

$$\mathcal{A} = \frac{a}{b} \Big| \frac{b}{c}$$

$$\mathcal{A}^{-1} = \frac{1}{ac - b^2} \frac{c}{-b} \Big| \frac{-b}{a} = \frac{1}{d} \frac{c}{-b} \Big| \frac{-b}{a}$$

$$\partial = \frac{\bar{\partial}}{\underline{\partial}}$$

$$\partial \mathcal{A} = \frac{\bar{\partial} \mathcal{A}}{\underline{\partial} \mathcal{A}} = \frac{\bar{\partial} \frac{a}{b} \Big| \frac{b}{c}}{\underline{\partial} \frac{a}{b} \Big| \frac{b}{c}} = \frac{\frac{\bar{a}}{\bar{b}} \Big| \frac{\bar{b}}{\bar{c}}}{\frac{\underline{a}}{\underline{b}} \Big| \frac{\underline{b}}{\underline{c}}}$$

$$\partial \mathcal{A} - \partial^T \mathcal{A} + \partial^{\underline{t}} \mathcal{A} = \frac{\frac{\bar{a}}{\bar{b}} \Big| \frac{\bar{b}}{\bar{c}}}{\frac{\underline{a}}{\underline{b}} \Big| \frac{\underline{b}}{\underline{c}}} - \frac{\frac{\bar{a}}{\bar{b}} \Big| \frac{\underline{a}}{\underline{b}}}{\frac{\bar{b}}{\bar{c}} \Big| \frac{\underline{b}}{\underline{c}}} + \frac{\frac{\bar{a}}{\bar{b}} \Big| \frac{\bar{b}}{\bar{c}}}{\frac{\underline{a}}{\underline{b}} \Big| \frac{\underline{b}}{\underline{c}}} = \frac{\frac{\bar{a}}{\underline{a}} \Big| \frac{2\bar{b} - \underline{a}}{\underline{c}}}{2\bar{b} - \underline{c} \Big| \underline{c}}$$

$$2d \mathcal{A} = \frac{\partial \mathcal{A} - \partial^T \mathcal{A} + \partial^{\underline{t}} \mathcal{A}}{\underline{\partial} \mathcal{A}} \mathcal{A}^{-1} = \frac{\frac{\bar{a}}{\underline{a}} \Big| \frac{2\bar{b} - \underline{a}}{\underline{c}}}{2\bar{b} - \underline{c} \Big| \underline{c}} \frac{c}{-b} \Big| \frac{-b}{a} = \frac{\frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{\underline{a}c - \underline{c}b} \Big| \frac{2\bar{b}a - \underline{a}a - \bar{a}b}{\bar{c}a - \underline{a}b}}{2\bar{b}c - \underline{c}c - \underline{c}b \Big| \underline{c}a + \underline{c}b - 2\bar{b}b}$$

$$2d^2 \partial \mathbf{x} \mathbf{d}^\# = \frac{\bar{\partial}}{\partial} \frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{\underline{a}c - \bar{c}b} \left| \frac{2\bar{b}a - \bar{a}b - \underline{a}a}{\bar{c}a - \underline{a}b} \right| \frac{\underline{a}c - \bar{c}b}{2\bar{b}c - \bar{c}c - \underline{c}b} \left| \frac{\bar{c}a - \underline{a}b}{\bar{c}b + \underline{c}a - 2\bar{b}b} \right| =$$

*	*	$\frac{\underline{a}c - \bar{c}bd - \underline{a}c - \bar{c}b\bar{d}}{\underline{a}c - \bar{c}b}$	$\frac{\bar{c}a - \underline{a}bd - \bar{c}a - \underline{a}b\bar{d}}{\bar{c}b + \underline{c}a - 2\bar{b}b}$
*	*	$\frac{2\bar{b}c - \bar{c}c - \underline{c}bd}{2\bar{b}c - \bar{c}c - \underline{c}b\bar{d}}$	$\frac{\bar{c}b + \underline{c}a - 2\bar{b}bd}{-\bar{c}b + \underline{c}a - 2\bar{b}b\bar{d}}$
$\frac{\bar{a}c + \underline{a}b - 2\bar{b}bd}{-\bar{a}c + \underline{a}b - 2\bar{b}b\bar{d}}$	$\frac{2\bar{b}a - \bar{a}b - \underline{a}ad}{-2\bar{b}a - \bar{a}b - \underline{a}a\bar{d}}$	*	*
$\frac{\underline{a}c - \bar{c}bd - \underline{a}c - \bar{c}b\bar{d}}{\underline{a}c - \bar{c}b}$	$\frac{\bar{c}a - \underline{a}bd - \bar{c}a - \underline{a}b\bar{d}}{\bar{c}a - \underline{a}b}$	*	*

