

**National Institute of Open Schooling (NIOS)**  
**Senior Secondary Course**  
**Lesson – 19: Probability**  
**Worksheet -19**

1. Three coins are tossed once. Find out the probability of getting:
  - (i) at least 2 heads
  - (ii) no heads
  - (iii) exactly 2 tails
  
2. A bag contains 5 red, 6 white and 7 black pens. Two pens are drawn at random. Find out the probability that both pens are red or both are black.
  
3. If  $P(A) = \frac{2}{5}$ ,  $P(B) = \frac{1}{3}$  and  $P(A \cap B) = \frac{1}{5}$  then find out  $P\left(\frac{\bar{A}}{B}\right)$
  
4. A letter is chosen at random from the word ASSASSINATION, find the probability that letter is
  - (i) a vowel
  - (ii) a consonant
  
5. The probability that Harish will pass the examination in both Mathematics and Science is 0.5 and the probability of passing the Mathematics examination is 0.75, find out the probability of passing the Science examination.
  
6. Colored balls are distributed in three bags as:

Bag	Colour of the ball		
	Black	White	Red
1	2	1	3
2	4	2	1
3	3	4	5

A bag is selected at random and two balls are drawn randomly from the selected bag. It happened to be white and red. Find the probability that they have come from bag – 2.

7. Fifteen balls are distributed among three boxes. Find the probability that the first box will contain three balls.

8. Three dice are thrown Simultaneously. Find the probability of getting same number on all the three dice.
9. A basket contains 20 apples and 10 oranges out of which 5 apples and 3 oranges are defective. If a person like to takes out 2 at random, then the probability that both are apples.
- 10 An unbiased die is thrown twice. Then the probability distribution of number of sixes and find its mean and variance.