0902.0431 — formula report

0 inline formulas, 57 display equations, 0 tables, 0 unrecovered image regions.

Display equations

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ0515 **[conf 0.002]**	085	■ 0.002 ● C|+76	`\begin{aligned} & \lambda_{0}-\lambda_{1}=1 \quad 0 \quad 0 \quad 0

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ0517 **[conf 0.002]**	085	■ 0.002 ● C|+43	\begin{aligned} & \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 0 \quad 1 \quad 0 \quad 1 \\ & \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 2 \quad 3 \quad 1 \quad 1 \quad 2 \\ & \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 1 \quad 2 \quad 1 \\ & \frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 1 \quad 2 \quad 2 \quad 1 \quad 2 \\ & \frac{1}{2}\left(\quad \lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 2 \quad 2 \quad 1 \\ & \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}-\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 0,0 \quad 0 \\ & \frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}-\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1 \\ & \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}-\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 1 \quad 1 \quad 0 \\ & \frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 1 \quad 2 \quad 1 \\ & \frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}-\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 1 \quad 1 \quad \frac{1}{1} \quad 1 \quad 0 \end{aligned}	$\frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 0 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 2 \quad 3 \quad 1 \quad 1 \quad 2$ $\frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 1 \quad 2 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}\left(\quad \lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 2 \quad 2 \quad 1$ $\frac{1}{2}\left(-\lambda_{0}-\lambda_{1}-\lambda_{2}+\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 0,0 \quad 0$ $\frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}-\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}\left(-\lambda_{0}+\lambda_{1}-\lambda_{2}-\lambda_{3}\right)+\frac{1}{2}\left(\mu_{3}-\mu_{1}\right)=0 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}\left(\quad \lambda_{0}-\lambda_{1}-\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 1 \quad 1$	$\frac{1}{2}(-\lambda_0-\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 0 \quad 0 \quad 1 \quad 0 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_0+\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 1 \quad 2 \quad 3 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}(-\lambda_0+\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 0 \quad 1 \quad 2 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}(\quad \lambda_0-\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 1 \quad 1 \quad 2 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}(\quad \lambda_0+\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 1 \quad 2 \quad 2 \quad 1 \quad 2 \quad 1$ $\frac{1}{2}(-\lambda_0-\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_0-\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 1 \quad 1 \quad 1 \quad 0 \quad 1 \quad 0$ $\frac{1}{2}(-\lambda_0+\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}(\mu_3-\mu_1) = 0 \quad 1 \quad 1 \quad 0 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_0-\lambda_1+\lambda_2-\lambda_3)-\frac{1}{2}(\mu_1-\mu_2) = 1 \quad 1 \quad 2 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_0-\lambda_1-\lambda_2+\lambda_3)-\frac{1}{2}(\mu_1-\mu_2) = 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_0+\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}(\mu_1-\mu_2) = 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 1$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ1026 **[conf 0.018]**	171	■ 0.018 ● C|+25	\left.\begin{array}{lllllllrlllll} \lambda_{0}-\lambda_{1}=2 & 3 & 4 & 3 & 2 & 1 & 0 & 2 & \lambda_{0}+\lambda_{1}=2 & 4 & 6 & 5 & 4 & 3 & 2 \end{array}\right], \begin{array}{lllllllllll} \lambda_{0}-\lambda_{2}=2 & 3 & 4 & 3 & 2 & 1 & 1 & 2 & \lambda_{0}+\lambda_{2}=2 & 4 & 6 \\ \lambda_{0}-\lambda_{3}=2 & 3 & 4 & 3 & 2 & 2 & 1 & 2 & \lambda_{0}+\lambda_{3}=2 & 4 & 6 \\ \lambda_{1}-\lambda_{2}=0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & & 2 & 1 \\ \lambda_{1}-\lambda_{3}=0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & \lambda_{1}+\lambda_{2}=0 & 1 & 2 \\ \lambda_{2}-\lambda_{3}=0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & & 2 & 1 \\ \lambda_{2}+\lambda_{3}=0 & 1 & 2 & 2 & 2 & 1 & 0 & 1 & & & \end{array}	$\lambda_{0}-\lambda_{1}=2 \quad 3 \quad 4 \quad 3 \quad 2 \quad 1 \quad 0 \quad 2 \qquad \lambda_{0}+\lambda_{1}=2 \quad 4 \quad 6 \quad 5 \quad 4 \quad 3 \quad 2 \quad 3$ $\lambda_{0}-\lambda_{2}=2 \quad 3 \quad 4 \quad 3 \quad 2 \quad 1 \quad 1 \quad 2 \qquad \lambda_{0}+\lambda_{2}=2 \quad 4 \quad 6 \quad 5 \quad 4 \quad 3 \quad 1 \quad 3$ $\lambda_{0}-\lambda_{3}=2 \quad 3 \quad 4 \quad 3 \quad 2 \quad 2 \quad 1 \quad 2 \qquad \lambda_{0}+\lambda_{3}=2 \quad 4 \quad 6 \quad 5 \quad 4 \quad 2 \quad 1 \quad 3$ $\lambda_{1}-\lambda_{2}=0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0 \qquad \lambda_{1}+\lambda_{2}=0 \quad 1 \quad 2 \quad 2 \quad 2 \quad 2 \quad 1 \quad 1$ $\lambda_{1}-\lambda_{3}=0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 0 \qquad \lambda_{1}+\lambda_{3}=0 \quad 1 \quad 2 \quad 2 \quad 2 \quad 1 \quad 1 \quad 1$ $\lambda_{2}-\lambda_{3}=0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 0 \quad 0 \qquad \lambda_{2}+\lambda_{3}=0 \quad 1 \quad 2 \quad 2 \quad 2 \quad 1 \quad 0 \quad 1$
0902.0431_ EQ0518 **[conf 0.021]**	086	■ 0.021 ● C|+6	\begin{aligned} & \frac{1}{2}\left(\lambda_{0}+\lambda_{1}-\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 2 \quad 2 \quad 2 \quad 1 \quad 1 \quad c \\ & \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \\ & \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 1 \\ & \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 2 \quad 3 \quad 2 \\ & \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 0 \end{aligned}	$\frac{1}{2}\left(\lambda_{0}+\lambda_{1}-\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 2 \quad 2 \quad 2 \quad 1 \quad 1 \quad c$ $\frac{1}{2}\left(-\lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1$ $\frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 1$ $\frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=1 \quad 2 \quad 3 \quad 2$ $\frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right)-\frac{1}{2}\left(\mu_{1}-\mu_{2}\right)=0 \quad 0$	$\frac{1}{2}(\quad \lambda_{0}+\lambda_{1}-\lambda_{2}-\lambda_{3})-\frac{1}{2}(\mu_{1}-\mu_{2}) \;=\; 1 \quad 2 \quad 2 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(-\lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3})-\frac{1}{2}(\mu_{1}-\mu_{2}) \;=\; 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3})-\frac{1}{2}(\mu_{1}-\mu_{2}) \;=\; 0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(\quad \lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3})-\frac{1}{2}(\mu_{1}-\mu_{2}) \;=\; 1 \quad 2 \quad 3 \quad 2 \quad 2 \quad 1$ $\frac{1}{2}(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3})-\frac{1}{2}(\mu_{1}-\mu_{2}) \;=\; 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ1032 **[conf 0.022]**	173	■ 0.022 ● C|+579	`\begin{aligned} & \frac{1}{2}\left(\lambda_{0}+ \lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2} \mu_{2}-\frac{2}{3} \nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 2 \end{aligned} \quad 1 \quad =\frac{1}{2}\left(\lambda_{0}+\lambda_{1}-\lambda_{2}+\lambda_{3}\right)+ \frac{1}{2} \mu_{2}-\frac{2}{3} \nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 1 \quad 1 .`	*(not rendered)*	$\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 2 \quad 1 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 1 \quad 1 \quad 1$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0 \quad 0$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2-\lambda_3)-\frac{1}{2}\mu_2+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 2 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2+\lambda_3)-\frac{1}{2}\mu_2+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 2 \quad 1 \quad 1 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2+\lambda_3)-\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 2 \quad 1 \quad 0 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2-\lambda_3)-\frac{1}{2}\mu_2+\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 3 \quad 2 \quad 1 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2+\lambda_3)-\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 3 \quad 5 \quad 4 \quad 3 \quad 2 \quad 1 \quad 3$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2-\lambda_3)-\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 1 \quad 1 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2-\lambda_3)-\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 1 \quad 0 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2+\lambda_3)-\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 0 \quad 0 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2-\lambda_3)-\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 0 \quad 0 \quad 2$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ1033 **[conf 0.026]**	174	■ 0.026 ● C|+36	`\begin{array}{lllllllll} \lambda_{0}+\frac{1}{2} \mu_{1}+ \frac{1}{3} \nu+r=2 & 4 & 6 & 4 & 3 & 2 & 1 & 3 & \\ \lambda_{0}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=2 & 4 & 5 & 4 & 3 & 2 & 1 & 3 \\ \lambda_{0}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=2 & 3 & 5 & 4 & 3 & 2 & 1 & 2 \\ \lambda_{0}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=2 & 3 & 4 & 4 & 3 & 2 & 1 & 2 \\ \lambda_{1}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 1 & 1 & 1 \\ \lambda_{1}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \lambda_{1}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 1 & 1 & 0 \\ \lambda_{1}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 \\ \lambda_{2}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 1 & 0 & 1 \\ \lambda_{2}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\ \lambda_{2}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 \\ \lambda_{2}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 \\ \lambda_{3}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 0 & 0 & 1 \\ \lambda_{3}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 0 & 0 & 1 \\ \lambda_{3}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 \\ \lambda_{3}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 \\ 1+\lambda_{2}-\lambda_{3}+\frac{1}{2} \mu_{2}+\frac{1}{3} \nu+r=1 & 2 & 4 & 3 & 2 & 2 & 1 & \\ 1+\lambda_{2}-\lambda_{3}+\frac{1}{2} \mu_{2}+\frac{1}{3} \nu-r=1 & 2 & 3 & 3 & 2 & 2 & 1 & 2 \\ \end{array}`	$\lambda_0+\frac{1}{2}\mu_1+\frac{1}{3}\nu+r=2 \quad 4 \quad 6 \quad 4 \quad 3 \quad 2 \quad 1 \quad 3$ $\lambda_0+\frac{1}{2}\mu_1+\frac{1}{3}\nu-r=2 \quad 4 \quad 5 \quad 4 \quad 3 \quad 2 \quad 1 \quad 3$ $\lambda_0-\frac{1}{2}\mu_1-\frac{1}{3}\nu+r=2 \quad 3 \quad 5 \quad 4 \quad 3 \quad 2 \quad 1 \quad 2$ $\lambda_0-\frac{1}{2}\mu_1-\frac{1}{3}\nu-r=2 \quad 3 \quad 4 \quad 4 \quad 3 \quad 2 \quad 1 \quad 2$ $\lambda_1+\frac{1}{2}\mu_1+\frac{1}{3}\nu+r=0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1$ $\lambda_1+\frac{1}{2}\mu_1+\frac{1}{3}\nu-r=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1$ $\lambda_1-\frac{1}{2}\mu_1-\frac{1}{3}\nu+r=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\lambda_1-\frac{1}{2}\mu_1-\frac{1}{3}\nu-r=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\lambda_2+\frac{1}{2}\mu_1+\frac{1}{3}\nu+r=0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1$ $\lambda_2+\frac{1}{2}\mu_1+\frac{1}{3}\nu-r=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1$ $\lambda_2-\frac{1}{2}\mu_1-\frac{1}{3}\nu+r=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_2-\frac{1}{2}\mu_1-\frac{1}{3}\nu-r=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_3+\frac{1}{2}\mu_1+\frac{1}{3}\nu+r=0 \quad 1 \quad 2 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$ $\lambda_3+\frac{1}{2}\mu_1+\frac{1}{3}\nu-r=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$ $\lambda_3-\frac{1}{2}\mu_1-\frac{1}{3}\nu+r=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0$ $\lambda_3-\frac{1}{2}\mu_1-\frac{1}{3}\nu-r=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0$ $_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2+\frac{1}{3}\nu+r=1 \quad 2 \quad 4 \quad 3 \quad 2 \quad 2 \quad 1 \quad 2$ $_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2+\frac{1}{3}\nu-r=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 2 \quad 1 \quad 2$

$$\begin{array}{lllllllll}
\lambda_{0}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=2 & 4 & 6 & 4 & 3 & 2 & 1 & 3 & \\
\lambda_{0}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=2 & 4 & 5 & 4 & 3 & 2 & 1 & 3 \\
\lambda_{0}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=2 & 3 & 5 & 4 & 3 & 2 & 1 & 2 \\
\lambda_{0}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=2 & 3 & 4 & 4 & 3 & 2 & 1 & 2 \\
\lambda_{1}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 1 & 1 & 1 \\
\lambda_{1}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
\lambda_{1}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 1 & 1 & 0 \\
\lambda_{1}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 \\
\lambda_{2}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 1 & 0 & 1 \\
\lambda_{2}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 1 & 0 & 1 \\
\lambda_{2}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 \\
\lambda_{2}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 \\
\lambda_{3}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu+r=0 & 1 & 2 & 1 & 1 & 0 & 0 & 1 \\
\lambda_{3}+\frac{1}{2} \mu_{1}+\frac{1}{3} \nu-r=0 & 1 & 1 & 1 & 1 & 0 & 0 & 1 \\
\lambda_{3}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu+r=0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 \\
\lambda_{3}-\frac{1}{2} \mu_{1}-\frac{1}{3} \nu-r=0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 \\
1+\lambda_{2}-\lambda_{3}+\frac{1}{2} \mu_{2}+\frac{1}{3} \nu+r=1 & 2 & 4 & 3 & 2 & 2 & 1 & \\
1+\lambda_{2}-\lambda_{3}+\frac{1}{2} \mu_{2}+\frac{1}{3} \nu-r=1 & 2 & 3 & 3 & 2 & 2 & 1 & 2 \\
\end{array}$$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ1031 **[conf 0.036]**	173	■ 0.036 ● C|+5	`\begin{aligned} & \lambda_{2}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0 \\ & \lambda_{2}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1 \quad 0 \\ & \lambda_{3}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0 \\ & \lambda_{3}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1 \quad 0 \end{aligned}`	$\lambda_2+\frac{1}{2}\mu_1-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_2-\frac{1}{2}\mu_1+\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0$ $\lambda_3+\frac{1}{2}\mu_1-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 1 \quad 1$ $\lambda_3-\frac{1}{2}\mu_1+\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0$ 0	$\lambda_2+\frac{1}{2}\mu_1-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_2-\frac{1}{2}\mu_1+\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 1$ $\lambda_3+\frac{1}{2}\mu_1-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 0$ $\lambda_3-\frac{1}{2}\mu_1+\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$
0902.0431_ EQ0761 **[conf 0.036]**	127	■ 0.036 ● C|+497	`\begin{aligned} & \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2} \mu_{2}-\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad` **`[U+0930] [U+094D]`** `0 \quad 0 \\ & \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right)+\frac{1}{2} \mu_{2}-\frac{2}{3} \nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \end{aligned} \quad 1 \quad 2 .`	$\frac{1}{2}(-\lambda_0-\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1$ **[U+0930][U+094D]** $0 \quad 0$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 2$ $\quad 1 \quad 2.$	$\frac{1}{2}(-\lambda_0-\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 3 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}(-\lambda_0+\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=0 \quad 1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 1 \quad 2 \quad 3 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 2 \quad 2 \quad 3 \quad 2 \quad 1 \quad 2$ $\frac{1}{2}(-\lambda_0-\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=0 \quad 0 \quad 0 \quad 1 \quad 0 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$ $\frac{1}{2}(-\lambda_0+\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}\mu_2-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0-\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 1 \quad 2 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0-\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_3+\frac{2}{3}\nu=1 \quad 1 \quad 1 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2+\lambda_3)-\frac{1}{2}\mu_3-\frac{2}{3}\nu=0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 0$ $\frac{1}{2}(\lambda_0+\lambda_1-\lambda_2-\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 2 \quad 2 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(-\lambda_0+\lambda_1-\lambda_2+\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=0 \quad 1 \quad 1 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(-\lambda_0+\lambda_1+\lambda_2-\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=0 \quad 1 \quad 2 \quad 2 \quad 1 \quad 0 \quad 1$ $\frac{1}{2}(\lambda_0+\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=1 \quad 2 \quad 3 \quad 4 \quad 3 \quad 1 \quad 2$ $\frac{1}{2}(-\lambda_0-\lambda_1+\lambda_2+\lambda_3)+\frac{1}{2}\mu_3-\frac{2}{3}\nu=0 \quad 0 \quad 1 \quad 2 \quad 1 \quad 0 \quad 1.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ0516 **[conf 0.041]**	085	■ 0.041 ● C|+12	`\begin{aligned} & \lambda_{0}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 \quad 1 \quad 1 \quad 1 \quad a \quad 0 \\ & \lambda_{1}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 1 \quad 1 \quad 1 \quad a \\ & \lambda_{2}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 1 \quad 1 \\ & \lambda_{3}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \\ & \lambda_{0}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 \quad 1 \quad 1 \quad 1 \quad 0 \\ & \lambda_{1}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 1 \quad 1 \quad 1 \quad 0 \\ & \lambda_{2}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 1 \quad 1 \\ & \lambda_{3}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \quad 0 \end{aligned}`	$\lambda_0+\frac{1}{2}(\mu_2-\mu_3)=1 \quad 1 \quad 1 \quad 1 \quad a \quad 0$ $\lambda_1+\frac{1}{2}(\mu_2-\mu_3)=0 \quad 1 \quad 1 \quad 1 \quad a$ $\lambda_2+\frac{1}{2}(\mu_2-\mu_3)=0 \quad 0 \quad 1 \quad 1$ $\lambda_3+\frac{1}{2}(\mu_2-\mu_3)=0 \quad 0 \quad 0$ $\lambda_0-\frac{1}{2}(\mu_2-\mu_3)=1 \quad 1 \quad 1 \quad 1 \quad 0$ $\lambda_1-\frac{1}{2}(\mu_2-\mu_3)=0 \quad 1 \quad 1 \quad 1 \quad 0$ $\lambda_2-\frac{1}{2}(\mu_2-\mu_3)=0 \quad 0 \quad 1 \quad 1$ $\lambda_3-\frac{1}{2}(\mu_2-\mu_3)=0 \quad 0 \quad 0 \quad 0$	$\lambda_0+\frac{1}{2}(\mu_2-\mu_3) = 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_1+\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_2+\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 0 \quad 1 \quad 1 \quad 0 \quad 0$ $\lambda_3+\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 0 \quad 0 \quad 1 \quad 0 \quad 0$ $\lambda_0-\frac{1}{2}(\mu_2-\mu_3) = 1 \quad 1 \quad 1 \quad 0 \quad 1 \quad 1$ $\lambda_1-\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 1 \quad 1 \quad 0 \quad 1 \quad 1$ $\lambda_2-\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 0 \quad 1 \quad 0 \quad 1 \quad 1$ $\lambda_3-\frac{1}{2}(\mu_2-\mu_3) = 0 \quad 0 \quad 0 \quad 0 \quad 1 \quad 1$
0902.0431_ EQ0425 **[conf 0.082]**	070	■ 0.082 ● W|-2	`\begin{aligned} & A X A^{*} \times A Y A^{*}=A(X \times Y) A^{*} \\ & \left(P M A^{*}\right)^{*}\left(P N A^{*}\right)=A M^{*} P^{*} P N A=A\left(M^{*} N\right) A, \\ & \left(P M A^{*}\right)\left(A Y A^{*}\right)=P(M Y) A^{*}, \\ & \overline{P M A^{*} \times P N A^{*}}=\frac{\bar{t} \widetilde{P}(M \times N)^{t} \widetilde{A}*}{}=P \overline{M \times N} A^{*}, \text { etc. } \end{aligned}`	$AXA^* \times AYA^* = A(X \times Y)A^*$ $(PMA^*)^*(PNA^*) = AM^*P^*PNA = A(M^*N)A,$ $(PMA^*)(AYA^*) = P(MY)A^*,$ $\overline{PMA^* \times PNA^*} = \frac{\bar{t}\widetilde{P}(M \times N)^t\widetilde{A}*}{} = P\overline{M \times N}A^*,$ etc.	$AXA^* \times AYA^* = A(X \times Y)A^*,$ $(PMA^*)^*(PNA^*) = AM^*P^*PNA = A(M^*N)A,$ $(PMA^*)(AYA^*) = P(MY)A^*,$ $\overline{PMA^* \times PNA^*} = \overline{{}^t\widetilde{P}(M \times N)^t\widetilde{A}^*} = P\overline{M \times N}A^*,$ etc.