=

*	*	$\frac{\bar{a}c - \bar{c}b + \underline{a}c - \bar{b}c\bar{d} + \bar{c}b - \underline{a}c\bar{d}}{\underline{a}c - \bar{c}b}$	$\frac{\bar{c}a - \underline{a}b + \bar{c}a - \underline{a}b\bar{d} + \underline{a}b - \bar{c}a\bar{d}}{\bar{c}b + \underline{c}a - 2\bar{b}b}$
*	*	$\frac{2\bar{b}c - \bar{c}c - \bar{c}b + 2\bar{b}c - \bar{c}c - \underline{c}b\bar{d}}{+ \bar{c}c + \underline{c}b - 2\bar{b}c\bar{d}}$	$\frac{\bar{c}b - 2\bar{b}b + \underline{c}a + \bar{c}b - 2\bar{b}b + \underline{c}a\bar{d}}{+ 2\bar{b}b - \bar{c}b - \underline{c}a\bar{d}}$
$\frac{\bar{a}c + \underline{a}b - 2\bar{b}b + \bar{a}c + \underline{a}b - 2\bar{b}b\bar{d}}{+ 2\bar{b}b - \bar{a}c - \underline{a}b\bar{d}}$	$\frac{2\bar{b}a - \underline{a}a - \bar{a}b + 2\bar{b}a - \underline{a}a - \bar{a}b\bar{d}}{+ \bar{a}b + \underline{a}a - 2\bar{b}a\bar{d}}$	*	*
$\frac{\underline{a}c - \bar{c}b + \underline{a}c - \bar{c}b\bar{d} + \bar{c}b - \underline{a}c\bar{d}}{\underline{a}c - \bar{c}b}$	$\frac{\bar{c}a - \underline{a}b + \bar{c}a - \underline{a}b\bar{d} + \underline{a}b - \bar{c}a\bar{d}}{\bar{c}a - \underline{a}b}$	*	*

$$4d^2 \rho_1 \mathbf{z} \rho_1^\# =$$

$$\frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{\underline{a}c - \bar{c}b} \mid \frac{2\bar{b}a - \underline{a}a - \bar{a}b}{\bar{c}a - \underline{a}b} \quad \bar{a}c + \underline{a}b - 2\bar{b}b \mid 2\bar{b}a - \underline{a}a - \bar{a}b \mid \underline{a}c - \bar{c}b \mid \frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} =$$

$$\frac{\underline{a}c - \bar{c}b}{2\bar{b}c - \bar{c}c - \underline{c}b} \mid \frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \quad \underline{a}c - \bar{c}b \mid \bar{c}a - \underline{a}b \mid 2\bar{b}c - \bar{c}c - \underline{c}b \mid \underline{c}a + \bar{c}b - 2\bar{b}b =$$

