

Первые пространственные производные

	$\text{grad}T = \vec{\nabla}T$	$\text{rot}\vec{M} = [\vec{\nabla}\vec{M}]$	$\text{div}\vec{M} = (\vec{\nabla}\vec{M})$	$\vec{\nabla}$
x y z	$\vec{\mathbf{i}}_x \frac{\partial T}{\partial x} + \vec{\mathbf{i}}_y \frac{\partial T}{\partial y} + \vec{\mathbf{i}}_z \frac{\partial T}{\partial z}$	$\begin{bmatrix} \vec{\mathbf{i}}_x & \vec{\mathbf{i}}_y & \vec{\mathbf{i}}_z \\ \frac{\partial}{\partial x} & \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ M_x & M_y & M_z \end{bmatrix}$	$\frac{\partial M_x}{\partial x} + \frac{\partial M_y}{\partial y} + \frac{\partial M_z}{\partial z}$	$\vec{\mathbf{i}}_x \frac{\partial}{\partial x} + \vec{\mathbf{i}}_y \frac{\partial}{\partial y} + \vec{\mathbf{i}}_z \frac{\partial}{\partial z}$
r φ z	$\vec{\mathbf{i}}_r \frac{\partial T}{\partial r} + \vec{\mathbf{i}}_\phi \frac{\partial T}{r\partial\phi} + \vec{\mathbf{i}}_z \frac{\partial T}{\partial z}$	$\frac{1}{r} \begin{bmatrix} \vec{\mathbf{i}}_r & \vec{\mathbf{i}}_\phi & \vec{\mathbf{i}}_z \\ \frac{\partial}{\partial r} & \frac{\partial}{\partial\phi} & \frac{\partial}{\partial z} \\ M_r & rM_\phi & M_z \end{bmatrix}$	$\frac{1}{r} \left[\frac{\partial(rM_r)}{\partial r} + \frac{\partial M_\phi}{\partial\phi} + r \frac{\partial M_z}{\partial z} \right]$	$\vec{\mathbf{i}}_r \frac{\partial}{\partial r} + \vec{\mathbf{i}}_\phi \frac{\partial}{r\partial\phi} + \vec{\mathbf{i}}_z \frac{\partial}{\partial z}$
R θ φ	$\vec{\mathbf{i}}_R \frac{\partial T}{\partial R} + \vec{\mathbf{i}}_\theta \frac{\partial T}{R\partial\theta} + \vec{\mathbf{i}}_\phi \frac{\partial T}{R\sin\theta\partial\phi}$	$\frac{1}{R^2 \sin\theta} \begin{bmatrix} \vec{\mathbf{i}}_R & \vec{\mathbf{i}}_\theta R & \vec{\mathbf{i}}_\phi R \sin\theta \\ \frac{\partial}{\partial R} & \frac{\partial}{\partial\theta} & \frac{\partial}{\partial\phi} \\ M_R & RM_\theta & R\sin\theta M_\phi \end{bmatrix}$	$\frac{1}{R^2 \sin\theta} \left[\sin\theta \frac{\partial(R^2 M_R)}{\partial R} + R \frac{\partial(\sin\theta M_\theta)}{\partial\theta} + R \frac{\partial M_\phi}{\partial\phi} \right]$	$\vec{\mathbf{i}}_R \frac{\partial}{\partial R} + \vec{\mathbf{i}}_\theta \frac{\partial}{R\partial\theta} + \vec{\mathbf{i}}_\phi \frac{\partial}{R\sin\theta\partial\phi}$
Ламэ	$\sum_1^3 \frac{\vec{\mathbf{i}}_k}{h_k} \frac{\partial T}{\partial \xi_k}$	$\frac{1}{h_1 h_2 h_3} \begin{bmatrix} \vec{\mathbf{i}}_1 h_1 & \vec{\mathbf{i}}_2 h_2 & \vec{\mathbf{i}}_3 h_3 \\ \frac{\partial}{\partial \xi_1} & \frac{\partial}{\partial \xi_2} & \frac{\partial}{\partial \xi_3} \\ h_1 M_1 & h_2 M_2 & h_3 M_3 \end{bmatrix}$	$\frac{1}{h_1 h_2 h_3} \left[\frac{\partial(h_2 h_3 M_1)}{\partial \xi_1} + \frac{\partial(h_1 h_3 M_2)}{\partial \xi_2} + \frac{\partial(h_1 h_2 M_3)}{\partial \xi_3} \right]$	$\sum_1^3 \frac{\vec{\mathbf{i}}_k}{h_k} \frac{\partial}{\partial \xi_k}$