Example:

X is a continuous random variable with the probability density function of

$$f(x) = 3x^2 \quad for\ 0 \leq x \leq 1$$

The cumulative distribution function of X is found to be

$$F(x) = P(X \leq x) = x^3\ for\ 0 \leq x \leq 1$$

From this, we can see the differences between the 'pdf' and the 'cdf':