a, b ab

a, b $T_{a,b}$

$$T_{a,b}(x) = \sum_{n=0}^{\infty} a^n T(b^n x),$$

a, b $a <$
$1, b >$
$1, ab >$
1 $T :$
$R \to$
R

$$T(x) = \{ x \ x \in [0, \tfrac{1}{2}] 1 - x x \in [\tfrac{1}{2}, 1].$$

$T_{a,b}$ $T_{\frac{1}{2},2}$
$T_{a,b}$
$T_{a,b}$

$$B = 2 + \frac{\ln a}{\ln b} = 1 + \frac{\ln ab}{\ln b}.$$

$f :$
$R \to$
R
f

$$\Gamma_f = \{(x, y) \in R^2 : x \in [0, 1], y = f(x)\}.$$

.1 (Assouad)
a, b $ab >$
1 $k-$
1 *Littlewood* ,

$$\sum_{n=0}^{k-1} \epsilon_n (ab)^n.$$

, $\{\epsilon_n\}_{n \in \{0, \cdots, k-1\}}$ $\{-1, 1\}$
, b 2 , ,

$$\dim_A \Gamma_{T_{a,b}} \geq 1 + \frac{1}{k}.$$

.2
,

$$\dim_A{}^{1/B} \Gamma_{T_{a,b}} \geq 1 + \frac{1}{k},$$

, $B =$
$\frac{\ln(ab^2)}{\ln b}$, $\dim_A{}^{1/B}$ $1/B$ *Assouad*
$abbb \frac{\ln(ab^2)}{\ln b}$
$a =$
$\frac{\sqrt{5}+1}{2}, b =$
$8 \dim_B \Gamma_{T_{a,b}} \approx$
$1, 23$
$\dim_A \Gamma_{T_{a,b}} \geq$
$\frac{4}{3}$

.3 ( )
a, b 1.1 , $\Gamma_{T_{a,b}}$ $E,$

$$\dim_H E = \dim_A \Gamma_{T_{a,b}} \geq \overline{\dim_B} \Gamma_{T_{a,b}}.$$

$T_{a,b}$

.4
$a.b$ 1.1 , $ab =$
1 $y \in$
$R,$

$$L(y) = \{x \in [0, 1] : T_{a,b}(x) = y\} \times \{y\}.$$

$y \in$
R