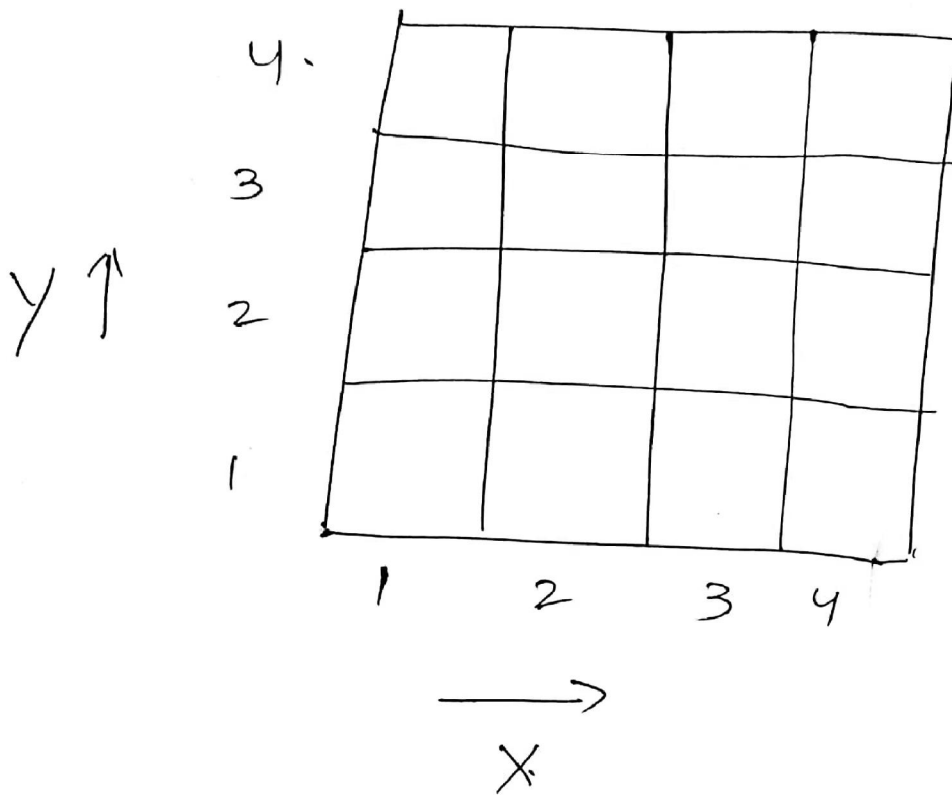


Question



You have two 4-faced dice.

B : It is an event that $\min(\hat{X}, Y) = 2$.

or

$$B \equiv \min(X, Y) = 2$$

$$A \equiv \max(X, Y)$$

i) What is $P(M=1|B)$ $\min(x,y)=1$ 0

ii) What is $P(M=2|B)$ ~~0~~

$$\min(x,y)=2$$

i)

4		≡		
3		≡		
2		≡	≡	≡
1	⊙			
	1	2	3	4

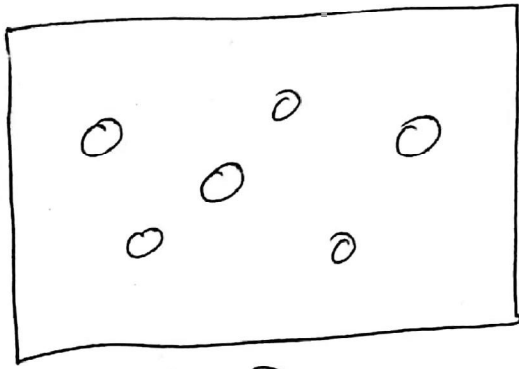
M

$$P(M=1|B) = 0.$$

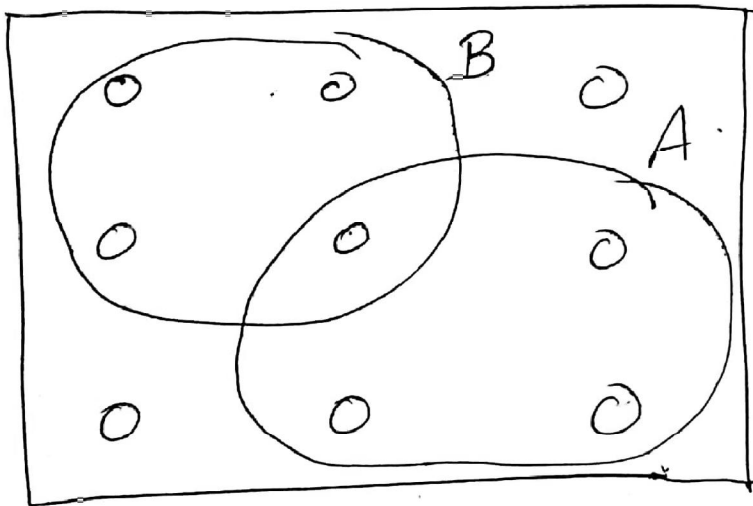
ii) $P(M=2|B)$

$$\frac{P(M=2 \cap B)}{P(B)} = \frac{1/16}{5/16} = \underline{1/5}.$$

	≡		
	≡		
⊙	⊙	≡	≡



Ω



Total mass of coins = 1

Question : $P(A/B)$

Ans: $1/4$.

$$P(A) = 4/9 \quad (4 \text{ coins})$$

$$P(B) = 4/9$$

$$P(A \cap B) = 1/9$$

$$P(A|B) = \frac{P(A \cap B)}{P(B)}$$

$$= \frac{\frac{1}{9}}{\frac{4}{9}} = 1/4$$