امثلة رقم (15)

1- $A = \{(2,1),(2,2),(2,3),(2,4),(2,5),(2,6)\}$

$\therefore P(A) = \frac{n(A)}{n(S)} = \frac{6}{36} = \frac{1}{6}$

2- $B = \{(1,1),(1,3),(1,5),(2,1),(2,3),(2,5),(3,1)$
$(3,3),(3,5),(4,1),(4,3),(4,5),(5,1),(5,3)$
$(5,5),(6,1),(6,3),(6,5)\}$

$\therefore P(B) = \frac{n(B)}{n(S)} = \frac{18}{36} = \frac{1}{2}$

3- $C = \{(5,6),(6,5),(6,6)\}$

$\therefore P(C) = \frac{n(C)}{n(S)} = \frac{3}{36} = \frac{1}{12}$

4- $D = \{(1,1),(2,1),(1,2),(3,1),(1,3),(2,2)\}$

$\therefore P(D) = \frac{n(D)}{n(S)} = \frac{6}{36} = \frac{1}{6}$

Axioms of prob.

1- $0 \le P(A) \le 1$ For any event A

2- $P(S) = 1$

3- $P(A_1 \cup A_2 \cup A_3 \cup \dots \cup A_n) = P(A_1) + P(A_2) + P(A_3) \dots + \dots + P(A_n)$

4- $P(\bigcup_{i=1}^{\infty} A_i) = \sum_{i=1}^{\infty} P(A_i)$; for any disjoint $A_1, A_2, \dots, A_n$ or $A_i \cdot A_j = \phi$, $i \neq j$