0902.0431_ EQ1059 **[conf 0.093]**	180	■ 0.093 ● C|+7	`\begin{aligned} & =\left\{\alpha \in\left(E_{8}{ }^{C} \right)_{1,1-, 1-} \mid \tau \widetilde{\lambda} \alpha= \alpha \tau \widetilde{\lambda}\right\} \\ & =\left\{ \alpha \in E_{7}{ }^{C} \mid \tau \widetilde{\lambda} \alpha=\alpha \tau \widetilde{\lambda}\right\} \text { (Proposition 5.7.1) } \\ & =\left\{\alpha \in E_{7}{ }^{C} \mid \tau \lambda \alpha=\alpha \tau \lambda\right \} \text { (by the correspondence to Proposition 5.7.1) } \\ & =E_{7} \text { (Lemma 4.3.3.(4)). } \end{aligned}`	$=\left\{\alpha \in \left(E_8{}^C\right)_{1,1-,1-} \mid \tau\widetilde{\lambda}\alpha = \alpha\tau\widetilde{\lambda}\right\}$ $=\left\{\alpha \in E_7{}^C \mid \tau\widetilde{\lambda}\alpha = \alpha\tau\widetilde{\lambda}\right\}$ (Proposition 5.7.1) $=\left\{\alpha \in E_7{}^C \mid \tau\lambda\alpha = \alpha\tau\lambda\right\}$ (by the correspondence to Proposition 5.7.1) $= E_7$ (Lemma 4.3.3.(4)).	$=\{\alpha \in (E_8{}^C)_{1,1^-,1_-} \mid \tau\widetilde{\lambda}\alpha = \alpha\tau\widetilde{\lambda}\}$ $=\{\alpha \in E_7{}^C \mid \tau\widetilde{\lambda}\alpha = \alpha\tau\widetilde{\lambda}\}$ (Proposition 5.7.1) $=\{\alpha \in E_7{}^C \mid \tau\lambda\alpha = \alpha\tau\lambda\}$ (by the correspondence to Proposition 5.7.1) $= E_7$ (Lemma 4.3.3.(4)).

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_ EQ0757 **[conf 0.095]**	126	■ 0.095 ● C|+4	`\begin{aligned} & \lambda_{0}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \\ & \lambda_{1}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad a \\ & \lambda_{2}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \\ & \lambda_{3}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \\ & 0 \end{aligned}`	$\begin{aligned} & \lambda_{0}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \\ & \lambda_{1}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad a \\ & \lambda_{2}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \\ & \lambda_{3}-\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \\ & 0 \end{aligned}$	$\begin{aligned} & \lambda_{0}-\frac{1}{2}(\mu_{2}-\mu_{3})=1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \\ & \lambda_{1}-\frac{1}{2}(\mu_{2}-\mu_{3})=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \\ & \lambda_{2}-\frac{1}{2}(\mu_{2}-\mu_{3})=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 0 \quad 0 \\ & \lambda_{3}-\frac{1}{2}(\mu_{2}-\mu_{3})=0 \quad 0 \quad 0 \quad 1 \quad 1 \quad 0 \quad 0 \end{aligned}$
0902.0431_EQ0922	153	■ 0.102 ● C|+237	`f^{-1}\left(\sum_{i<j<k} x_{i j k} \boldsymbol{e}_{i} \wedge \boldsymbol{e}_{j} \wedge \boldsymbol{e}_{k} \right)=\left(\begin{array}{c} \left(\begin{array}{ccc} h\left(x_{156}\right) & h\left(x_{164}, \bar{x}_{256} \right) & h\left(x_{145}, \bar{x}_{356}\right) \\ h \left(x_{256}, \bar{x}_{164}\right) & h\left(x_{264} \right) & h\left(x_{245}, \bar{x}_{364}\right) \\ h \left(x_{356}, \bar{x}_{145}\right) & h\left(x_{364}, \bar{x}_{245}\right) & h\left(x_{345}\right) \end{array}\right) \\ \left(\begin{array}{ccc} h\left(x_{423}\right) & h\left(x_{431}, \bar{x}_{523}\right) & h\left(x_{412}, \bar{x}_{623}\right) \\ h\left(x_{523}, \bar{x}_{431}\right) & h\left(x_{531}\right) & h\left(x_{512}, \bar{x}_{631}\right) \\ h\left(x_{623}, \bar{x}_{412}\right) & h\left(x_{631}, \bar{x}_{512}\right) & h\left(x_{612}\right) \end{array}\right) \\ \left(\begin{array}{cc} h\left(x_{123}\right) & \\ h\left(x_{456}\right) & \end{array}\right. \end{array} \right),`	*(not rendered)*	$f^{-1}\Big(\sum_{i<j<k} x_{ijk}\boldsymbol{e}_i\wedge\boldsymbol{e}_j\wedge\boldsymbol{e}_k\Big)=\left(\begin{array}{c} \left(\begin{array}{ccc} h(x_{156}) & h(x_{164},\overline{x}_{256}) & h(x_{145},\overline{x}_{356}) \\ h(x_{256},\overline{x}_{164}) & h(x_{264}) & h(x_{245},\overline{x}_{364}) \\ h(x_{356},\overline{x}_{145}) & h(x_{364},\overline{x}_{245}) & h(x_{345}) \end{array}\right) \\ \left(\begin{array}{ccc} h(x_{423}) & h(x_{431},\overline{x}_{523}) & h(x_{412},\overline{x}_{623}) \\ h(x_{523},\overline{x}_{431}) & h(x_{531}) & h(x_{512},\overline{x}_{631}) \\ h(x_{623},\overline{x}_{412}) & h(x_{631},\overline{x}_{512}) & h(x_{612}) \end{array}\right) \\ \left(\begin{array}{cc} h(x_{123}) & \\ h(x_{456}) & \end{array}\right. \end{array}\right),$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ1117	189	■ 0.108 ● C|+18	\begin{aligned} & (\boldsymbol{X}, \boldsymbol{Y})= \left(X_{1}, Y_{1}\right)+\left(X_{2}, Y_{2}\right)+ \left(X_{3}, Y_{3}\right) \in C, \\ & \langle \boldsymbol{X}, \boldsymbol{Y}\rangle=\left\langle X_{1}, Y_{1}\right\rangle+\left\langle X_{2}, Y_{2} \right\rangle+\left\langle X_{3}, Y_{3}\right\rangle \in C, \\ & \boldsymbol{X} \times \boldsymbol{Y}=\left(\begin{array}{ll} X_{2} \times Y_{3}-Y_{2} \times X_{3} \\ X_{3} \times Y_{1}-Y_{3} \times X_{1} \\ X_{1} \times Y_{2}-Y_{1} \times X_{2} \end{array}\right) \in\left(\mathfrak{J}^{C}\right)^{3}, \\ & \boldsymbol{X} \cdot \boldsymbol{Y}=\left(\begin{array}{ll} \left(X_{1}, Y_{1} \right) & \left(X_{1}, Y_{2}\right) \\ \left(X_{2}, Y_{1}\right) & \left(X_{2}, Y_{2}\right) \\ \left(X_{3}, Y_{1}\right) & \left(X_{2}, Y_{3}\right) \\ X \vee \boldsymbol{Y} & \left(X_{3}, Y_{3}\right) \end{array}\right)-\frac{1}{3}(\boldsymbol{X}, \boldsymbol{Y}) E \in \mathfrak{s}\mathfrak{l}(3, C), \\ & \boldsymbol{X} Y_{1}+X_{2} \vee Y_{2}+X_{3} \vee Y_{3} \in \mathfrak{e}_{6}{ }^{C}, \end{aligned}	$$\begin{aligned} & (\boldsymbol{X}, \boldsymbol{Y})= \left(X_{1}, Y_{1}\right)+\left(X_{2}, Y_{2}\right)+ \left(X_{3}, Y_{3}\right) \in C, \\ & \langle \boldsymbol{X}, \boldsymbol{Y}\rangle=\left\langle X_{1}, Y_{1}\right\rangle+\left\langle X_{2}, Y_{2} \right\rangle+\left\langle X_{3}, Y_{3}\right\rangle \in C, \\ & \boldsymbol{X} \times \boldsymbol{Y}=\left(\begin{array}{ll} X_{2} \times Y_{3}-Y_{2} \times X_{3} \\ X_{3} \times Y_{1}-Y_{3} \times X_{1} \\ X_{1} \times Y_{2}-Y_{1} \times X_{2} \end{array}\right) \in\left(\mathfrak{J}^{C}\right)^{3}, \\ & \boldsymbol{X} \cdot \boldsymbol{Y}=\left(\begin{array}{ll} \left(X_{1}, Y_{1} \right) & \left(X_{1}, Y_{2}\right) \\ \left(X_{2}, Y_{1}\right) & \left(X_{2}, Y_{2}\right) \\ \left(X_{3}, Y_{1}\right) & \left(X_{2}, Y_{3}\right) \\ X \vee \boldsymbol{Y} & \left(X_{3}, Y_{3}\right) \end{array}\right)-\frac{1}{3}(\boldsymbol{X}, \boldsymbol{Y}) E \in \mathfrak{s}\mathfrak{l}(3, C), \\ & \boldsymbol{X} Y_{1}+X_{2} \vee Y_{2}+X_{3} \vee Y_{3} \in \mathfrak{e}_{6}{ }^{C}, \end{aligned}$$	$$\begin{aligned} & (\boldsymbol{X}, \boldsymbol{Y})= \left(X_{1}, Y_{1}\right)+\left(X_{2}, Y_{2}\right)+ \left(X_{3}, Y_{3}\right) \in C, \\ & \langle \boldsymbol{X}, \boldsymbol{Y}\rangle=\left\langle X_{1}, Y_{1}\right\rangle+\left\langle X_{2}, Y_{2} \right\rangle+\left\langle X_{3}, Y_{3}\right\rangle \in C, \\ & \boldsymbol{X} \times \boldsymbol{Y}=\left(\begin{array}{ll} X_{2} \times Y_{3}-Y_{2} \times X_{3} \\ X_{3} \times Y_{1}-Y_{3} \times X_{1} \\ X_{1} \times Y_{2}-Y_{1} \times X_{2} \end{array}\right) \in\left(\mathfrak{J}^{C}\right)^{3}, \\ & \boldsymbol{X} \cdot \boldsymbol{Y}=\left(\begin{array}{ll} \left(X_{1}, Y_{1} \right) & \left(X_{1}, Y_{2}\right) \\ \left(X_{2}, Y_{1}\right) & \left(X_{2}, Y_{2}\right) \\ \left(X_{3}, Y_{1}\right) & \left(X_{2}, Y_{3}\right) \\ X \vee \boldsymbol{Y} & \left(X_{3}, Y_{3}\right) \end{array}\right)-\frac{1}{3}(\boldsymbol{X}, \boldsymbol{Y}) E \in \mathfrak{s}\mathfrak{l}(3, C), \\ & \boldsymbol{X} Y_{1}+X_{2} \vee Y_{2}+X_{3} \vee Y_{3} \in \mathfrak{e}_{6}{ }^{C}, \end{aligned}$$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0756	125	■ 0.119 ● C|+10	\begin{array}{lllllllllllll} \lambda_{0}-\lambda_{1}=1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{1}=1 & 2 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{2}=1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{2}=1 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{3}=1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{3}=1 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{2}=0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{2}=0 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{3}=0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{3}=0 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{2}-\lambda_{3}=0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{2}+\lambda_{3}=0 & 0 & 1 & 2 & 2 & 1 \\ \lambda_{0}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 & 1 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ \lambda_{1}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 1 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ \lambda_{2}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 0 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ +\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 0 & 0 & 1 & 1 & 1 & 1 & & & & & & & \end{array}	$\begin{array}{lllllllllllll} \lambda_{0}-\lambda_{1}=1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{1}=1 & 2 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{2}=1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{2}=1 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{3}=1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{3}=1 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{2}=0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{2}=0 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{3}=0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{3}=0 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{2}-\lambda_{3}=0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{2}+\lambda_{3}=0 & 0 & 1 & 2 & 2 & 1 \\ \lambda_{0}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=1 & 1 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ \lambda_{1}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 1 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ \lambda_{2}+\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 0 & 1 & 1 & 1 & 1 & 1 & & & & & & & \\ +\frac{1}{2}\left(\mu_{2}-\mu_{3}\right)=0 & 0 & 0 & 1 & 1 & 1 & 1 & & & & & & & \end{array}$	$\begin{array}{lllllllllllll} \lambda_{0}-\lambda_{1}=1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{1}=1 & 2 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{2}=1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{2}=1 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{0}-\lambda_{3}=1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{0}+\lambda_{3}=1 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{2}=0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{2}=0 & 1 & 2 & 2 & 2 & 1 \\ \lambda_{1}-\lambda_{3}=0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{1}+\lambda_{3}=0 & 1 & 1 & 2 & 2 & 1 \\ \lambda_{2}-\lambda_{3}=0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & \lambda_{2}+\lambda_{3}=0 & 0 & 1 & 2 & 2 & 1 \\ \lambda_{0}+\frac{1}{2}(\mu_{2}-\mu_{3})=1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \lambda_{1}+\frac{1}{2}(\mu_{2}-\mu_{3})=0 & 1 & 1 & 1 & 1 & 1 & 1 \\ \lambda_{2}+\frac{1}{2}(\mu_{2}-\mu_{3})=0 & 0 & 1 & 1 & 1 & 1 & 1 \\ \lambda_{3}+\frac{1}{2}(\mu_{2}-\mu_{3})=0 & 0 & 0 & 1 & 1 & 1 & 1 \end{array}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ1187	200	■ 0.183 ● C|+279	\begin{aligned} &=(\boldsymbol{v}, \boldsymbol{w})(\boldsymbol{a}, *(\boldsymbol{b} \wedge \boldsymbol{x}))- \left(\boldsymbol{a}_{1}, \boldsymbol{w}\right) \left(\boldsymbol{w} \wedge \boldsymbol{a}_{2}, *(\boldsymbol{b} \wedge \boldsymbol{x})\right) \\ &+ \left(\boldsymbol{a}_{2}, \boldsymbol{w}\right) \left(\boldsymbol{w} \wedge \boldsymbol{a}_{1}, *(\boldsymbol{b} \wedge \boldsymbol{x})\right)- \frac{3}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w}) \\ &= \frac{2}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w})- \left(\boldsymbol{a}_{1}, \boldsymbol{w}\right) \left(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_{2}, \boldsymbol{e}_{1} \wedge \cdots \wedge \boldsymbol{e}_{5}\right) \\ &+\left(\boldsymbol{a}_{2}, \boldsymbol{w}\right)\left(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_{1}, \boldsymbol{e}_{1} \wedge \cdots \wedge \boldsymbol{e}_{5}\right) \\ &((\boldsymbol{b} \times ∗ ⊟ ⊟ — ⊟ 日 — \zh20 \\ &=(\boldsymbol{a} \wedge \boldsymbol{x})) \boldsymbol{v}, \boldsymbol{w}) \\ &=(\boldsymbol{v}, \boldsymbol{w})(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{v})+\left(\boldsymbol{a}_{1}, \boldsymbol{w} \right)\left(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_{2}, \boldsymbol{e}_{1} \wedge \cdots \wedge \boldsymbol{e}_{5}\right) \\ &-\left(\boldsymbol{a}_{2}, \boldsymbol{w}\right)\left(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_{1}, \boldsymbol{e}_{1} \wedge \cdots \wedge \boldsymbol{e}_{5}\right)-\frac{3}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w}) . \end{aligned}	*(not rendered)*	$= (\boldsymbol{v}, \boldsymbol{w})(\boldsymbol{a}, *(\boldsymbol{b} \wedge \boldsymbol{x})) - (\boldsymbol{a}_1, \boldsymbol{w})(\boldsymbol{w} \wedge \boldsymbol{a}_2, *(\boldsymbol{b} \wedge \boldsymbol{x}))$ $+(\boldsymbol{a}_2, \boldsymbol{w})(\boldsymbol{w} \wedge \boldsymbol{a}_1, *(\boldsymbol{b} \wedge \boldsymbol{x})) - \frac{3}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w})$ $= \frac{2}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w}) - (\boldsymbol{a}_1, \boldsymbol{w})(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_2, \boldsymbol{e}_1 \wedge \cdots \wedge \boldsymbol{e}_5)$ $+(\boldsymbol{a}_2, \boldsymbol{w})(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_1, \boldsymbol{e}_1 \wedge \cdots \wedge \boldsymbol{e}_5),$ $((\boldsymbol{b} \times *(\boldsymbol{a} \wedge \boldsymbol{x}))\boldsymbol{v}, \boldsymbol{w})$ $= (\boldsymbol{x} \wedge \boldsymbol{a}, \boldsymbol{w} \wedge *(\boldsymbol{b} \wedge \boldsymbol{v})) - \frac{3}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w})$ $= (\boldsymbol{v}, \boldsymbol{w})(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{v}) + (\boldsymbol{a}_1, \boldsymbol{w})(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_2, \boldsymbol{e}_1 \wedge \cdots \wedge \boldsymbol{e}_5)$ $-(\boldsymbol{a}_2, \boldsymbol{w})(\boldsymbol{b} \wedge \boldsymbol{x} \wedge \boldsymbol{w} \wedge \boldsymbol{a}_1, \boldsymbol{e}_1 \wedge \cdots \wedge \boldsymbol{e}_5) - \frac{3}{5}(*(\boldsymbol{a} \wedge \boldsymbol{b}), \boldsymbol{x})(\boldsymbol{v}, \boldsymbol{w}).