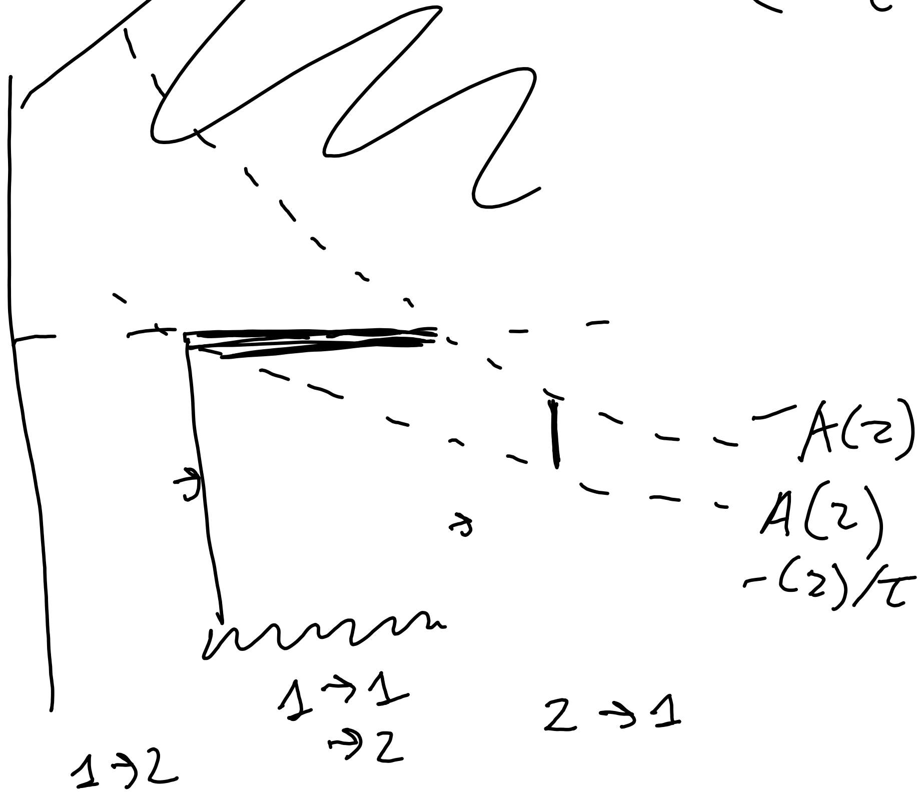
Test

$t > 1$

$1 \to 2$ if $-(2) > \boxed{\tau} \frac{1}{w^2} > \frac{w^1}{w^2}$

$2 \to 1$ if $A(2) < \tau \frac{1}{w^2}$



$c : [0,1] \to \mathbb{R}^+$

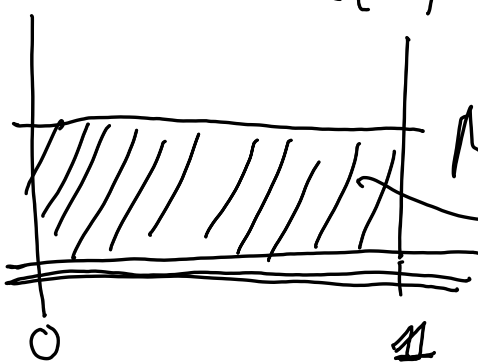
$$u(c) = \exp \int_0^1 \ln[c(z)]\, dz$$

$$\int_0^1 p(z)\, c(z)\, dz \le I \qquad (*)$$

max $u()$ s.t. $(*)$

$$u() - \lambda \int_0^1 p(z)\, c(z)\, dz \to \max$$

