Sheet # _____

# LGS GROUP OF COLLEGES
A PROJECT OF LAHORE GRAMMAR SCHOOL

Name: Alisha Fahad Class: 11-B Roll No. _____

Subject: Statistics Test No. week Assign Date: _____

| | A | B | C | D | | A | B | C | D | | A | B | C | D | | A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ● | ○ | ○ | ○ | 6 | ○ | ○ | ○ | ○ | 11 | ○ | ○ | ○ | ○ | 16 | ○ | ○ | ○ | ○ |
| 2 | ○ | ○ | ○ | ● | 7 | ○ | ○ | ○ | ○ | 12 | ○ | ○ | ○ | ○ | 17 | ○ | ○ | ○ | ○ |
| 3 | ● | ○ | ○ | ○ | 8 | ○ | ○ | ○ | ○ | 13 | ○ | ○ | ○ | ○ | 18 | ○ | ○ | ○ | ○ |
| 4 | ○ | ○ | ○ | ○ | 9 | ○ | ○ | ○ | ○ | 14 | ○ | ○ | ○ | ○ | 19 | ○ | ○ | ○ | ○ |
| 5 | ○ | ○ | ○ | ○ | 10 | ○ | ○ | ○ | ○ | 15 | ○ | ○ | ○ | ○ | 20 | ○ | ○ | ○ | ○ |

Marks Obtained

# Subjective type Question -2

## (i)

**Set ;**

A set is a well defined collection of distinct objects. The objects making up a set called its elements. A set is usually denoted by capital letter.

E.g; $A = \{1, 2, 3, 4, 5\}$

## (ii)

$$\frac{12!}{10!}$$

= 132

(iii)

2 coins are tossed. find Probability;

① No head appears

② 1 head appears.

(IV)

A pair die is rolled

find probability;

① the number is one or more than one.

② the number is odd or even.

# Question - 2

## i) Sum is 6;

we need to find pairs of numbers $(x,y)$ where $x+y=6$ and $x \neq 1$.

the valid pairs are:

• $(1,5)$, $(2,4)$, $(4,2)$, $(5,1)$

There are 4 outcomes.

probability.

$$P(\text{sum is } 6) = \frac{4}{30} = \frac{2}{15}$$

## ii) Sum is 4 or less

we need pairs $(x,y)$ where $x+y \leq 4$ and $x \neq y$. the valid pairs are:

$(1,2), (1,3), (2,1), (2,2), (3,1)$

count only pairs with $x \neq y$:

$(1,2), (1,3), (2,1), (3,1)$

There are 4 outcomes

probability.

$P(\text{sum is 4 or less}) = \frac{4}{30} = \frac{2}{15}$

## iii) Sum is even;

we need pairs $(x,y)$ where $x+y$ is even. this happens if both $x$ and $y$ are odd or both are even with $x \neq y$, the valid pairs are

for odd;

$(1,3), (3,1), (1,5), (5,1), (3,5), (5,3) \rightarrow$ 6 pairs

for even;

$(2,4), (4,2), (6,2), (2,6), (4,6), (6,4)$

$\rightarrow$ 6 pairs

Total outcomes $= 6+6 = 12$

probability: $P(\text{sum is even}) = \frac{12}{30} = \frac{2}{5}$