LGS GROUP OF COLLEGES
A PROJECT OF LAHORE GRAMMAR SCHOOL

Name: Anas Moyi Ud Din   Class: First year   Roll No. 240 401

Subject: Stats   Test No. WT-5   Date: 18-11-2024

Marks Obtained

SUBJECTIVE TYPE

Question-2:

(i)

Sets:

A set is a collection of well defined distinct objects. The object which make up a particular set are called elements or members of the set.

For example:

The set of natural numbers: $\{1, 2, 3, 4 \ldots \ldots\}$

(ii)

$\dfrac{12!}{10!}$:

$= \dfrac{12!}{10!}$

$= \dfrac{12 \cdot 11 \cdot 10!}{10!}$

$= 12 \cdot 11$

$= 132$

(iii)

One head:

Two coins: $\{H,T\}, \{T,H\}, \{T,T\}, \{H,H\}$

probability of Head: $\{H,T\}, \{T,H\}, \{H,H\}$

$$P(A) = \frac{N(S)}{N(A)}$$

$$P(A) = \frac{3}{4}$$

(iv)

Even number:

One die: $\{1,2,3,4,5,6\}$

Even numbers: $\{2,4,6\}$

$$P(A) = \frac{n(A)}{n(S)}$$

$$= \frac{3}{6}$$

$$P(A) = \frac{1}{2}$$

Question-3:

(i)

Sum is 6:

$S = (1,5), (2,4), (4,2), (3,3), (5,1)$

$N(S) = 36$

$N(A) = 5$

$$P(A) = \frac{n(A)}{n(S)}$$

$$P(A) = \frac{5}{36}$$

(ii)

Sum is 4 or less

$S = (1,3), (2,2), (3,1)$

$n(S) = 36$

$n(A) = 3$

$P(A) = \dfrac{n(A)}{n(S)}$

$P(A) = \dfrac{3}{36}$

$P(A) = \dfrac{1}{12}$

(iii)

Sum is even:

$n(S) = 36$

$m(A) = 18$

$P(A) = \dfrac{18}{36}$

$P(A) = \dfrac{1}{2}$