*	*	$\frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{2\bar{b}a - \underline{a}a - \bar{a}b} \frac{\underline{a}c - \bar{c}b}{2\bar{b}c - \bar{c}c - \underline{c}b} +$	$\frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{2\bar{b}a - \underline{a}a - \bar{a}b} \frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} +$
*	*	$\frac{\underline{a}c - \bar{c}b}{\bar{c}a - \underline{a}b} \frac{\underline{a}c - \bar{c}b}{2\bar{b}c - \bar{c}c - \underline{c}b} +$	$\frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} d$
$\frac{\underline{a}c - \bar{c}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \bar{d}$	$\frac{\underline{a}c - \bar{c}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \frac{2\bar{b}a - \underline{a}a - \bar{a}b}{\bar{c}a - \underline{a}b} +$ $\frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b}$	*	*
$\frac{2\bar{b}c - \bar{c}c - \underline{c}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \frac{\bar{a}c + \underline{a}b - 2\bar{b}b}{\underline{a}c - \bar{c}b}$	$\frac{2\bar{b}c - \bar{c}c - \underline{c}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \frac{2\bar{b}a - \underline{a}a - \bar{a}b}{\bar{c}a - \underline{a}b} +$ $\frac{\underline{c}a + \bar{c}b - 2\bar{b}b}{\underline{c}a + \bar{c}b - 2\bar{b}b} \frac{\bar{c}a - \underline{a}b}{\underline{c}a + \bar{c}b - 2\bar{b}b}$	*	*

$$4d^2 \underline{\partial} \mathbf{z} \rho_1^\# + \rho_1 \mathbf{z} \rho_1^\# =$$

*	*	$\underbrace{\underline{\bar{a}c - \bar{c}b + \underline{a}\bar{c} - \bar{b}\bar{c}}}_{2d} + \underbrace{\bar{c}b - \underline{a}c}_{\bar{d}}$	$\underbrace{\bar{c}a - \bar{a}b + \bar{c}\bar{a} - \bar{a}\bar{b}}_{2d} + \underbrace{\underline{a}c - \bar{c}b}_{2\bar{b}a - \underline{a}a - \bar{a}b} + \underbrace{\underline{a}b - \bar{c}a}_{2\bar{a}c + \bar{c}a - 4\bar{b}b + \underline{a}b}$
*	*	$\underbrace{2\bar{b}c - \bar{c}c - \bar{c}b + 2\bar{b}\bar{c} - \bar{c}\bar{c} - \bar{c}\bar{b}}_{2d} + \underbrace{\underline{c}a + \bar{c}b - 2\bar{b}b}_{\underline{a}c - \bar{c}b} + \underbrace{\bar{c}c + \bar{c}b - 2\bar{b}c}_{\bar{a}c + 2\bar{c}a - 2\bar{b}b - \underline{a}b}$	$\underbrace{\bar{c}b - 2\bar{b}b + \bar{c}a + \bar{c}b - 2\bar{b}b + \bar{c}\bar{a}}_{2d} + \underbrace{2\bar{b}c - \bar{c}c - \bar{c}b}_{2\bar{b}a - \underline{a}a - \bar{a}b} + \underbrace{2\bar{b}b - \bar{c}b - \underline{c}a}_{\bar{a}c + 2\bar{c}a - 4\bar{b}b + \underline{a}b}$
$\underbrace{\underline{\bar{a}c + \underline{a}b - 2\bar{b}b + \bar{a}\bar{c} + \underline{a}b - 2\bar{b}b}}_{2d} + \underbrace{2\bar{b}a - \underline{a}a - \bar{a}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} + \underbrace{2\bar{b}b - \bar{a}c - \underline{a}b}_{\underline{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b}$	$\underbrace{2\bar{b}a - \underline{a}a - \bar{a}b + 2\bar{b}a - \underline{a}a - \bar{a}b}_{2d} + \underbrace{\bar{a}c + \underline{a}b - 2\bar{b}b}_{\bar{c}a - \underline{a}b} + \underbrace{\bar{a}b + \underline{a}a - 2\bar{b}a}_{2\bar{a}c + \bar{c}a - 2\bar{b}b - \bar{c}b}$	*	*
$\underbrace{\underline{\underline{a}c - \bar{c}b + \underline{a}c - \bar{c}b}}_{2d} + \underbrace{\bar{c}a - \underline{a}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} + \underbrace{\bar{c}b - \underline{a}c}_{\underline{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b}$	$\underbrace{\bar{c}a - \underline{a}b + \bar{c}\bar{a} - \bar{b}a}_{2d} + \underbrace{\underline{a}b - \bar{c}a}_{\bar{d}}$	*	*