$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0830	138	■ 0.186 ● W|+0	`\begin{aligned} \kappa(X, Y, \xi, \eta)= & \kappa \left(\left(\begin{array}{ccc} \xi_{1} & x_{3} & \bar{x}_{2} \\ \bar{x}_{3} & \xi_{2} & x_{1} \\ x_{2} & \bar{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & y_{3} & \bar{y}_{2} \\ \bar{y}_{3} & \eta_{2} & y_{1} \\ y_{2} & \bar{y}_{1} & \eta_{3} \end{array}\right), \xi, \eta\right) \\ = & \left(\left(\begin{array}{ccc} -\xi_{1} & 0 & 0 \\ 0 & \xi_{2} & x_{1} \\ 0 & \bar{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & 0 & 0 \\ 0 & -\eta_{2} & -y_{1} \\ 0 & -\bar{y}_{1} & -\eta_{3} \end{array}\right),-\xi, \eta\right), \\ \mu(X, Y, \xi, \eta)= & \left(\left(\begin{array}{ccc} \eta & 0 & 0 \\ 0 & \eta_{3} & -y_{1} \\ 0 & -\bar{y}_{1} & \eta_{2} \end{array}\right),\left(\begin{array}{ccc} \xi & 0 & 0 \\ 0 & \xi_{3} & -x_{1} \\ 0 & -\bar{x}_{1} & \xi_{2} \end{array}\right), \eta_{1}, \xi_{1}\right) . \end{aligned}`	$\begin{aligned} \kappa(X, Y, \xi, \eta)= & \kappa \left(\left(\begin{array}{ccc} \xi_{1} & x_{3} & \bar{x}_{2} \\ \bar{x}_{3} & \xi_{2} & x_{1} \\ x_{2} & \bar{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & y_{3} & \bar{y}_{2} \\ \bar{y}_{3} & \eta_{2} & y_{1} \\ y_{2} & \bar{y}_{1} & \eta_{3} \end{array}\right), \xi, \eta\right) \\ = & \left(\left(\begin{array}{ccc} -\xi_{1} & 0 & 0 \\ 0 & \xi_{2} & x_{1} \\ 0 & \bar{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & 0 & 0 \\ 0 & -\eta_{2} & -y_{1} \\ 0 & -\bar{y}_{1} & -\eta_{3} \end{array}\right),-\xi, \eta\right), \\ \mu(X, Y, \xi, \eta)= & \left(\left(\begin{array}{ccc} \eta & 0 & 0 \\ 0 & \eta_{3} & -y_{1} \\ 0 & -\bar{y}_{1} & \eta_{2} \end{array}\right),\left(\begin{array}{ccc} \xi & 0 & 0 \\ 0 & \xi_{3} & -x_{1} \\ 0 & -\bar{x}_{1} & \xi_{2} \end{array}\right), \eta_{1}, \xi_{1}\right) . \end{aligned}$	$\begin{aligned} \kappa(X, Y, \xi, \eta) = & \kappa \left(\left(\begin{array}{ccc} \xi_{1} & x_{3} & \overline{x}_{2} \\ \overline{x}_{3} & \xi_{2} & x_{1} \\ x_{2} & \overline{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & y_{3} & \overline{y}_{2} \\ \overline{y}_{3} & \eta_{2} & y_{1} \\ y_{2} & \overline{y}_{1} & \eta_{3} \end{array}\right), \xi, \eta\right) \\ = & \left(\left(\begin{array}{ccc} -\xi_{1} & 0 & 0 \\ 0 & \xi_{2} & x_{1} \\ 0 & \overline{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{ccc} \eta_{1} & 0 & 0 \\ 0 & -\eta_{2} & -y_{1} \\ 0 & -\overline{y}_{1} & -\eta_{3} \end{array}\right),-\xi, \eta\right), \\ \mu(X, Y, \xi, \eta) = & \left(\left(\begin{array}{ccc} \eta & 0 & 0 \\ 0 & \eta_{3} & -y_{1} \\ 0 & -\overline{y}_{1} & \eta_{2} \end{array}\right),\left(\begin{array}{ccc} \xi & 0 & 0 \\ 0 & \xi_{3} & -x_{1} \\ 0 & -\overline{x}_{1} & \xi_{2} \end{array}\right), \eta_{1}, \xi_{1}\right) . \end{aligned}$
0902.0431_EQ1041	177	■ 0.204 ● C|+4	`\begin{aligned} & \left(\alpha_{i}, \alpha_{i}\right)= \frac{1}{30}, \quad i=1,2,3,4,5,6,7,8 \\ & \left(\alpha_{i}, \alpha_{i+1}\right)=-\frac{1}{60}, \quad i=1,2, \cdots, 6, \quad\left(\alpha_{3}, \alpha_{8} \right)=-\frac{1}{60} \\ & \left(\alpha_{i}, \alpha_{j} \right)=0, \quad \text { otherwise } \\ & (-\mu,-\mu)= \frac{1}{30}, \quad\left(-\mu, \alpha_{7}\right)=- \frac{1}{60}, \quad\left(-\mu, \alpha_{i}\right)=0, \quad i=1,2,3,4,5,6,8, \end{aligned}`	$\begin{aligned} & \left(\alpha_{i}, \alpha_{i}\right)= \frac{1}{30}, \quad i=1,2,3,4,5,6,7,8 \\ & \left(\alpha_{i}, \alpha_{i+1}\right)=-\frac{1}{60}, \quad i=1,2, \cdots, 6, \quad\left(\alpha_{3}, \alpha_{8} \right)=-\frac{1}{60} \\ & \left(\alpha_{i}, \alpha_{j} \right)=0, \quad \text { otherwise } \\ & (-\mu,-\mu)= \frac{1}{30}, \quad\left(-\mu, \alpha_{7}\right)=- \frac{1}{60}, \quad\left(-\mu, \alpha_{i}\right)=0, \quad i=1,2,3,4,5,6,8, \end{aligned}$	$\begin{aligned} & \left(\alpha_{i}, \alpha_{i}\right)= \frac{1}{30}, \quad i=1,2,3,4,5,6,7,8, \\ & \left(\alpha_{i}, \alpha_{i+1}\right)=-\frac{1}{60}, \quad i=1,2, \cdots, 6, \quad\left(\alpha_{3}, \alpha_{8} \right)=-\frac{1}{60}, \\ & \left(\alpha_{i}, \alpha_{j} \right)=0, \quad \text { otherwise, } \\ & (-\mu,-\mu)= \frac{1}{30}, \quad\left(-\mu, \alpha_{7}\right)=- \frac{1}{60}, \quad\left(-\mu, \alpha_{i}\right)=0, \quad i=1,2,3,4,5,6,8, \end{aligned}$
0902.0431_EQ0340	054	■ 0.226 ● W|+0	`\begin{array}{lr} \lambda_{0}=\alpha_{1}+\alpha_{2}+ & \alpha_{3} \\ \lambda_{1}= & \alpha_{2}+\alpha_{3} \\ \lambda_{3}= & \alpha_{3} \\ \lambda_{3}= & \alpha_{1}+2 \alpha_{2}+3 \alpha_{3}+2 \alpha_{4}, \end{array}`	$\begin{array}{lr} \lambda_{0}=\alpha_{1}+\alpha_{2}+ & \alpha_{3} \\ \lambda_{1}= & \alpha_{2}+\alpha_{3} \\ \lambda_{3}= & \alpha_{3} \\ \lambda_{3}= & \alpha_{1}+2 \alpha_{2}+3 \alpha_{3}+2 \alpha_{4}, \end{array}$	$\begin{array}{lr} \lambda_{0} & =\alpha_{1}+ \quad \alpha_{2}+ \quad \alpha_{3} \\ \lambda_{1} & = \quad \alpha_{2}+ \quad \alpha_{3} \\ \lambda_{3} & = \quad \alpha_{3} \\ \lambda_{3} & =\alpha_{1}+2 \alpha_{2}+3 \alpha_{3}+2 \alpha_{4}, \end{array}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0937	155	■ 0.238 ● W|+0	\begin{aligned} & P=(0,0,1,0) \\ & \xrightarrow{f} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3} \\ & \stackrel{D}{\longrightarrow} D \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}+\boldsymbol{e}_{1} \wedge D \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}+ \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2} \wedge D \boldsymbol{e}_{3} \\ & \quad+\left(b_{11}+\frac{\nu}{3} \right) \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}-\bar{l}_{11} \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}- \bar{l}_{12} \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}-\bar{l}_{13} \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3} \\ & \quad+\left(b_{33}+\frac{\nu}{3}\right) \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3}-\bar{l}_{21} \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{1}-\bar{l}_{21} \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{2}-\bar{l}_{32} \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{2}-\bar{l}_{33} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{3} \\ & \quad\left(\begin{array}{ccc} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{array}\right) \\ & \xrightarrow{f^{-1}}\left(\begin{array}{ccc} -h \left(\bar{l}_{11}\right) & -h\left(\bar{l}_{21}, l_{12} \right) & -h\left(\bar{l}_{31}, l_{13}\right) \\ -h\left(\bar{l}_{12}, l_{21}\right) & -h\left(\bar{l}_{22}\right) & -h\left(\bar{l}_{32}, l_{23}\right) \\ -h\left(\bar{l}_{13}, l_{31}\right) & -h\left(\bar{l}_{23}, l_{32}\right) & -h\left(\bar{l}_{33}\right) \end{array}\right)=\left(\begin{array}{c} h(\nu) \\ 0 \\ -\tau h(L) \\ -i \nu e_{1} \\ 0 \end{array}\right) h(L) \\ & =\left(\begin{array}{ccc} \phi_{\boldsymbol{C}}(B, C)+\frac{i \nu e_{1}}{3} & -2 \tau h(L) & 0 \\ 2 h(L) & \tau \phi_{\boldsymbol{C}}(B, C) \tau-\frac{i \nu e_{1}}{3} & -\tau h(L) \\ 0 & h(L) & 0 \\ -\tau h(L) & 0 & 0 \\ 0 & & \\ 1 & & \\ 0 & & \end{array}\right) \\ & =\Phi\left(\phi_{\boldsymbol{C}}(B, C), h(L),-\tau h(L),-i \nu e_{1}\right) P. \end{aligned}	$P=(0,0,1,0)$ $\xrightarrow{f} \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3$ $\xrightarrow{D} D\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 + \boldsymbol{e}_1 \wedge D\boldsymbol{e}_2 \wedge \boldsymbol{e}_3 + \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge D\boldsymbol{e}_3$ $+\left(b_{11}+\frac{\nu}{3}\right)\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{11}\boldsymbol{e}_4 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{12}\boldsymbol{e}_5 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{13}\boldsymbol{e}_6 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3$ $+\left(b_{33}+\frac{\nu}{3}\right)\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{21}\boldsymbol{e}_4 \wedge \boldsymbol{e}_3 \wedge \boldsymbol{e}_1 - \bar{l}_{21}\boldsymbol{e}_4 \wedge \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 - \bar{l}_{32}\boldsymbol{e}_5 \wedge \boldsymbol{e}_3 \wedge \boldsymbol{e}_2 - \bar{l}_{33}\boldsymbol{e}_1 \wedge \boldsymbol{e}_6 \wedge \boldsymbol{e}_3$ $\begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix}$ $\xrightarrow{f^{-1}} \begin{pmatrix} -h\left(\bar{l}_{11}\right) & -h\left(\bar{l}_{21}, l_{12}\right) & -h\left(\bar{l}_{31}, l_{13}\right) \\ -h\left(\bar{l}_{12}, l_{21}\right) & -h\left(\bar{l}_{22}\right) & -h\left(\bar{l}_{32}, l_{23}\right) \\ -h\left(\bar{l}_{13}, l_{31}\right) & -h\left(\bar{l}_{23}, l_{32}\right) & -h\left(\bar{l}_{33}\right) \end{pmatrix} = \begin{pmatrix} h(\nu) \\ 0 \\ -\tau h(L) \\ -i\nu e_1 \\ 0 \end{pmatrix} h(L)$ $= \begin{pmatrix} \phi_{\boldsymbol{C}}(B,C)+\frac{i\nu e_1}{3} & -2\tau h(L) & 0 \\ 2h(L) & \tau\phi_{\boldsymbol{C}}(B,C)\tau-\frac{i\nu e_1}{3} & -\tau h(L) \\ 0 & h(L) & 0 \\ -\tau h(L) & 0 & 0 \\ 0 & & \\ 1 & & \\ 0 & & \end{pmatrix}$ $= \Phi\left(\phi_{\boldsymbol{C}}(B,C), h(L), -\tau h(L), -i\nu e_1\right) P.$	$P=(0,0,1,0)$ $\xrightarrow{f} \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3$ $\xrightarrow{D} D\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 + \boldsymbol{e}_1 \wedge D\boldsymbol{e}_2 \wedge \boldsymbol{e}_3 + \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge D\boldsymbol{e}_3$ $= \left(b_{11}+\frac{\nu}{3}\right)\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{11}\boldsymbol{e}_4 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{12}\boldsymbol{e}_5 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{13}\boldsymbol{e}_6 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3$ $+\left(b_{22}+\frac{\nu}{3}\right)\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{21}\boldsymbol{e}_4 \wedge \boldsymbol{e}_3 \wedge \boldsymbol{e}_1 - \bar{l}_{22}\boldsymbol{e}_1 \wedge \boldsymbol{e}_5 \wedge \boldsymbol{e}_3 - \bar{l}_{23}\boldsymbol{e}_1 \wedge \boldsymbol{e}_6 \wedge \boldsymbol{e}_3$ $+\left(b_{33}+\frac{\nu}{3}\right)\boldsymbol{e}_1 \wedge \boldsymbol{e}_2 \wedge \boldsymbol{e}_3 - \bar{l}_{31}\boldsymbol{e}_4 \wedge \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 - \bar{l}_{32}\boldsymbol{e}_5 \wedge \boldsymbol{e}_1 \wedge \boldsymbol{e}_2 - \bar{l}_{33}\boldsymbol{e}_6 \wedge \boldsymbol{e}_1 \wedge \boldsymbol{e}_2$ $\xrightarrow{f^{-1}} \begin{pmatrix} \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix} \\ \begin{pmatrix} -h(\bar{l}_{11}) & -h(\bar{l}_{21}, l_{12}) & -h(\bar{l}_{31}, l_{13}) \\ -h(\bar{l}_{12}, l_{21}) & -h(\bar{l}_{22}) & -h(\bar{l}_{32}, l_{23}) \\ -h(\bar{l}_{13}, l_{31}) & -h(\bar{l}_{23}, l_{32}) & -h(\bar{l}_{33}) \end{pmatrix} \\ h(\nu) \\ 0 \end{pmatrix} = \begin{pmatrix} 0 \\ -\tau h(L) \\ -i\nu e_1 \\ 0 \end{pmatrix}$ $= \begin{pmatrix} \phi_{\boldsymbol{C}}(B,C)+\frac{i\nu e_1}{3} & -2\tau h(L) & 0 & h(L) \\ 2h(L) & \tau\phi_{\boldsymbol{C}}(B,C)\tau-\frac{i\nu e_1}{3} & -\tau h(L) & 0 \\ 0 & h(L) & -i\nu e_1 & 0 \\ -\tau h(L) & 0 & 0 & i\nu e_1 \end{pmatrix} \begin{pmatrix} 0 \\ 0 \\ 1 \\ 0 \end{pmatrix}$ $= \Phi(\phi_{\boldsymbol{C}}(B,C), h(L), -\tau h(L), -i\nu e_1)P.$

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0834	139	■ 0.239 ● W|+1	\[\begin{aligned} \left(\left(\mathfrak{e}_{7}\right)^{ \kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)}=\left \{\Phi \in\left(\mathfrak{e}_{7}\right)^{\kappa, \mu} \mid \Phi\left(\left(0, E_{1}, 0,1\right)\right)=0 \right\} \\ =\left\{\begin{array}{l|l} \Phi(\phi, A,-\tau A, 0) \in \mathfrak{e}_{7} & \left\lvert\, \begin{array}{l} \phi \in \mathfrak{e}_{6}, \phi E_{1}=0 \\ A \in \mathfrak{J}^{C}, 2 E_{1} \times A=\tau A \end{array}\right. \end{array}\right\} . \end{aligned} \] \end{itemize}	$$\begin{aligned} &\left(\left(\mathfrak{e}_{7}\right)^{\kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)}=\left\{\Phi \in\left(\mathfrak{e}_{7}\right)^{\kappa, \mu} \mid \Phi\left(\left(0, E_{1}, 0,1\right)\right)=0\right\} \\ &=\left\{\begin{array}{l\|l} \Phi(\phi, A,-\tau A, 0) \in \mathfrak{e}_{7} & \left\lvert\, \begin{array}{l} \phi \in \mathfrak{e}_{6}, \phi E_{1}=0 \\ A \in \mathfrak{J}^{C}, 2 E_{1} \times A=\tau A \end{array}\right. \end{array}\right\} . \end{aligned}$$	$$\begin{aligned} &\left(\left(\mathfrak{e}_{7}\right)^{\kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)}=\left\{\Phi \in\left(\mathfrak{e}_{7}\right)^{\kappa, \mu} \mid \Phi\left(\left(0, E_{1}, 0,1\right)\right)=0\right\} \\ &=\left\{\begin{array}{l\|l} \Phi(\phi, A,-\tau A, 0) \in \mathfrak{e}_{7} & \left\lvert\, \begin{array}{l} \phi \in \mathfrak{e}_{6}, \phi E_{1}=0, \\ A \in \mathfrak{J}^{C}, 2 E_{1} \times A=\tau A \end{array}\right. \end{array}\right\} . \end{aligned}$$
0902.0431_EQ0946	157	■ 0.244 ● C|+3	\begin{aligned} \psi(A, & \epsilon) \psi(B, 1) P=\psi(A, \epsilon)\left(f^{-1}(B(f P))\right) \\ & \left.=f^{-1} \left(A f \overline{\left(f^{-1}(B(f P)\right.}\right) \right)=f^{-1}\left(A f\left(f^{-1}\left(\overline{ \left.\left(\mathrm{Ad} J_{3}\right) B\right)}(f \bar{P}) \right)\right)\right. \\ & =f^{-1}((A(\epsilon B))(f \bar{P}))=\psi(A(\epsilon B), \epsilon) P \end{aligned}	$$\begin{aligned} \psi(A,\epsilon)\psi(B,1)P &= \psi(A,\epsilon)\left(f^{-1}(B(fP))\right) \\ &= f^{-1}\left(Af\overline{\left(f^{-1}(B(fP))\right)}\right) = f^{-1}\left(Af\left(f^{-1}\left(\overline{(\mathrm{Ad}J_3)\,B}\right)(f\bar{P})\right)\right) \\ &= f^{-1}((A(\epsilon B))(f\bar{P})) = \psi(A(\epsilon B),\epsilon)P \end{aligned}$$	$$\begin{aligned} \psi(A,\epsilon)\psi(B,1)P &= \psi(A,\epsilon)(f^{-1}(B(fP))) \\ &= f^{-1}(Af\overline{(f^{-1}(B(fP))}) = f^{-1}(Af(f^{-1}(\overline{(\mathrm{Ad}J_3)B})(f\overline{P}))) \\ &= f^{-1}((A(\epsilon B))(f\overline{P})) = \psi(A(\epsilon B),\epsilon)P. \end{aligned}$$
