

// Lanzar dado //

$$E = \{1, 2, 3, 4, 5, 6\}$$

$$A = \text{'salir par'} = \{2, 4, 6\}$$

$$B = \text{'salir impar'} = \{1, 3, 5\}$$

$$C = \text{'salir múltiplo 3'} = \{3, 6\}$$

$$D = \text{'salir múlt. de 5'} = \{5\}$$

$$F = \{1, 2, 3, 4, 5, 6\} = E \quad \leftarrow \text{suceso seguro}$$

$$G = \{\emptyset\} \quad \leftarrow \text{suceso imposible}$$

$X = \text{'lanzar dado y sus resultados'}$

$$E = \{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$$

$$A = \text{'salir par'} = \{2, 4, 6, 8, 10, 12\}$$

$$C = \text{'salir n.º 3 cifras'} = \{\emptyset\}$$

$$\textcircled{1} \textcircled{a} E = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$$

$$\textcircled{b} A = \{1, 2, 3, 4\} \quad B = \{5, 6, 7, 8, 9, 10, 11, 12\}$$

$$C = \{2, 4, 6, 8, 10, 12\} \quad D = \{1, 2, 4, 5, 7, 8, 10, 11\}$$

②

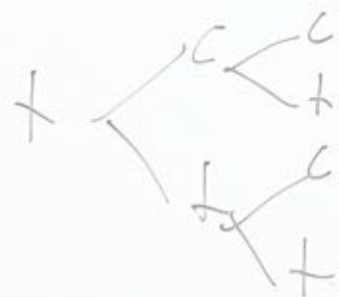
(a) $E = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

(b) $A = \{0, 1, 2, 3\}$

$B = \{1, 3, 5, 7, 9\}$

$C = \{6, 7, 8, 9\}$

⑤



(a) $E = \{ccc, cc+, c+c, c++ ,$
 $+cc, +c+, ++c, +++ \}$

(b) $A = \{cc+, c+c, +cc\}$

$B = \{c++, +c+, ++c\}$

$C = \{ccc\}$

④

$C <^c_+$

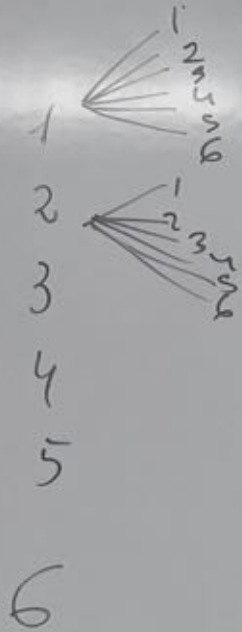
$+ <^c_+$

(a) $E = \{cc, c+, +c, ++\}$

(b) $A = \{cc, c+\}$

$B = \{++\}$

③ Hauerbo



$$E = \{ (1,1), (1,2), (1,3), (1,4), (1,5), (1,6), \\ (2,1), (2,2), (2,3), (2,4), (2,5), (2,6), \\ \dots \\ (6,1), (6,2), (6,3), (6,4), (6,5), (6,6) \}$$

36 casos posibles

REGLA DE LAPLACE

$$P(A) = \frac{\text{nº de casos favorables a A}}{\text{nº casos posibles}}$$

③ Hacerlo

Ej:

$$P(\text{la suma al tirar dos dados sea 11}) = P((5,6), (6,5)) = \frac{2}{36} = \frac{1}{18} \\ \approx 0'0556 \\ \underline{\underline{5'56\%}}$$

6

90 bolas idénticas

1, ..., 90

Casos posibles: 90

$$P(\text{extraer bola n}^\circ 58) = \frac{1}{90}$$

7

32 europeos

13 americanos

15 africanos

23 asiáticos

83 en total

↓ casos posibles

$$a) P(\text{europeo}) = \frac{\text{n}^\circ \text{ casos favorables}}{\text{n}^\circ \text{ casos posibles}} = \frac{32}{83} \approx 0'3854$$