$$\partial_{\underline{\mathbf{X}}}^{\#} - \partial_{\bar{\mathbf{X}}}^T \# - \underbrace{\rho_1 \underline{\mathbf{X}}^{\#} - \rho_1 \bar{\mathbf{X}}^T \#}_T = \partial_{\underline{\mathbf{X}}}^{\#} + \rho_1 \bar{\mathbf{X}}^T \# - \overbrace{\partial_{\underline{\mathbf{X}}}^{\#} + \rho_1 \bar{\mathbf{X}}^T \#}^T$$

$$= \frac{K + 2d \overbrace{2\bar{b} - \underline{a} - \bar{c}}}{4d^2} \begin{array}{c|c|c|c} 0 & 0 & b & -a \\ 0 & 0 & c & -b \\ -b & a & 0 & 0 \\ -c & b & 0 & 0 \end{array}$$

$$K = \underline{a} \underline{d} + \bar{c} \bar{d} + 4\bar{b} \bar{b}b - 2\bar{b} \bar{c}a - 2\bar{a} \bar{b}c + \bar{a} \bar{c}b - \underline{a} \bar{c}b$$

$$= \underline{a} \underline{a}c + \underline{a} \underline{c}a - 2\underline{a} \bar{b}b + \bar{c} \bar{a}c + \bar{c} \bar{c}a - 2\bar{c} \bar{b}b + 4\bar{b} \bar{b}b - 2\bar{b} \bar{c}a - 2\bar{a} \bar{b}c + \bar{a} \bar{c}b - \underline{a} \bar{c}b$$

$$4d^2 \partial_{\underline{\mathbf{X}}}^{\#} + \rho_1 \bar{\mathbf{X}}^T \# = \begin{array}{c|c|c|c} * & * & (1) & (2) \\ * & * & (3) & (4) \\ (5) & (6) & * & * \\ (7) & (8) & * & * \end{array}$$

$$\begin{aligned} 1/ \quad & \underbrace{2\underline{\bar{a}c - \bar{c}b + \underline{a}\bar{c} - \bar{b}\bar{c}}}_{d} + \underbrace{\bar{c}b - \underline{a}c}_{\bar{d}} + \underbrace{\underline{a}c - \bar{c}b}_{2\bar{d}} = 2\underbrace{\underline{\bar{a}c - \bar{c}b}}_{d} + 2\underbrace{\underline{\bar{a}\bar{c} - \bar{b}\bar{c}}}_{\bar{d}} + \underbrace{\bar{c}b - \underline{a}c}_{\bar{d}} + \underbrace{\underline{\bar{a}c + \bar{c}a - 2\bar{b}b}}_{\bar{d}} \\ & = 2\underbrace{\underline{\bar{a}c - \bar{c}b}}_{d} + \underbrace{-2\underline{\bar{a}\bar{c}b + \bar{a}\bar{c}c + \bar{c}\bar{c}a} + \underline{\bar{a}\bar{c}a - 2\bar{c}\bar{b}a - \underline{\bar{a}\bar{a}c} + 2\underline{\bar{a}b}b}}_{\bar{d}} c \end{aligned}$$

