



INDIAN SCHOOL NIZWA - WORKSHEET

SUBJECT: MATHEMATICS CH-13 PROBABILITY

Name: _____ Date: _____ Class: _____ Sec: _____

1. Probabilities of solving a specific problem independently by A and B are $\frac{1}{2}$ and $\frac{1}{3}$. If both of them try to solve the problem, find the probability that

(i) Exactly one of them solves the problem

(ii) None of them solves the problem

(iii) the problem is solved

2. In a hostel 60 % of the students read Hindi, 40 % read English and 20 % both Hindi and English. A student is selected at random.

(i) Find the probability that the student reads neither Hindi nor English

(ii) If she reads Hindi, find the probability that she reads English.

(iii) If she reads English, find the probability that she reads Hindi.

3. A card from a pack of 52 cards is lost. From the remaining cards of the pack, two cards are drawn and are found to be both diamonds. Find the probability of the lost card being a diamond.

4. Bag 1 contains 3 red and 4 black balls and bag II contains 4 red and 5 black balls. One ball is transferred from bag 1 to bag II and then a ball is drawn from bag II. The ball is found to be red in colour. Find the probability that the transferred ball is black.

5. If $P(A) = 0.4$ and $P(B) = p$, $P(A \cup B) = 0.6$ and A and B are independent events. Find the value of p.

6. If $P(A) = 0.6$, $P(B) = 0.5$, $P(B/A) = 0.4$, find $P(A \cup B)$ and $P(A/B)$.

7. A man is known to speak truth 4 out of 5 times. He threw a die and reported that he got face 6. Find the probability that it is actually a 6.

8. Three machines E1, E2 and E3 in a factory produce 50%, 25% and 25 % of the total



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output of electric bulbs. It is known that 4% of the tubes produced on each of machines E1 and E2 are defective and 5% of those produced on E3 are defective. If one tube is picked up at random a days production, calculate the probability that it is defective.

9. There are 3 coins. One is two headed coin having head on both faces, another is a biased coin that comes up head 75 % of the times and third is a normal coin. One of the coins is selected at random and tossed, it shows head. What is the probability that it was the two headed coin ?

10. An insurance company insured 3000 scooters and 4000 cars and 5000 trucks. The probabilities of the accident involving a scooter, a car and a truck are respectively 0.02, 0.03 and 0.04. One of them met with an accident. What is the probability that it is a car ?