Tender Heart High School, Sec. 33B, Chd.

Class: X Date: 11.11.2024

Subject: Mathematics Teacher: Ms. Reena

Topic: Probability (Extra questions)

Ques 1: In a single throw of a dice, find the probability of getting a number :-

(i) greater than 2

(ii) less than or equal to 2

(iii) not greater than 2

[Ans. $\frac{2}{3}, \frac{1}{3}, \frac{1}{3}$]

Ques 2: Three identical coins are tossed together. What is the probability of obtaining :-

(i) all heads (ii) exactly two heads

(iii) exactly one head (iv) at least one head

(v) at least two heads (vi) all tails.

[Ans. $\frac{1}{8}, \frac{3}{8}, \frac{3}{8}, \frac{7}{8}, \frac{1}{2}, \frac{1}{8}$]

Ques 3: From the pack of 52 playing cards, the black cards are removed. Now the cards are re-shuffled and then a card is drawn from the remaining pack of cards. Find the probability that the card drawn is

(i) a black card (ii) a king

(iii) an ace (iv) a spade card

[Ans. $\frac{10}{23}, \frac{1}{23}, \frac{2}{23}, \frac{5}{23}$]

Ques4: Anmol and Nirgam are friends. They were both born in 1990. What is the probability that they have
(i) same birthday (ii) different birthday

[Ans. (i) $\frac{1}{365}$ (ii) $\frac{364}{365}$]

Ques5: Three digit numbers are made using the digits 4, 5, 9 (without repetition). If a number among them is selected at random, what is the probability that the number will
(i) be a multiple of 5 (ii) end with 9

[Ans. $\frac{1}{3}$, $\frac{1}{3}$]

Ques6: Find the probability of having 53 Sundays in
(i) a non-leap year (ii) a leap year

[Ans. $\frac{1}{7}$, $\frac{2}{7}$]

Ques7: The probability of selecting a red ball at random from a jar that contains only red, blue and orange balls is $\frac{1}{4}$. The probability of selecting a blue ball at random from the same jar is $\frac{1}{3}$. If the jar contains 10 orange balls, find the total number of balls in the jar. [Ans 247]

Ques8: An integer is chosen between 0 and 100. What is the probability that it is
(i) divisible by 7 (ii) not divisible by 7

Ques 9: The King, queen and jack of clubs are removed from a deck of 52 playing cards and then well-shuffled.
Now one card is drawn at random from the remaining cards. Determine the probability that the card is
(i) a heart (ii) a king (iii) a club
(iv) 10 of hearts (v) a black face card
(vi) an ace or a queen
(vii) neither an ace nor a black king
(Ans. $\frac{13}{49}, \frac{3}{49}, \frac{10}{49}, \frac{1}{49}, \frac{3}{49}, \frac{1}{7}, \frac{44}{49}$)

Ques 10: A box contains four cards numbered from 1 to 4. A card is drawn from the box, its number is noted and put back in the box. Now, one more card is drawn. Write down the sample space of this random experiment. Find the probability of getting
(i) the product of numbers equal to 4
(ii) the sum of number less than or equal to 6.
[Ans. $\frac{3}{16}, \frac{13}{16}$]

Ques 11: A bag contains red, black and yellow balls. The probability of drawing a red ball from a bag is $\frac{5}{18}$. The probability of drawing a black ball is $\frac{10}{18}$. What is the probability of drawing a yellow ball?
[Ans. $\frac{1}{6}$]

Ques 12: A girl chooses a date at random in July for a party. Find the probability of her choosing:-
(i) a Friday (ii) a saturday
(iii) a Saturday or Sunday. [Ans $\frac{4}{31}, \frac{4}{31}, \frac{8}{31}$]

Ques 13: Instead of numbers, the letters in the word 'CHANCE' were stuck on a die.
Find the probability of rolling:-
(i) letter C (ii) a vowel
(iii) a consonant (iv) any letter except C
[Ans. $\frac{1}{3}, \frac{1}{3}, \frac{2}{3}, \frac{2}{3}$]

Ques. 14

The marks scored by 100 students are given below:

Marks scored	No. of students
0-10	4
10- 20	5
20-30	9
30-40	7
40-50	13
50-60	12
60-70	15
70-80	11
80-90	14
90-100	10

A student in the class is selected at random. Find the probability that the student has scored:

(a) less than 20.
(b) below 60 but 30 or more.
(c) more than or equal to 70.
(d) above 89.

[Ans. $\frac{9}{100}, \frac{8}{25}, \frac{7}{20}, \frac{1}{10}$]