$$\begin{aligned}
2/ \quad & \underbrace{2\bar{c}a-\bar{a}b+\bar{c}\bar{a}-\bar{a}\bar{b}}_d + \underbrace{ab-\bar{c}a}_2 \bar{d} + \underbrace{ac-\bar{c}b}_2 \underbrace{2\bar{b}a-\bar{a}a-\bar{a}b} \\
& \quad + \underbrace{\bar{c}a-\bar{a}b}_2 \underbrace{\bar{c}a-\bar{a}b} \\
& = \underbrace{2\bar{c}a-\bar{a}b}_d + \underbrace{2\bar{c}\bar{a}-\bar{a}\bar{b}}_2 \underbrace{ac-\bar{b}b}_2 + \underbrace{ab-\bar{c}a}_2 \underbrace{2\bar{a}c+\bar{c}a-4\bar{b}b+\bar{a}b} \\
& \quad + \underbrace{ac-\bar{c}b}_2 \underbrace{2\bar{b}a-\bar{a}a-\bar{a}b} \\
& = \underbrace{2\bar{c}a-\bar{a}b}_d + \underbrace{-aac-\bar{c}\bar{c}a+2\bar{c}\bar{b}b+a\bar{c}b}_2 a + \underbrace{aab-\bar{a}\bar{c}b-2\bar{a}\bar{b}b+a\bar{a}c}_2 b \\
3/ \quad & \underbrace{2\bar{2}\bar{b}c-\bar{c}c-\bar{c}b+2\bar{b}\bar{c}-\bar{c}\bar{c}-\bar{c}\bar{b}}_d + \underbrace{\bar{c}c+\bar{c}b-2\bar{b}c}_2 \bar{d} \\
& \quad + \underbrace{2\bar{b}c-\bar{c}c-\bar{c}b}_2 \underbrace{\bar{a}c+\bar{a}b-2\bar{b}b}_2 + \underbrace{ca+\bar{c}b-2\bar{b}b}_2 \underbrace{ac-\bar{c}b} \\
& = \underbrace{2\bar{2}\bar{b}c-\bar{c}c-\bar{c}b}_d + \underbrace{2\bar{2}\bar{b}\bar{c}-\bar{c}\bar{c}-\bar{c}\bar{b}}_2 \underbrace{ac-\bar{b}b} \\
& \quad + \underbrace{\bar{c}c+\bar{c}b-2\bar{b}c}_2 \underbrace{\bar{a}c+2\bar{c}a-2\bar{b}b-\bar{a}b}_2 + \underbrace{ca+\bar{c}b-2\bar{b}b}_2 \underbrace{ac-\bar{c}b} \\
& = \underbrace{2\bar{2}\bar{b}c-\bar{c}c-\bar{c}b}_d + \underbrace{a\bar{c}a-2\bar{c}\bar{b}a+\bar{c}\bar{a}c-2\bar{a}\bar{b}c-2\bar{c}\bar{b}b+\bar{a}\bar{c}b+4\bar{b}\bar{b}b}_2 c \\
& \quad + \underbrace{-a\bar{c}b+\bar{c}\bar{c}b-2\bar{b}\bar{c}b+\bar{c}\bar{c}a}_2 b \\
4/ \quad & \underbrace{2\bar{c}b-2\bar{b}b+\bar{c}a+\bar{c}\bar{b}-2\bar{b}\bar{b}+\bar{c}\bar{a}}_d + \underbrace{2\bar{b}b-\bar{c}b-\bar{c}a}_2 \bar{d} \\
& \quad + \underbrace{2\bar{b}c-\bar{c}c-\bar{c}b}_2 \underbrace{2\bar{b}a-\bar{a}a-\bar{a}b}_2 + \underbrace{ca+\bar{c}b-2\bar{b}b}_2 \underbrace{\bar{c}a-\bar{a}b} \\
& = \underbrace{2\bar{c}b-2\bar{b}b+\bar{c}a}_d + \underbrace{2\bar{c}\bar{b}-2\bar{b}\bar{b}+\bar{c}\bar{a}}_2 \underbrace{ac-\bar{b}b} \\
& \quad + \underbrace{2\bar{b}b-\bar{c}b-\bar{c}a}_2 \underbrace{2\bar{a}c+\bar{c}a-4\bar{b}b+\bar{a}b}_2 + \underbrace{2\bar{b}c-\bar{c}c-\bar{c}b}_2 \underbrace{2\bar{b}a-\bar{a}a-\bar{a}b} \\
& = \underbrace{2\bar{c}b-2\bar{b}b+\bar{c}a}_d + \underbrace{2\bar{a}bb-\bar{a}\bar{c}b-4\bar{b}\bar{b}b-\bar{c}\bar{a}b+2\bar{c}\bar{b}a+2\bar{a}\bar{b}c-\bar{c}\bar{d}b}_2 \\
& \quad + \underbrace{-2\bar{a}bc+a\bar{c}c-\bar{c}\bar{c}a+2\bar{b}\bar{c}ba}_2 \\
5/ \quad & \underbrace{2\bar{a}c+\bar{a}b-2\bar{b}b+\bar{a}c+\bar{a}b-2\bar{b}b}_d + \underbrace{2\bar{b}b-\bar{a}c-\bar{a}b}_2 \bar{d}
\end{aligned}$$