$$\forall z \quad u() \frac{1}{c(z)} - \lambda p(z) = 0 \qquad c(z)\, p(z) = k$$



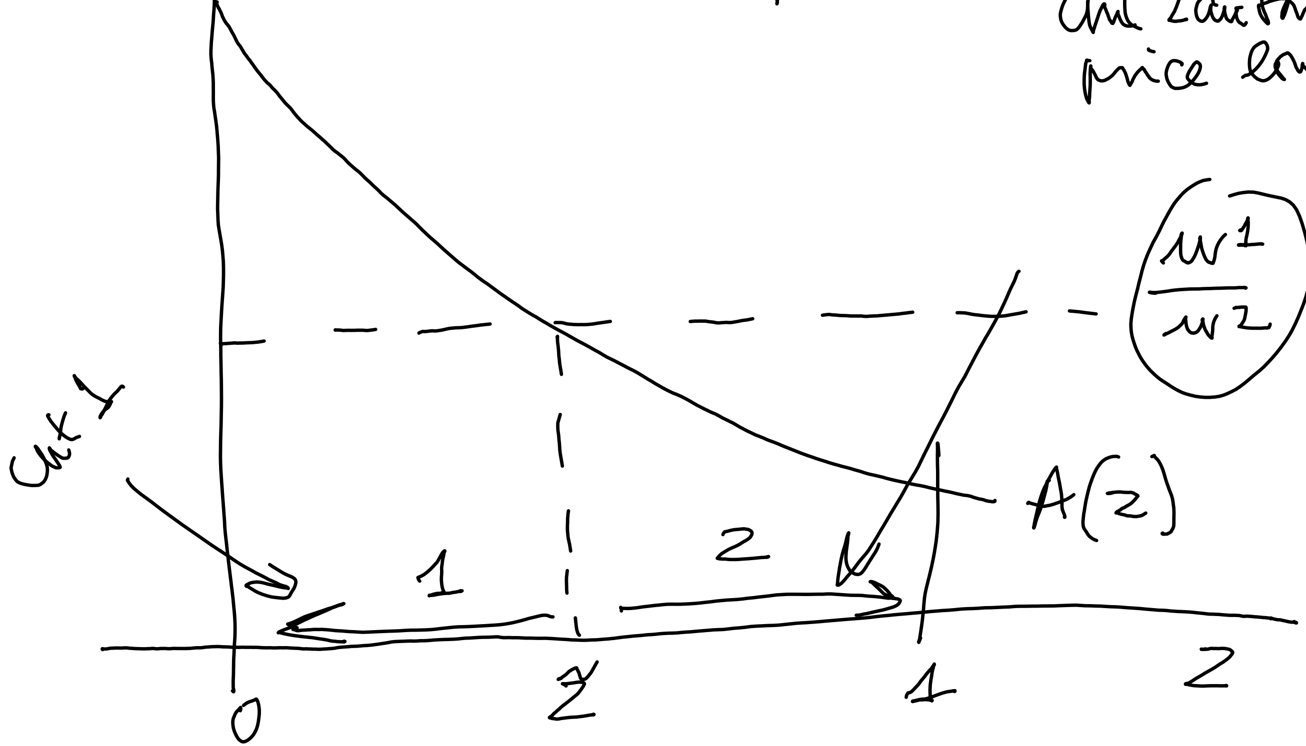
$p(z)\, c(z) = k$ $\quad$ \$/good

I $\quad$ \$

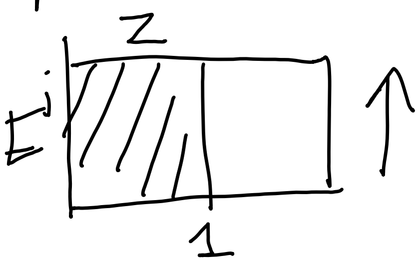
$$A(z) = a^2(z)/a^1(z)$$

$$w^j a^j(z) = p^{aj}(z)$$

cnt 2 are truly price lowt



$$\text{Expenditure } [0,z] = \int_0^z \underbrace{p(\xi)^j c(\xi)^j}_{E^j} d\xi = z E^j$$



