

ASSIGNMENT - CLASS 11

MATHEMATICS – PROBABILITY

1. Two dice are thrown and the sum of the numbers which come up on the dice is noted. Find the probability of getting sum less or equal to 4.
2. Three coins are tossed once. Find the probability of getting at most 2 heads.
3. Suppose each child born is equally likely to be a boy or girl. Consider the family with three children;
 - a) Find the sample space.
 - b) Find the probability of the event that at least two children are girls.
4. Four persons are to be chosen at random from a group of 3 men, 2 women and 4 children. Find the probability of selecting 1 man, 1 woman and 2 children.
5. If the letters of the word ' ATTRACTION' are written down at random, find the probability that :
 - a) All the T's occur together.
 - b) No two T's occur together.
6. Three dice are thrown simultaneously. Find the probability that :
 - a) All of them show the same face.
 - b) All of them show distinct faces.
7. A, B, and C are three mutually exclusive and exhaustive events associated with a random experiment. Find $P(A)$, it being given that $P(B) = \frac{3}{2} P(A)$ and $P(C) = \frac{1}{2} P(B)$.
8. Four candidates A , B , C and D have applied for the assignment to coach a school cricket team. If A is twice as likely to be selected as B and , B

and C are given about the same chance of being selected, while C is twice as likely to be selected as D. What are the probabilities that :

- a) C will be selected.
- b) A will not be selected.

9. Two cards are drawn from a pack of 52 cards. What is the probability that either both are red or both are kings?

10. Six employees, two of whom are married to each other, are to be assigned six desks that are lined up in a row. If the assignment of employees to desks is made randomly, what is the probability that the married couple will have non – adjacent desks?

ANSWERS

- 1. $1/6$
- 2. $7/8$
- 3. b) $\frac{1}{2}$
- 4. $2/7$
- 5. a) $1/15$ b) $7/15$
- 6. a) $1/36$ b) $5/9$
- 7. $4/13$
- 8. a) $2/9$ b) $5/9$
- 9. $55/221$
- 10. $2/3$