

# CONTINUOUS RANDOM VARIABLES



Key Concepts:

pdf: probability density function

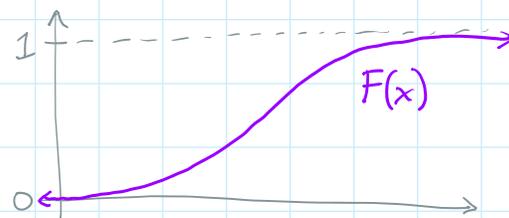
$$f(x) \text{ such that } \underline{P(a \leq X \leq b)} = \int_a^b f(x) dx$$



cdf: cumulative distribution function

$$F(x) \text{ such that } P(X \leq b) = F(b)$$

note:  $F(b) = \int_{-\infty}^b f(x) dx$



$$F'(x) = f(x) \text{ by Fundamental Theorem of Calculus}$$

