



## **Tutorial-2**

1. A CRV  $X$  that can assume any value between  $x=2$  and  $x=5$  has a density function given by  $f(x) = k(1+x)$ . Find  $k$ .
2.  $X$  and  $Y$  are independent random variables with variance 2 and 3. Find the variance of  $3X+4Y$ .
3. The mean of a Binomial distribution is 20 and S.D is 4. Determine the parameters of the distribution.
4. Out of 800 families with 4 children each how many families would be expected to have
  - i. 2 Boys and 2 Girls
  - ii. At least 1 boy
  - iii. At most 2 girls
  - iv. Children of both gender, Assume equal probabilities for boys & girls.