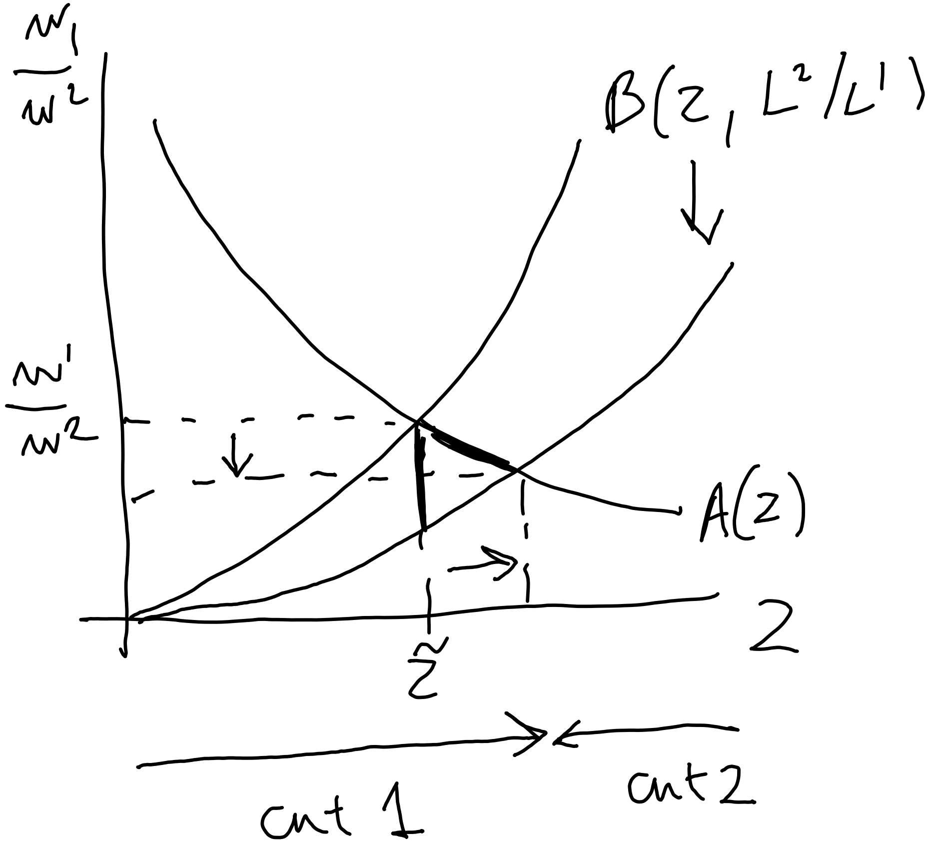
$$E^j = w^j L^j$$

$$\int_z^1 p(\xi)^j c(\xi)^j d\xi = (1-z) E^j$$

$$R^1 = \underline{w^1 L^1} = \int_0^{\tilde z} p(z)\left[c^1(z) + c^2(z)\right] dz$$

$$= \tilde z \left(E^1 + E^2\right) = \tilde z \left(\underline{w^1 L^1 + w^2 L^2}\right)$$

