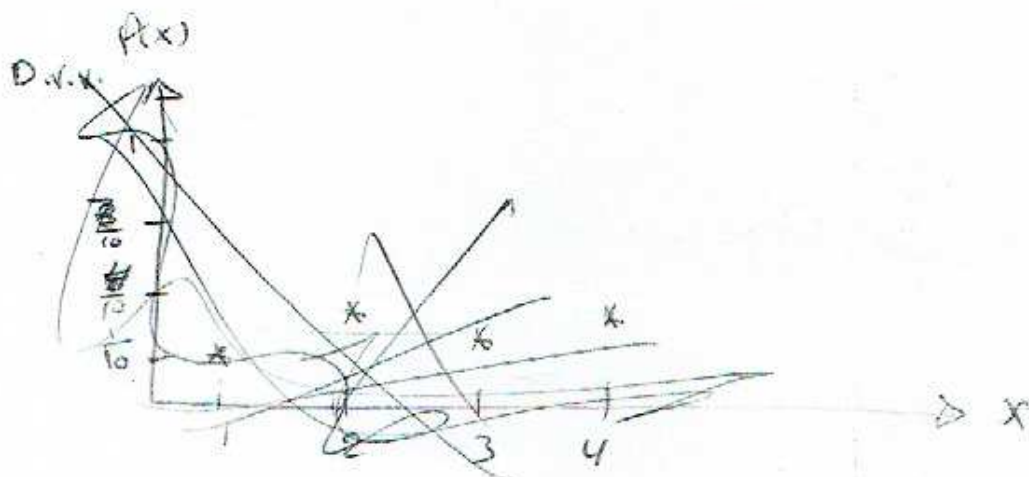
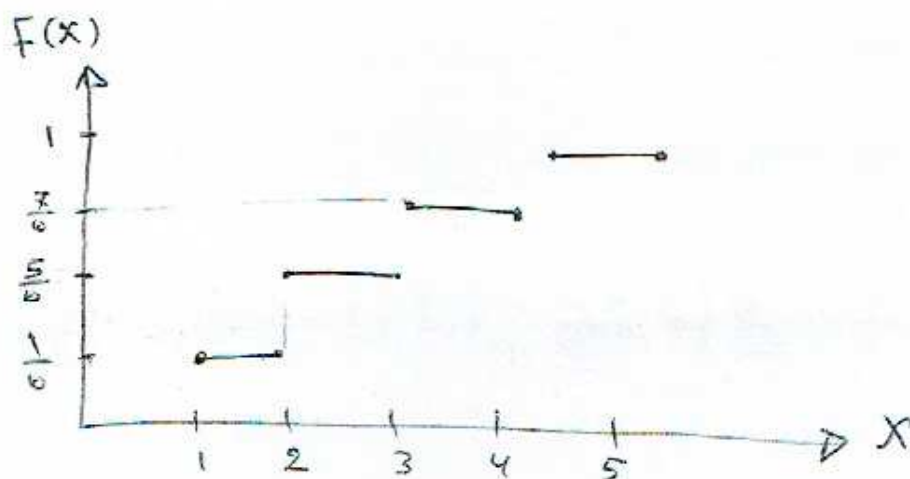


sol

$$F(x) = P(X \leq x)$$

$$F(x) = \begin{cases} 0 & ; x < 1 \\ \frac{1}{10} & ; 1 \leq x < 2 \\ \frac{5}{10} & ; 2 \leq x < 3 \\ \frac{7}{10} & ; 3 \leq x < 4 \\ 1 & ; 4 \leq x \end{cases}$$



EX(3) Find C.D.F. of p.d.f. given

$$f(x) = \begin{cases} 2e^{-2x} & ; x > 0 \\ 0 & ; o.w. \end{cases}$$

$$F(x) = P_r(X \leq x) = \int_{-\infty}^x f(x) dx$$

$$= \int_0^x 2e^{-2x} dx = -e^{-2x} \Big|_0^x$$

$$F(x) = -e^{-2x} - [-e^0]$$

$$= -e^{-2x} + 1$$

$$F(x) = \begin{cases} 1 - e^{-2x} & , x > 0 \\ 0 & , x < 0. \end{cases}$$

Ans. Two dice are thrown once, let X be the absolute difference between the two numbers shown by the dice. Find the probability mass function of X and C.D.F. of X .