?
R^3
R^3
R^{n+1}
$R^{n+1} n M M$
L

$$H = tr(L) = \sum_{i=1}^{n} \kappa_i.$$

$f :$
$\Omega \to$
$R \Omega \in$
R^n

$$X : \Omega \to R^{n+1} X(x^1, x^2, \cdots, x^n) = (x^1, x^2, \cdots, x^n, f(x^1, x^2, \cdots, x^n))$$

f
$M u n$

$$H = div \frac{\nabla u}{\sqrt{1+|\nabla u|^2}}.$$

$X_i =$
$\frac{\partial}{\partial x^i} =$
$(0, \cdots, 1, \cdots, 0, u_i) =$
$(e_i, u_i) e_i R^n i u_i$
$u x^i$

$$n = \frac{(-\nabla u, 1)}{\sqrt{1+|\nabla u|^2}}.$$

$$\begin{aligned} L(X_i) =& -n_i = \frac{\partial}{\partial x^i} \frac{(\nabla u, -1)}{\sqrt{1+|\nabla u|^2}} \\ =& \frac{(\nabla u_i, 0)}{\sqrt{1+|\nabla u|^2}} - \frac{(\nabla u, -1) \cdot (1+|\nabla u|^2)_i}{2\sqrt{1+|\nabla u|^2}^3} \\ =& \frac{1}{\sqrt{1+|\nabla u|^2}} (\nabla u_i, 0) - \frac{\langle \nabla u, \nabla u_i \rangle}{\sqrt{1+|\nabla u|^2}^3} (\nabla u, -1) \end{aligned}$$

$$\begin{aligned} H = trL =& \sum_{i=1}^{n} \frac{u_{ii}}{\sqrt{1+|\nabla u|^2}} - \sum_{i=1}^{n} \frac{\langle \nabla u, \nabla u_i \rangle}{\sqrt{1+|\nabla u|^2}^3} u_i \\ =& \sum_{i=1}^{n} \frac{u_{ii}}{\sqrt{1+|\nabla u|^2}} - \sum_{i,j=1}^{n} \frac{u_j u_{ji}}{\sqrt{1+|\nabla u|^2}^3} u_i \\ =& div \frac{\nabla u}{\sqrt{1+|\nabla u|^2}}. \end{aligned}$$

$M M$
$\Omega \theta \in$
$S^1 \Omega \theta$
$\Omega \theta l_1, l_2 p \in$
$\Omega p l_1, l_2 \Omega p l_1 l_2 p \in$
$\Omega \Omega \Omega \Omega$
$\Omega \Omega \Omega \Omega$
$\Omega \theta \in$
$S^1 \Omega \theta l_\theta l_\theta$
$A, O, B \angle AOB \leq$
$\frac{\pi}{3} A, O, B$
$O(0,0)$
$A =$
$(1, a), B =$
$(1, b) a <$
b
$A B O A O B \Omega$
$p \in$
$\Omega p A B A B \Omega p$
$p_i =$
$p A B \Omega \{p_i :$
$i =$
$0, 1, 2, \cdots\}$
$p_i p_i O A O B 2 \angle AOB \leq$
$\frac{2\pi}{3}$
$\frac{2\pi}{3} <$