38'54 %

$$b) P(\text{asiático}) = \frac{23}{83} \approx 0'2771$$

27'71 %

8

a)

$$P(2) = \frac{1}{6} ; P(5) = \frac{1}{6}$$

b)

$$P(2) = \frac{1}{8} ; P(5) = \frac{1}{8}$$

c)

$$P(2) = \frac{1}{4} ; P(5) = \frac{0}{4}$$

9

6R 2Am
7V 1N
4Az

nº casos posibles: 20

$$(6 + 2 + 7 + 1 + 4 = 20)$$

a) $P(Azul) = \frac{4}{20} = \frac{1}{5} = 0.2$

b) $P(\text{no sea negra}) = \frac{19}{20}$

c) $P(\text{sea roja o verde}) = \frac{13}{20}$

d) $P(\text{no sea amarilla ni negra}) = \frac{17}{20}$

10 40 naipes: casos posibles

a) $P(\text{Bastos}) = \frac{10}{40} = \frac{1}{4} = 0.25$

b) $P(\text{no sea As ni figura})$

10

$$a) P(\text{bastos}) = \frac{\text{nº casos favorables a bastos}}{\text{nº casos totales}} = \frac{10}{40} = \frac{1}{4} = 0'25 \quad 25\%$$

$$b) P(\text{no sea ni as ni figura}) = \frac{24}{40} = \frac{6}{10} = 0'6 \quad 60\%$$

$$c) P(\text{sea h² menor que 6}) = \frac{20}{40} = \frac{1}{2} = 0'5 \quad 50\%$$

$$d) P(\text{0, 100 o figura}) = \frac{19}{40} = 0'475 \quad 10 + 3 + 3 + 3 = 10 + 9 = 19$$

11

$$a) P(\text{ninguna errata}) = \frac{\text{nº casos favorable}}{\text{nº casos totales}} = \frac{58}{120} = \frac{29}{60} \approx 0'4833 \quad 48'33\%$$

$$b) P(2 erratas) = \frac{16}{120} = \frac{8}{60} = \frac{4}{30} = \frac{2}{15} \approx 0'2667 \quad 26'67\%$$

$$c) P(\text{algunas erratas}) = \frac{62}{120} = \frac{31}{60} \approx 0'5167 \quad 51'67\%$$

$$P(\text{más de 3}) = \frac{1}{120} \approx 0'0083 \quad 0'83\%$$

12

$$a) P(\text{sea un 5}) = \frac{4}{40} = \frac{1}{10} = 0'1 \quad 10\%$$

$$c) P(\text{Gran o copao}) = \frac{20}{40} = \frac{1}{2} = 0'5 \quad 50\%$$

$$b) P(\text{no sea caballo}) = \frac{36}{40} = \frac{9}{10} = 0'9 \quad 90\%$$

$$d) P(\text{no expedan}) = \frac{30}{40} = \frac{3}{4} = 0'75 \quad 75\%$$

13

	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	2	3	4	5	6
3	3	3	3	4	5	6
4	4	4	4	4	5	6
5	5	5	5	5	5	6
6	6	6	6	6	6	6

$$E = \left\{ \begin{array}{l} (1,1), (1,2), (1,3), (1,4), (1,5), (1,6) \\ (2,1), (2,2), \dots \\ (3,1), (3,2), \dots \\ (6,1), (6,2), \dots \end{array} \right\}$$

Hay 36 casos

$$P(\text{mayor puntuaciones sea 1}) = \frac{1}{36}$$

$$P(\text{mayor puntuaciones sea 2}) = \frac{3}{36} = \frac{1}{12}$$

$$P(\text{" " sea 3}) = \frac{5}{36} \quad P(\text{mayor punt sea 5}) = \frac{9}{36} = \frac{1}{4}$$

$$P(\text{" " sea 4}) = \frac{7}{36} \quad P(\text{sea 6}) = \frac{11}{36}$$

13

	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

$$E = \left\{ \begin{array}{l} (1,1), (1,2), (1,3), (1,4), (1,5), (1,6) \\ (2,1), (2,2), \dots \\ (3,1), (3,2), \dots \end{array} \right\}$$

$$(6,1), (6,2), \dots$$

Hay 36 casos

$$P(\text{producto sea } 5) = \frac{2}{36} = \frac{1}{18}$$

$$P(\text{producto sea } 6) = \frac{4}{36} = \frac{1}{9}$$

$$P(\text{sea par}) = \frac{27}{36} = \frac{3}{4}$$

$$P(\text{sea primo}) = \frac{6}{36} = \frac{1}{6}$$