$$\int_a^b f(x)dx$$

$$\int_a^b f(x)dx \tag{1}$$

p_1을 재화 1의 가격이라 하고, p_2를 재화 2의 가격이라 하자. 소비자가 사용할 수 있는 예산의 한도가 m원까지일 때, 생각할 수 있는 제약모델은 다음과 같다:

$$p_1x_1 + p_2x_2 \leq m. \tag{2}$$

자주 사용되는 효용함수로 **Cobb-Douglas** 효용함수가 있다. 이 함수의 정의는 다음과 같다:

$$u(x_1, x_2) = x_1^c x_2^d$$

$\int_a^b f(x)dx$

$$\int_a^b f(x)dx$$

$$\int_a^b f(x)dx \tag{3}$$

$$a^x + y = a^x a^y \tag{4}$$

$$a^{x+y} = a^x a^y$$

$$a^{x+y} = a^x a^y$$

$$\overline{a+b} = \overline{a} + \overline{b}$$

$$\underline{a+b} = \underline{a} + \underline{b}$$

$$\underbrace{1 + \cdots + 1}$$

$$\overbrace{1+\cdots+1}$$

$$\vec{a} = (3,0,0)$$

$$\overrightarrow{a} = (3,0,0)$$

$$\overleftarrow{a} = (3,0,0)$$

$$id = \sigma^{-1} \cdot \sigma \cdot$$

$$\begin{matrix} A & B & C \\ d & e & f \\ 1 & 2 & 3 \end{matrix}$$

$$\begin{pmatrix} A & B & C \\ d & e & f \\ 1 & 2 & 3 \end{pmatrix}$$

$$\begin{bmatrix} A & B & C \\ d & e & f \\ 1 & 2 & 3 \end{bmatrix}$$

$$\underset{under}{baseline}$$

$$\overset{over}{baseline}$$

$$\sum_{\substack{1\le i\le q\\1\le j\le q\\1\le k\le r}} a_{ij}b_{jk}c_{ki}$$

$$A = \{x \in \mathbb{R} | x^2 = a, \text{where } a \text{ is positive}\}$$

$$A = \{x \in \mathbb{R} \mid x^2 = a, \text{where } a \text{ is positive}\}$$

1 Hi

정리 1.1.

$$A = \{x \in \mathbb{R} \mid x^2 = a, \textit{where } a \textit{ is positive}\}$$

증명. Hello world!

$$id = \sigma^{-1} \cdot \sigma \cdot \qquad \square$$

2 Hello

정의 1. $\mathbb{R}$ *is the set of all real numbers.*

$$id = \sigma^{-1} \cdot \sigma \cdot$$

정리 1.1에 의해서

정리 (1.1)에 의해서

Note that

$$A \leq B \tag{5}$$

and

$$B \leq A. \tag{6}$$

So by (5) and (6), we conclude that $A = B$.

$$\begin{aligned} Hf(x) &= \text{p.v.} \frac{1}{\pi} \int_{\mathbb{R}} \frac{f(y)}{x-y} dy \\ &= \lim_{\varepsilon \to 0} \frac{1}{\pi} \int_{|x-y|>\varepsilon} \frac{f(y)}{x-y} dy \end{aligned} \tag{7}$$

$$\begin{aligned} Hf(x) &= \text{p.v.} \frac{1}{\pi} \int_{\mathbb{R}} \frac{f(y)}{x-y} dy \\ &= \lim_{\varepsilon \to 0} \frac{1}{\pi} \int_{|x-y|>\varepsilon} \frac{f(y)}{x-y} dy \end{aligned} \tag{8}$$

$$
\begin{aligned}
Hf(x) &= \text{p.v.}\frac{1}{\pi}\int_{\mathbb{R}}\frac{f(y)}{x-y}dy \qquad (9)\\
&= \lim_{\varepsilon\to 0}\frac{1}{\pi}\int_{|x-y|>\varepsilon}\frac{f(y)}{x-y}dy \qquad (10)
\end{aligned}
$$

$$
\begin{aligned}
Hf(x) &= \text{p.v.}\frac{1}{\pi}\int_{\mathbb{R}}\frac{f(y)}{x-y}dy \qquad (11)\\
&= \lim_{\varepsilon\to 0}\frac{1}{\pi}\int_{|x-y|>\varepsilon}\frac{f(y)}{x-y}dy
\end{aligned}
$$

$$
\begin{aligned}
Hf(x) &= \text{p.v.}\frac{1}{\pi}\int_{\mathbb{R}}\frac{f(y)}{x-y}dy\\
&= \lim_{\varepsilon\to 0}\frac{1}{\pi}\int_{|x-y|>\varepsilon}\frac{f(y)}{x-y}dy
\end{aligned}
$$