$$B(\tilde z) = \frac{\tilde z}{1-\tilde z}\,\frac{L^2}{L^1} = \frac{w^1}{w^2}$$

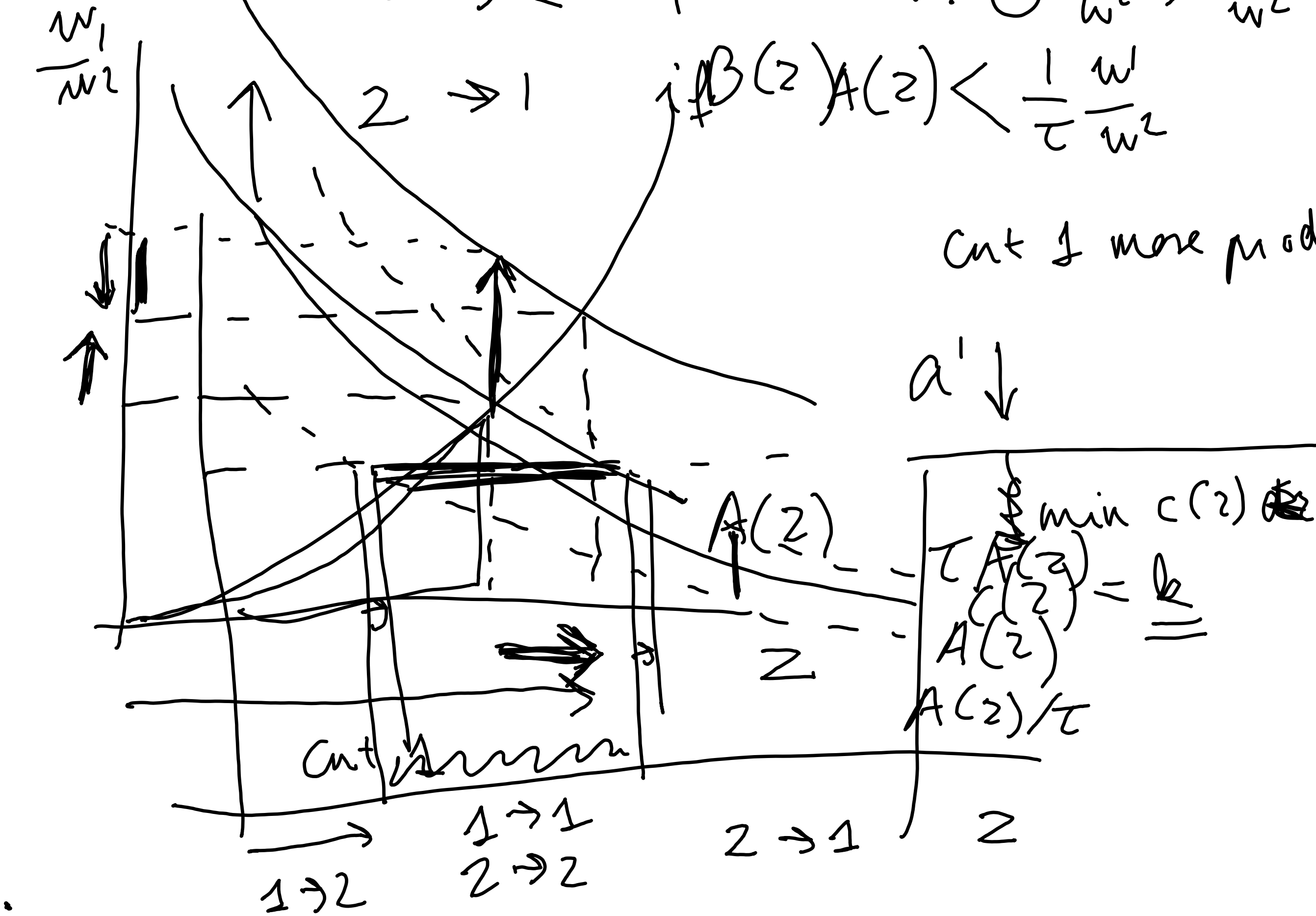


$L^2 \downarrow$

$\frac{w^2}{w^1} \uparrow$

$\tau > 1$ $\quad 1 \to 2$ if $A(2) > \boxed{\tau}\frac{w^1}{w^2} > \frac{w^1}{w^2}$

$2 \to 1$ if $\cancel{B(2)}\, A(2) < \frac{1}{\tau}\frac{w^1}{w^2}$



$\tau > 1$

$1 \to 2$ if $A(z) > \boxed{\tau} \frac{w^1}{w^2} > \frac{w^1}{w^2}$

$2 \to 1$ if $A(z) < \frac{1}{\tau} \frac{w^1}{w^2}$