$$\begin{aligned}
& + \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} + \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} \underbrace{2\bar{b}c - \bar{c}c - \bar{c}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} \\
& = 2 \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} d + 2 \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} \underbrace{\bar{a}c - \bar{b}b}_{\bar{a}c - \bar{b}b} \\
& + \underbrace{2\bar{b}b - \bar{a}c - \bar{a}b}_{2\bar{b}b - \bar{a}c - \bar{a}b} \underbrace{\bar{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b}_{\bar{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b} + \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} \underbrace{2\bar{b}c - \bar{c}c - \bar{c}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} \\
& = 2 \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} d + \underbrace{-\bar{a}\bar{c}b + 2\bar{b}\bar{c}b - \bar{a}\bar{c}b - 4\bar{b}\bar{b}b + 2\bar{a}\bar{b}c + 2\bar{b}\bar{c}a - \bar{a}d}_{-\bar{a}\bar{c}b + 2\bar{b}\bar{c}b - \bar{a}\bar{c}b - 4\bar{b}\bar{b}b + 2\bar{a}\bar{b}c + 2\bar{b}\bar{c}a - \bar{a}d} b \\
& \quad + \underbrace{\bar{a}\bar{c}a - 2\bar{b}\bar{c}a - \bar{a}\bar{a}c + 2\bar{a}\bar{b}b}_{\bar{a}\bar{c}a - 2\bar{b}\bar{c}a - \bar{a}\bar{a}c + 2\bar{a}\bar{b}b} c
\end{aligned}$$

$$\begin{aligned}
6/ \quad & \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} d + \underbrace{\bar{a}b + \bar{a}a - 2\bar{b}a}_{\bar{a}b + \bar{a}a - 2\bar{b}a} 2d \\
& + \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} + \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} \underbrace{\bar{c}a + \bar{c}b - 2\bar{b}b}_{\bar{c}a + \bar{c}b - 2\bar{b}b} \\
& = 2 \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} d + 2 \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} \underbrace{\bar{a}c - \bar{b}b}_{\bar{a}c - \bar{b}b} \\
& + \underbrace{\bar{a}b + \bar{a}a - 2\bar{b}a}_{\bar{a}b + \bar{a}a - 2\bar{b}a} \underbrace{2\bar{a}c + \bar{c}a - 2\bar{b}b - \bar{c}b}_{2\bar{a}c + \bar{c}a - 2\bar{b}b - \bar{c}b} + \underbrace{\bar{a}c + \bar{a}b - 2\bar{b}b}_{\bar{a}c + \bar{a}b - 2\bar{b}b} \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} \\
& = 2 \underbrace{2\bar{b}a - \bar{a}a - \bar{a}b}_{2\bar{b}a - \bar{a}a - \bar{a}b} d + \underbrace{\bar{a}\bar{c}c - 2\bar{a}\bar{b}c + \bar{a}\bar{c}b - 2\bar{a}\bar{b}b + 4\bar{b}\bar{b}b + \bar{a}\bar{c}a - 2\bar{b}\bar{c}a}_{\bar{a}\bar{c}c - 2\bar{a}\bar{b}c + \bar{a}\bar{c}b - 2\bar{a}\bar{b}b + 4\bar{b}\bar{b}b + \bar{a}\bar{c}a - 2\bar{b}\bar{c}a} a \\
& \quad + \underbrace{-\bar{a}\bar{c}b + \bar{a}ab - 2\bar{a}\bar{b}b + \bar{a}\bar{a}cb}_{-\bar{a}\bar{c}b + \bar{a}ab - 2\bar{a}\bar{b}b + \bar{a}\bar{a}cb} b
\end{aligned}$$