Cobb-Douglas 모델의 MRS(Marginal rate of substitution)을 구해보도록 하자. $u(x_1, x_2) = x_1^c x_2^c$이라 할 때,

$$
\begin{aligned}
\text{MRS} &= -\frac{\partial u(x_1, x)2)/\partial x_1}{\partial u(x_1, x_2)/\partial x_2}\\
&= -\frac{c x_1^{c-1} x_2^d}{d x_1^c x_2^{d-1}}\\
&= -\frac{c x_2}{d x_1}
\end{aligned}
$$

와 같다.

$$
\begin{aligned}
a_{11} &= b_{11} & a_{12} &= b_{12}\\
a_{21} &= b_{21} & a_{22} &= b_{22} + c_{22}
\end{aligned}
$$

$$
\begin{aligned}
a_{11} &= b_{11} & a_{12} &= b_{12} \\
a_{21} &= b_{21} & a_{22} &= b_{22} + c_{22}
\end{aligned}
$$

align환경이면서 한 행에 부연설명을 하고자 할 때 적합한 환경이다.

$$
\begin{aligned}
x &= y_1 - y_2 + y_3 - y_5 + y_8 - \dots && \text{by} && (12) \\
&= y' \circ y^* && \text{by} && (13) \\
&= y(0) y' && \text{by Axiom 1.} && (14)
\end{aligned}
$$

$\mathbb{1}$
$\mathbb{ABC}\mathbb{def}\mathbb{12}$
$\mathcal{ABC}$
$\mathfrak{ABCdef123}$
$\mathbb{Z}$
$\mathbb{Z}$

$$\|a\|$$

$$\|a\|$$

(Good!) $f \in L^p(\mathbb{R}) (1 < p < \infty)$에 대하여

$$Hf(x) = \text{p.v.} \int_{\mathbb{R}} \frac{f(y)}{\pi(x-y)} dy$$

와 같이 정의한 변환을 힐버트 변환이라 한다.

(Bad!) $f \in L^p(\mathbb{R}) (1 < p < \infty)$에 대하여

$$Hf(x) = \text{p.v.} \int_{\mathbb{R}} \frac{f(y)}{\pi(x-y)} dy$$

와 같이 정의한 변환을 힐버트 변환이라 한다.

$$\sum_{n=1}^{\infty} |a_n b_n| \leq \left(\sum_{n=1}^{\infty} |a_n|^p \right)^{\frac{1}{p}} \left(\sum_{n=1}^{\infty} |b_n|^q \right)^{\frac{1}{1}}$$

$$= \int_0^\infty \left| \int_0^1 \frac{g\left(x\left(1+y\right)\right)}{y^{1-\alpha}} dy \right|^p dx.$$

Now by the Minkowski's integral intequality, we get

$$\int_0^\infty \left| \int_0^1 \frac{g\left(x\left(1+y\right)\right)}{y^{1-\alpha}} dy \right|^p dx....$$

$$\begin{pmatrix} -2 & 3 \\ 1 & -2 \end{pmatrix}$$

$$\begin{cases} -\nu \triangle u + u \cdot \nabla u + \nabla p = f & \text{in } \Omega \\ \operatorname{div} u = 0 & \text{in } \Omega \\ u = 0 & \text{on } \partial\Omega, \end{cases}$$

$$\begin{cases} -\triangle u + \nabla p = -w \cdot \nabla w + f & \text{in } \Omega, \\ \operatorname{div} u = 0 & \text{in } \Omega, \\ u = 0 & \text{on } \partial\Omega, \end{cases}$$