

Diff 1

$$= \left[\frac{\partial D_{11}}{\partial x} \cdot \frac{\partial \phi}{\partial x} + \frac{\partial D_{12}}{\partial x} \frac{\partial \phi}{\partial y} + \frac{\partial D_{13}}{\partial x} \frac{\partial \phi}{\partial z} \right] +$$

Ext 1

$$\left[D_{11} \frac{\partial^2 \phi}{\partial x^2} + D_{12} \frac{\partial^2 \phi}{\partial x \partial y} + D_{13} \frac{\partial^2 \phi}{\partial x \partial z} \right] +$$

Diff 2

$$\left[\frac{\partial D_{12}}{\partial y} \frac{\partial \phi}{\partial x} + \frac{\partial D_{22}}{\partial y} \frac{\partial \phi}{\partial y} + \frac{\partial D_{32}}{\partial z} \frac{\partial \phi}{\partial z} \right] +$$

Ext 2

$$\left[D_{12} \frac{\partial^2 \phi}{\partial y \partial x} + D_{22} \frac{\partial^2 \phi}{\partial y^2} + D_{32} \frac{\partial^2 \phi}{\partial y \partial z} \right] +$$

Diff 3

$$\left[\frac{\partial D_{13}}{\partial z} \frac{\partial \phi}{\partial x} + \frac{\partial D_{23}}{\partial z} \frac{\partial \phi}{\partial y} + \frac{\partial D_{33}}{\partial z} \frac{\partial \phi}{\partial z} \right] +$$

Ext 3

$$\left[D_{13} \frac{\partial^2 \phi}{\partial z \partial x} + D_{23} \frac{\partial^2 \phi}{\partial y \partial z} + D_{33} \frac{\partial^2 \phi}{\partial z^2} \right]$$