$$H = \begin{pmatrix} h_{11} & h_{12} \\ h_{12} & -h_{11} \end{pmatrix}$$

here $h_{22} = -h_{11}$, $h_{21} = h_{12}$

$$h = \frac{h_{1} + i h_{12}}{\sqrt{2}}, \quad \bar{h} = \frac{h_{12} - i h_{12}}{\sqrt{2}}$$

$$\partial = \frac{\partial_1 + i \partial_2}{\sqrt{2}}, \quad \bar{\partial} = \frac{\partial_1 - i \partial_2}{\sqrt{2}}$$

I have to calculate terms like

$$\underline{\partial_i h_{kl} \partial_j h_{kl}} = \partial_1 h_{kl} \partial_1 h_{kl} + \partial_2 h_{kl} \partial_2 h_{kl}$$

$(\because h_{22} = -h_{11})$

$$= 2\partial_1 h_{11} \partial_1 h_{11} + 2\partial_1 h_{12} \partial_1 h_{12} + \cancel{\partial_1 h_{12} \partial_1 h_{12}} + \cancel{\partial_1 h_{11} \partial_1 h_{11}}$$

$$+ \cancel{2}\, 2 (\partial_2 h_{11} \partial_2 h_{11} + \partial_2 h_{12} \partial_2 h_{12})$$

$$= 2(\partial_1 h_{11} \partial_1 h_{11} + \partial_1 h_{12} \partial_1 h_{12}) + 2(\partial_2 h_{11} \partial_2 h_{11} + \partial_2 h_{12} \partial_2 h_{12})$$

also terms like $\partial_i h_{kl} \partial_k h_{jl}$ → this has mixed indices.

you can use other notations in place of $\partial, \bar{\partial}$, ~~etc~~ • for $\bar{h}$ you can ~~you~~ use l while writing programm.