



UNSA

UNIVERSIDAD NACIONAL DE SAN AGUSTÍN DE AREQUIPA

Estructuras Discretas II

Docente: Carlo Corrales Delgado

Actividad

Ejercicios

Escuela:

Ciencia de la computación (Primer año)

Temas:

-Combinatoria

Alumno:

Josue Gabriel Sumare Uscca

Ejercicios

Ejercicios Propuestos (Combinatoria)

1. $P_4 = 4! = 24$

2. $a b c$

$24 \times 26 \times 25 = 17550$

3. $P_3^{10} = \frac{10!}{7!} = 720$

4. $P_8 = 8! = 40320$

5. $C_3^6 = \frac{6!}{3!3!} = \frac{6 \cdot 5 \cdot 4}{6} = 20$

6. $C_4^5 = \frac{5!}{1!4!} = 5$

7.

54000
 $5 \times 3 \times 5 \times 5 \times 5 = 1875$

8.

$a b c$
 $8 \times 9 = 72$

9. $P_3^5 = \frac{5!}{2!3!} = 10$

$$11. \quad V C V C V C V C \quad 4 \quad 4 \\ 5 \cdot 22 \times 5 \times 22 \times 5 \times 22 \times 5 \times 22 = 22^4 \cdot 5^4 = 146.410.000$$

$$C V C V C V C V \quad 4 \quad 4 \\ 22 \times 5 \times 22 \times 5 \times 22 \times 5 \times 22 \times 5 = 22^4 \cdot 5^4 = 146.410.000$$

$$12. \quad \begin{aligned} 2+4+6 &= 12 \\ 2+4+8 &= 14 \\ 2+6+8 &= 16 \\ 4+6+8 &= 18 \end{aligned}$$

$$13. \quad \begin{aligned} \text{Linea Recta} &: P_7 = 5040 \\ \text{Circular} &: P_{(7-1)} = P_6 = 720 \end{aligned}$$

14

Probabilidades

$$1. \quad (1,6); (2,5); (3,4); (6,1); (5,2); (4,3) = 6/36 = 1/6$$

$$2. \quad (2,3,5) = 3/6 = 0,5$$

$$3. \quad (1,2) = 2/6 \Rightarrow 1 - 2/6 = 2/3$$

$$4. \quad P(7) = \frac{1}{6} \Rightarrow 1 - \frac{1}{6} = 5/6$$

5.