

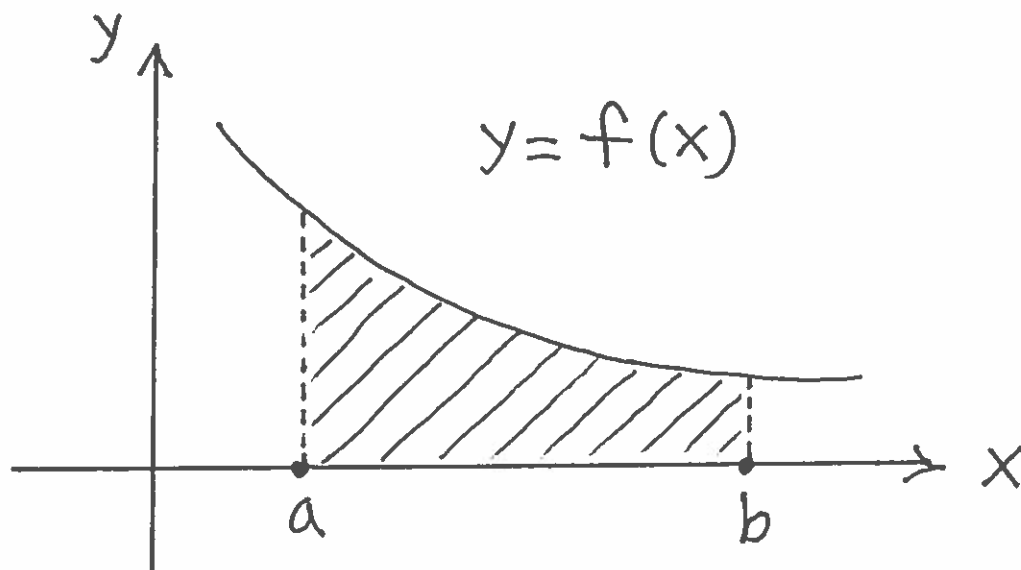
Math 16 B

Kouba

Probability Density Functions

Definition: Let x be a continuous random variable with $a \leq x \leq b$. Then function f defined on $a \leq x \leq b$ is called a probability density function (p.d.f.) if

- i.) $f(x) \geq 0$ for all $x, a \leq x \leq b$
- ii.) $\int_a^b f(x) dx = 1$



iii.) We will compute probabilities in the following manner:

$$P(c \leq x \leq d) = \int_c^d f(x) dx$$

