Method}$$

$$N2. \text{You}$$

$$(10)$$

$$(5)$$

$$210$$

$$12) ( )$$