0902.0431_EQ1037	176	■ 0.252 ● N|+0	\begin{aligned} B_{8}\left(\widetilde{h}, \widetilde{h}^{ \prime}\right) & =\frac{5}{3} B_{7}\left(\Phi(h), \Phi\left(h^{\prime}\right)\right)+120 r r^{\prime}(\text { Theorem 5.3.2 }) \\ & =\frac{5}{3} 6\left(6 \sum_{k=0}^{3} \lambda_{k} \lambda_{k}{ }^{\prime}+3 \sum_{j=1}^{3} \mu_{j} \mu_{j}{ }^{\prime}+4 \nu \nu^{\prime}\right)+120 r r^{\prime} \quad(\text { Theorem 4.6.2 }) \\ & =60 \sum_{k=0}^{3} \lambda_{k} \lambda_{k}{ }^{\prime}+30 \sum_{j=1}^{3} \mu_{j} \mu_{j}{ }^{\prime}+40 \nu \nu^{\prime}+120 r r^{\prime} . \end{aligned}	$$\begin{aligned} B_8\left(\widetilde{h},\widetilde{h}'\right) &= \frac{5}{3}B_7\left(\Phi(h),\Phi\left(h'\right)\right)+120rr'(\text{ Theorem 5.3.2 }) \\ &= \frac{5}{3}6\left(6\sum_{k=0}^{3}\lambda_k\lambda_k{}'+3\sum_{j=1}^{3}\mu_j\mu_j{}'+4\nu\nu'\right)+120rr' \quad(\text{ Theorem 4.6.2 }) \\ &= 60\sum_{k=0}^{3}\lambda_k\lambda_k{}'+30\sum_{j=1}^{3}\mu_j\mu_j{}'+40\nu\nu'+120rr'. \end{aligned}$$	$$\begin{aligned} B_8(\widetilde{h},\widetilde{h}') &= \frac{5}{3}B_7(\Phi(h),\Phi(h'))+120rr' \quad \text{(Theorem 5.3.2)} \\ &= \frac{5}{3}6\Big(6\sum_{k=0}^{3}\lambda_k\lambda_k{}'+3\sum_{j=1}^{3}\mu_j\mu_j{}'+4\nu\nu'\Big)+120rr' \quad \text{(Theorem 4.6.2)} \\ &= 60\sum_{k=0}^{3}\lambda_k\lambda_k{}'+30\sum_{j=1}^{3}\mu_j\mu_j{}'+40\nu\nu'+120rr'. \end{aligned}$$
0902.0431_EQ0365	059	■ 0.264 ● N|+0	\begin{array}{clcccccc} 1 & \longrightarrow & \operatorname{Spin}(8) & \longrightarrow & \left(F_{4} \right)_{E_{1}} & \longrightarrow & S^{8} & \longrightarrow \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & SO(8) & \longrightarrow & SO(9) & \longrightarrow & S^{8} & \longrightarrow \end{array} .	$$\begin{array}{ccccccccc} 1 & \longrightarrow & \mathrm{Spin}(8) & \longrightarrow & (F_4)_{E_1} & \longrightarrow & S^8 & \longrightarrow & \\ & & \downarrow p' & & \downarrow p & & \downarrow= & & \\ 1 & \longrightarrow & SO(8) & \longrightarrow & SO(9) & \longrightarrow & S^8 & \longrightarrow & \end{array}.$$	$$\begin{array}{ccccccccc} 1 & \longrightarrow & Spin(8) & \longrightarrow & (F_4)_{E_1} & \longrightarrow & S^8 & \longrightarrow & * \\ & & \downarrow p' & & \downarrow p & & \downarrow= & & \\ 1 & \longrightarrow & SO(8) & \longrightarrow & SO(9) & \longrightarrow & S^8 & \longrightarrow & * \end{array}$$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

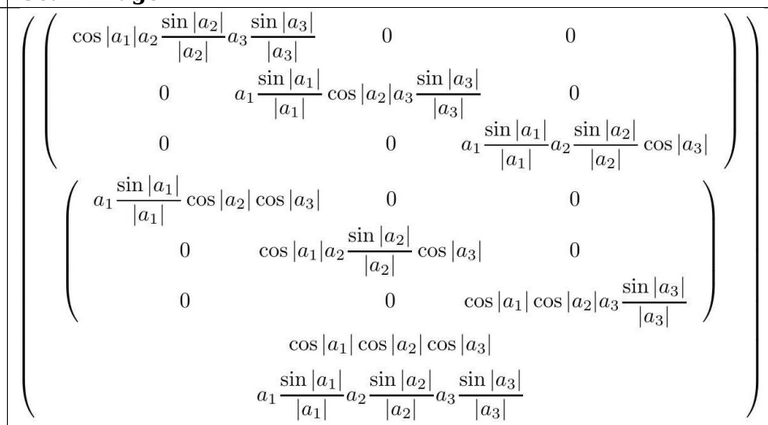
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0206	035	■ 0.294 ● W|+0	\begin{aligned} & \kappa\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)=\left(\kappa \alpha_{1}, \kappa \alpha_{3}, \kappa \alpha_{2}\right), \\ & \pi\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)=\left(\kappa \alpha_{3}, \kappa \alpha_{2}, \kappa \alpha_{1}\right), \\ & \nu\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)= \left(\alpha_{2}, \alpha_{3}, \alpha_{1}\right), \end{aligned}	$\kappa\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)=\left(\kappa \alpha_{1}, \kappa \alpha_{3}, \kappa \alpha_{2}\right),$ $\pi\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)=\left(\kappa \alpha_{3}, \kappa \alpha_{2}, \kappa \alpha_{1}\right),$ $\nu\left(\alpha_{1}, \alpha_{2}, \alpha_{3}\right)= \left(\alpha_{2}, \alpha_{3}, \alpha_{1}\right),$	$\kappa(\alpha_1,\alpha_2,\alpha_3)=(\kappa\alpha_1,\kappa\alpha_3,\kappa\alpha_2),$ $\pi(\alpha_1,\alpha_2,\alpha_3)=(\kappa\alpha_3,\kappa\alpha_2,\kappa\alpha_1),$ $\nu(\alpha_1,\alpha_2,\alpha_3)=(\alpha_2,\alpha_3,\alpha_1),$
0902.0431_EQ0655	108	■ 0.299 ● C|+4	\begin{aligned} & \left(P M \tau h(A, B)^{*}\right)^{*} \left(P N \tau h(A, B)^{*}\right)=\tau h(A, B) M^{*} P^{*} P N \tau h(A, B)^{*} \\ & =\tau\left(h(A, B) \tau\left(M^{*} N\right) h(A, B)^{*}\right), \\ & \frac{\left(P M \tau h(A, B)^{*}\right)\left(h(A, B) Y h(A, B)^{*}\right)}{\left(P M \tau h(A, B)^{*}\right) \times\left(P N \tau h(A, B)^{*}\right)}=\frac{\tau \left(P \tau(M Y) \tau h(A, B)^{*}\right),}{\bar{t} \widetilde{P}(M \times N) \tau^{t}\left(h(A, B)^{*} \right)^{\sim}} \\ & \quad=P(\overline{M \times N}) h(A, B)^{*}=\tau\left(P(\overline{M \times N}) \tau h(A, B)^{*}\right) . \end{aligned}	$\begin{aligned} & \left(P M \tau h(A, B)^{*}\right)^{*}\left(P N \tau h(A, B)^{*}\right)=\tau h(A, B) M^{*} P^{*} P N \tau h(A, B)^{*} \\ & =\tau\left(h(A, B) \tau\left(M^{*} N\right) h(A, B)^{*}\right), \\ & \frac{\left(P M \tau h(A, B)^{*}\right)\left(h(A, B) Y h(A, B)^{*}\right)}{\left(P M \tau h(A, B)^{*}\right) \times\left(P N \tau h(A, B)^{*}\right)}=\frac{\tau \left(P \tau(M Y) \tau h(A, B)^{*}\right),}{\bar{t} \widetilde{P}(M \times N) \tau^{t}\left(h(A, B)^{*} \right)^{\sim}} \\ & \quad=P(\overline{M \times N}) h(A, B)^{*}=\tau\left(P(\overline{M \times N}) \tau h(A, B)^{*}\right) . \end{aligned}$	$\begin{aligned} & \left(P M \tau h(A, B)^{*}\right)^{*}\left(P N \tau h(A, B)^{*}\right)=\tau h(A, B) M^{*} P^{*} P N \tau h(A, B)^{*} \\ & =\tau\left(h(A, B) \tau\left(M^{*} N\right) h(A, B)^{*}\right), \\ & \frac{\left(P M \tau h(A, B)^{*}\right)\left(h(A, B) Y h(A, B)^{*}\right)}{\left(P M \tau h(A, B)^{*}\right) \times\left(P N \tau h(A, B)^{*}\right)}=\frac{\tau \left(P \tau(M Y) \tau h(A, B)^{*}\right),}{\bar{t} \widetilde{P}(M \times N) \tau^{t}\left(h(A, B)^{*} \right)^{\sim}} \\ & \quad=P(\overline{M \times N}) h(A, B)^{*}=\tau\left(P(\overline{M \times N}) \tau h(A, B)^{*}\right) . \end{aligned}$
0902.0431_EQ0101	020	■ 0.306 ● W|+1	\begin{aligned} \lambda_{1}-\lambda_{2} & =\alpha_{1}, & \lambda_{1}-\lambda_{3} & =2 \alpha_{1}+3 \alpha_{2}, & \lambda_{2}-\lambda_{3} & =\alpha_{1}+3 \alpha_{2}, \\ \lambda_{1} & =\alpha_{1}+\alpha_{2}, & \lambda_{2} & =\alpha_{2}, & & =\lambda_{3}+2 \alpha_{2} \end{aligned}	$\begin{aligned} \lambda_{1}-\lambda_{2} & =\alpha_{1}, & \lambda_{1}-\lambda_{3} & =2 \alpha_{1}+3 \alpha_{2}, & \lambda_{2}-\lambda_{3} & =\alpha_{1}+3 \alpha_{2}, \\ \lambda_{1} & =\alpha_{1}+\alpha_{2}, & \lambda_{2} & =\alpha_{2}, & & =\lambda_{3}+2 \alpha_{2} \end{aligned}$	$\begin{aligned} \lambda_{1}-\lambda_{2} & =\alpha_{1}, & \lambda_{1}-\lambda_{3} & =2 \alpha_{1}+3 \alpha_{2}, & \lambda_{2}-\lambda_{3} & =\alpha_{1}+3 \alpha_{2}, \\ \lambda_{1} & =\alpha_{1}+\alpha_{2}, & \lambda_{2} & =\alpha_{2}, & & =\lambda_{3}+2 \alpha_{2} \end{aligned}$
