

# PLATAFORMA

DÍA	MES	AÑO
14	10	23

①  $3L - 27$   
 $4\# - 10$

a) Repetir

$$\begin{array}{cccccccc} 27 & \times & 27 & \times & 27 & \times & 10 & \times & 10 & \times & 10 & \times & 10 \\ L & & L & & L & & \# & & \# & & \# & & \# \end{array} = (27)^3 (10)^4 = (19,683)(10,000) = 196,830,000$$

b) No repetir

$$\begin{array}{cccccccc} 27 & \times & 26 & \times & 25 & \times & 10 & \times & 9 & \times & 8 & \times & 7 \\ L & & L & & L & & \# & & \# & & \# & & \# \end{array}$$

$$\frac{(27!)}{(24!)} \frac{(10!)}{(6!)} = 88,452,000$$

② 9 clientes

$$\begin{array}{cccccccccccc} 9 & \times & 8 & \times & 7 & \times & 6 & \times & 5 & \times & 4 & \dots & \times & 1 \\ 1 & 2 & 3 & 4 & 5 & 6 & \dots & 9 \end{array}$$

$$9! = 362,882$$

③ 7 competidores

3 primeros lugares

$$P_7^3 \Rightarrow \frac{7!}{4!} = 210$$

④ 14 platos en total

4 platos

$$\frac{\binom{14}{4} = 14!}{4! \cdot 10!} = 1001$$