$$\begin{aligned}
7/ \quad & \underbrace{2\bar{a}c - \bar{c}b + \bar{a}c - \bar{c}b}_{2\bar{a}c - \bar{c}b + \bar{a}c - \bar{c}b} d + \underbrace{\bar{c}b - \bar{a}c}_{\bar{c}b - \bar{a}c} 2d + \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} \\
& \quad + \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} \underbrace{2\bar{b}c - \bar{c}c - \bar{c}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} \\
& = 2 \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} d + 2 \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} \underbrace{\bar{a}c - \bar{b}b}_{\bar{a}c - \bar{b}b} + \underbrace{\bar{c}b - \bar{a}c}_{\bar{c}b - \bar{a}c} \underbrace{\bar{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b}_{\bar{a}c + 2\bar{c}a - 4\bar{b}b + \bar{c}b} \\
& \quad + \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} \underbrace{2\bar{b}c - \bar{c}c - \bar{c}b}_{2\bar{b}c - \bar{c}c - \bar{c}b} \\
& = 2 \underbrace{\bar{a}c - \bar{c}b}_{\bar{a}c - \bar{c}b} d + \underbrace{-\bar{c}\bar{c}a + 2\bar{a}\bar{b}b + \bar{a}\bar{c}b - \bar{a}\bar{a}c}_{-\bar{c}\bar{c}a + 2\bar{a}\bar{b}b + \bar{a}\bar{c}b - \bar{a}\bar{a}c} c + \underbrace{\bar{c}\bar{c}b - \bar{a}\bar{c}b - 2\bar{c}\bar{b}b + \bar{c}\bar{c}a}_{\bar{c}\bar{c}b - \bar{a}\bar{c}b - 2\bar{c}\bar{b}b + \bar{c}\bar{c}a} b
\end{aligned}$$

$$\begin{aligned}
8/ \quad & 2 \underbrace{\bar{c}a - \bar{a}b + \bar{c}a - \bar{b}a}_{\bar{c}a - \bar{a}b + \bar{c}a - \bar{b}a} d + \underbrace{\bar{a}b - \bar{c}a}_{\bar{a}b - \bar{c}a} 2d + \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} d = 2 \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} d + 2 \underbrace{\bar{c}a - \bar{b}a}_{\bar{c}a - \bar{b}a} \underbrace{\bar{a}c - \bar{b}b}_{\bar{a}c - \bar{b}b} + \underbrace{\bar{a}b - \bar{c}a}_{\bar{a}b - \bar{c}a} \underbrace{\bar{a}c + \bar{c}a - 2\bar{b}b}_{\bar{a}c + \bar{c}a - 2\bar{b}b} \\
& = 2 \underbrace{\bar{c}a - \bar{a}b}_{\bar{c}a - \bar{a}b} d + \underbrace{-2\bar{a}\bar{c}b + \bar{a}\bar{a}c + \bar{a}\bar{c}a}_{-2\bar{a}\bar{c}b + \bar{a}\bar{a}c + \bar{a}\bar{c}a} b + \underbrace{-2\bar{a}\bar{b}c + \bar{a}\bar{c}c - \bar{c}\bar{c}a + 2\bar{b}\bar{c}b}_{-2\bar{a}\bar{b}c + \bar{a}\bar{c}c - \bar{c}\bar{c}a + 2\bar{b}\bar{c}b} a
\end{aligned}$$

$$4d^2 \text{ LHS} = \begin{array}{c|c|c|c} 0 & 0 & (1) - (5) & (2) - (6) \\ \hline 0 & 0 & (3) - (7) & (4) - (8) \\ \hline (5) - (1) & (6) - (2) & 0 & 0 \\ \hline (7) - (3) & (8) - (4) & 0 & 0 \end{array}$$

$$(1) - (5) = 2\underbrace{2\bar{b}b - \underline{a}b - \bar{c}bd + Kb}_{bK} = bK + 2d\underbrace{2\bar{b} - \underline{a} - \bar{c}}$$

$$(2) - (6) = 2\underbrace{\bar{c}a + \underline{a}a - 2\bar{b}ad - aK}_{-aK} = -aK + 2d\underbrace{2\bar{b} - \underline{a} - \bar{c}}$$

$$(3) - (7) = 2\underbrace{2\bar{b}c - \bar{c}c - \underline{a}cd + cK}_{cK} = cK + 2d\underbrace{2\bar{b} - \underline{a} - \bar{c}}$$

$$(4) - (8) = 2\underbrace{\underline{a}b + \bar{c}b - 2\bar{b}bd - bK}_{-bK} = -bK + 2d\underbrace{2\bar{b} - \underline{a} - \bar{c}}$$