cumulative distribution function

the cumulative distribution

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If X is a discrete random variable, the function given by

$$F(x) = P(X \leq x) = \sum_{t \leq x} f(t)$$

for $-\infty < x < \infty$ is the cumulative distribution of X

The values $F(x)$ of the cumulative distribution of a discrete random variable X satisfies the conditions:

- $f(-\infty) = 0$ and $f(\infty) = 1$
- If $a < b$, then $F(a) \leq F(b)$ for any real numbers a and b

cumulative distribution function

example (cont'd...)

Toss a coin 3 times: the sample space is $\Omega : \{H,T\} \times \{H,T\} \times \{H,T\}$

Define the random variable: $X =$ the number of heads

What is the cdf of X?