0902.0431_EQ1154	195	■ 0.318 ● N|+0	\begin{aligned} & +(\boldsymbol{v}, \boldsymbol{w})(\boldsymbol{u}, \boldsymbol{a})-\sum_{i=1}^{3} \sum_{j=1}^{3}\left(\boldsymbol{u}_{i} \wedge \boldsymbol{v}_{j} \wedge \boldsymbol{v}_{j+1}, \boldsymbol{w}\right)\left(\boldsymbol{u}_{i+1} \wedge \boldsymbol{u}_{i+2} \wedge \boldsymbol{v}_{j+2}, \boldsymbol{a}\right) \\ & =-(\boldsymbol{u} \wedge \boldsymbol{v}, \boldsymbol{w} \wedge a)=-(*(*(\boldsymbol{u} \wedge \boldsymbol{v}) \wedge \boldsymbol{w}), \boldsymbol{a}) \end{aligned}	$\begin{aligned} & +(\boldsymbol{v}, \boldsymbol{w})(\boldsymbol{u}, \boldsymbol{a})-\sum_{i=1}^{3} \sum_{j=1}^{3}\left(\boldsymbol{u}_{i} \wedge \boldsymbol{v}_{j} \wedge \boldsymbol{v}_{j+1}, \boldsymbol{w}\right)\left(\boldsymbol{u}_{i+1} \wedge \boldsymbol{u}_{i+2} \wedge \boldsymbol{v}_{j+2}, \boldsymbol{a}\right) \\ & =-(\boldsymbol{u} \wedge \boldsymbol{v}, \boldsymbol{w} \wedge a)=-(*(*(\boldsymbol{u} \wedge \boldsymbol{v}) \wedge \boldsymbol{w}), \boldsymbol{a}) \end{aligned}$	$\begin{aligned} & +(\boldsymbol{v}, \boldsymbol{w})(\boldsymbol{u}, \boldsymbol{a})-\sum_{i=1}^{3} \sum_{j=1}^{3}\left(\boldsymbol{u}_{i} \wedge \boldsymbol{v}_{j} \wedge \boldsymbol{v}_{j+1}, \boldsymbol{w}\right)\left(\boldsymbol{u}_{i+1} \wedge \boldsymbol{u}_{i+2} \wedge \boldsymbol{v}_{j+2}, \boldsymbol{a}\right) \\ & =-(\boldsymbol{u} \wedge \boldsymbol{v}, \boldsymbol{w} \wedge a)=-(*(*(\boldsymbol{u} \wedge \boldsymbol{v}) \wedge \boldsymbol{w}), \boldsymbol{a}). \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ1189	200	0.322 N|+0	`\begin{aligned} ((\boldsymbol{a} & \times(\boldsymbol{x} \wedge \boldsymbol{y})) \boldsymbol{v}, \boldsymbol{w})=(\boldsymbol{x} \wedge \boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{v} \wedge \boldsymbol{a})-\frac{3}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(\boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{a})-(\boldsymbol{y}, \boldsymbol{v})(\boldsymbol{x} \wedge \boldsymbol{w}, \boldsymbol{a})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{y}), \boldsymbol{w})-(\boldsymbol{y}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{x}), \boldsymbol{w})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) . \end{aligned}`	$$\begin{aligned} ((\boldsymbol{a} & \times(\boldsymbol{x} \wedge \boldsymbol{y})) \boldsymbol{v}, \boldsymbol{w})=(\boldsymbol{x} \wedge \boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{v} \wedge \boldsymbol{a})-\frac{3}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(\boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{a})-(\boldsymbol{y}, \boldsymbol{v})(\boldsymbol{x} \wedge \boldsymbol{w}, \boldsymbol{a})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{y}), \boldsymbol{w})-(\boldsymbol{y}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{x}), \boldsymbol{w})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}). \end{aligned}$$	$$\begin{aligned} ((\boldsymbol{a} & \times(\boldsymbol{x} \wedge \boldsymbol{y})) \boldsymbol{v}, \boldsymbol{w})=(\boldsymbol{x} \wedge \boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{v} \wedge \boldsymbol{a})-\frac{3}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(\boldsymbol{y} \wedge \boldsymbol{w}, \boldsymbol{a})-(\boldsymbol{y}, \boldsymbol{v})(\boldsymbol{x} \wedge \boldsymbol{w}, \boldsymbol{a})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}) \\ & =(\boldsymbol{x}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{y}), \boldsymbol{w})-(\boldsymbol{y}, \boldsymbol{v})(*(*\boldsymbol{a} \wedge \boldsymbol{x}), \boldsymbol{w})+\frac{2}{5}(\boldsymbol{a}, \boldsymbol{x} \wedge \boldsymbol{y})(\boldsymbol{v}, \boldsymbol{w}). \end{aligned}$$
0902.0431_EQ1157	195	0.323 C|+4	`\begin{aligned} & 0=D \boldsymbol{u}=\sum_{I} u_{I} D \boldsymbol{e}_{I}=3 \sum_{I \nsupseteq 9} u_{I} \boldsymbol{e}_{I}-6 \sum_{I \ni 9} u_{I} \boldsymbol{e}_{I}, \\ & 0=-{ }^{t} D \boldsymbol{v}=-3 \sum_{J \not \ni 9} v_{J} \boldsymbol{e}_{J}+6 \sum_{J \ni 9} v_{J} \boldsymbol{e}_{J}, \end{aligned}`	$$\begin{aligned} & 0=D \boldsymbol{u}=\sum_{I} u_{I} D \boldsymbol{e}_{I}=3 \sum_{I \nsupseteq 9} u_{I} \boldsymbol{e}_{I}-6 \sum_{I \ni 9} u_{I} \boldsymbol{e}_{I}, \\ & 0=-{ }^{t} D \boldsymbol{v}=-3 \sum_{J \not \ni 9} v_{J} \boldsymbol{e}_{J}+6 \sum_{J \ni 9} v_{J} \boldsymbol{e}_{J}, \end{aligned}$$	$$\begin{aligned} & 0=D \boldsymbol{u}=\sum_{I} u_{I} D \boldsymbol{e}_{I}=3 \sum_{I \nsupseteq 9} u_{I} \boldsymbol{e}_{I}-6 \sum_{I \ni 9} u_{I} \boldsymbol{e}_{I}, \\ & 0=-{ }^{t} D \boldsymbol{v}=-3 \sum_{J \not \ni 9} v_{J} \boldsymbol{e}_{J}+6 \sum_{J \ni 9} v_{J} \boldsymbol{e}_{J}, \end{aligned}$$
0902.0431_EQ0460	075	0.325 C|+268	`\mathfrak{a} \supset\left[\mathfrak{a}, \mathfrak{e}_{6}{ }^{C}\right] \supset\left[\mathfrak{f}_{4}{ }^{C}, \widetilde{\mathfrak{J}}_{0}{ }^{C}\right]= \mathfrak{f}_{4} \widetilde{ }^{C} \mathfrak{J}_{0}{ }^{C} \text { (Lemma 3.2.2) }=\widetilde{\mathfrak{J}}_{0}{ }^{C} \text { (Proposition 2.4.6.(2)). }`	$\mathfrak{a} \supset\left[\mathfrak{a}, \mathfrak{e}_{6}{ }^{C}\right] \supset\left[\mathfrak{f}_{4}{ }^{C}, \widetilde{\mathfrak{J}}_{0}{ }^{C}\right]= \mathfrak{f}_{4} \widetilde{ }^{C} \mathfrak{J}_{0}{ }^{C}$ (Lemma 3.2.2) $=\widetilde{\mathfrak{J}}_{0}{ }^{C}$ (Proposition 2.4.6.(2)).	$\mathfrak{a} \supset\left[\mathfrak{a}, \mathfrak{e}_{6}{ }^{C}\right] \supset\left[\mathfrak{f}_{4}{ }^{C}, \widetilde{\mathfrak{J}}_{0}{ }^{C}\right]= \mathfrak{f}_{4} \widetilde{ }^{C} \mathfrak{J}_{0}{ }^{C}$ (Lemma 3.2.2) $=\widetilde{\mathfrak{J}}_{0}{ }^{C}$ (Proposition 2.4.6.(2)).

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

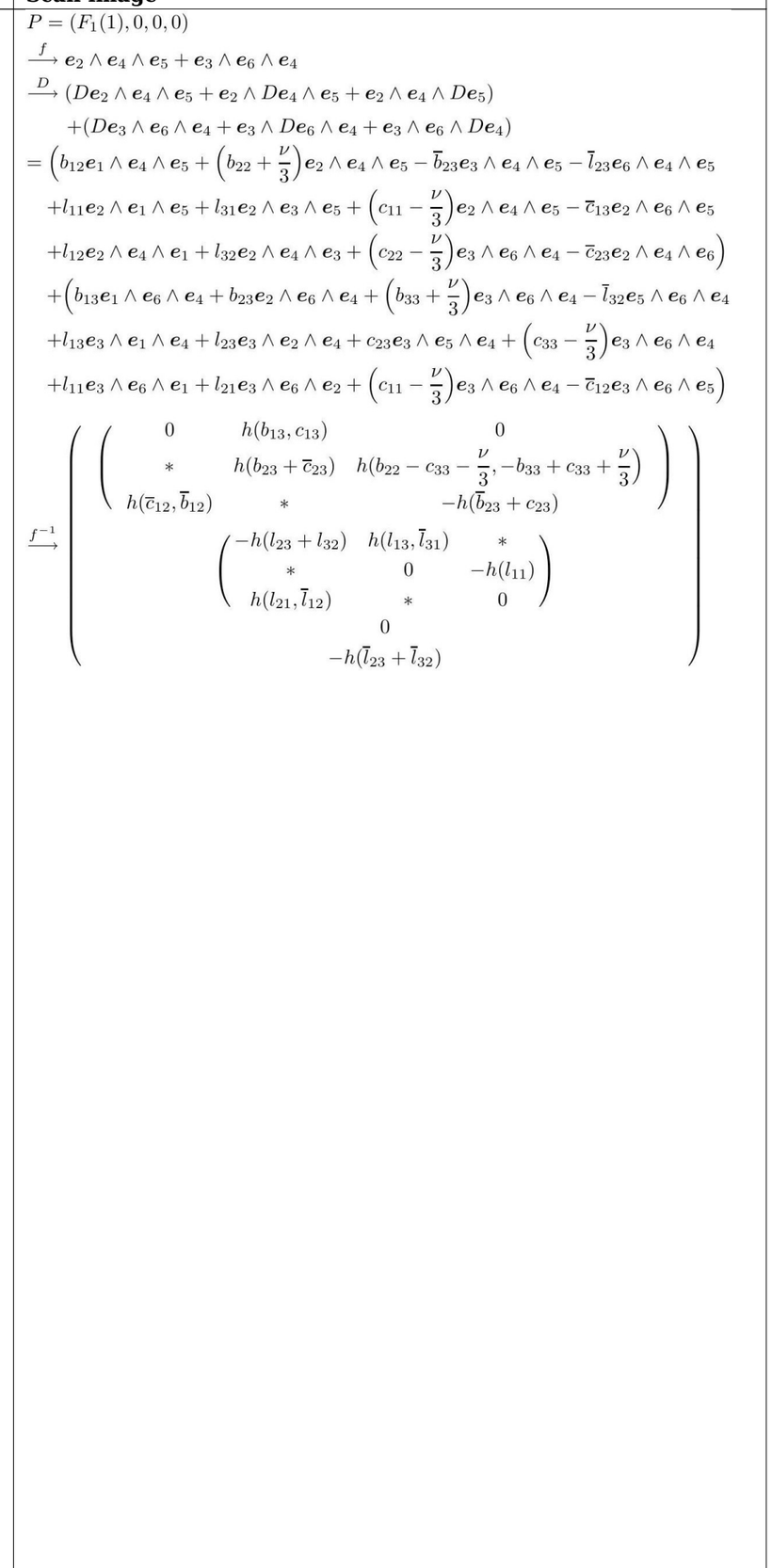
Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0802	134	■ 0.338 ● W|+2	`\left(\begin{array}{c} \left(\begin{array}{ccc} \cos \left|a_{1}\right| a_{2} \frac{\sin \left|a_{2}\right|}{ \left|a_{2}\right|} a_{3} \frac{\sin \left|a_{3}\right|}{ \left|a_{3}\right|} & 0 & 0 \\ 0 & a_{1} \frac{\sin \left|a_{1}\right|}{\left|a_{1}\right|} \cos \left|a_{2} \right| a_{3} \frac{\sin \left|a_{3}\right|}{\left|a_{3} \right|} & 0 \\ 0 & 0 & a_{1} \frac{\sin \left|a_{1} \right|}{\left|a_{1}\right|} a_{2} \frac{\sin \left|a_{2} \right|}{\left|a_{2}\right|} \cos \left|a_{3}\right| \end{array}\right) \\ \left(\begin{array}{ccc} a_{1} \frac{\sin \left|a_{1}\right|}{\left|a_{1}\right|} \cos \left|a_{2}\right| \cos \left|a_{3}\right| & 0 & 0 \\ 0 & \cos \left|a_{1}\right| a_{2} \frac{\sin \left|a_{2} \right|}{\left|a_{2}\right|} \cos \left|a_{3}\right| & 0 \\ 0 & 0 & \cos \left|a_{1}\right| \cos \left|a_{2}\right| a_{3} \frac{\sin \left|a_{3}\right|}{ \left|a_{3}\right|} \end{array}\right) \\ \left(\begin{array}{ccc} \cos \left|a_{1}\right| a_{2} \frac{\sin \left|a_{2}\right|}{ \left|a_{2}\right|} a_{3} \frac{\sin \left|a_{3}\right|}{ \left|a_{3}\right|} & 0 & 0 \\ 0 & a_{1} \frac{\sin \left|a_{1}\right|}{\left|a_{1}\right|} \cos \left|a_{2}\right| a_{3} \frac{\sin \left|a_{3}\right|}{ \left|a_{3}\right|} & 0 \\ 0 & 0 & a_{1} \frac{\sin \left|a_{1}\right|}{\left|a_{1}\right|} a_{2} \frac{\sin \left|a_{2}\right|}{\left|a_{2}\right|} \cos \left|a_{3}\right| \end{array}\right) \end{array}\right)`	*(not rendered)*	

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0875	145	■ 0.339 ● N|+1	`\begin{aligned} \varphi_{2}(A) & \left(\left(\begin{array}{ccc} \xi_{1} & x_{3} & \bar{x}_{2} \\ \bar{x}_{3} & \xi_{2} & x_{1} \\ x_{2} & \bar{x}_{1} & \xi_{3} \end{array}\right),\left(\begin{array}{lll} \eta_{1} & y_{3} & \bar{y}_{2} \\ \bar{y}_{3} & \eta_{2} & y_{1} \\ y_{2} & \bar{y}_{1} & \eta_{3} \end{array}\right), \xi, \eta\right) \\ = & \left(\left(\begin{array}{ccc} \xi_{1}^{\prime} & x_{3}^{ \prime} & \bar{x}_{2}^{\prime} \\ \bar{x}_{3}^{\prime} & \xi_{2}^{\prime} & x_{1}^{\prime} \\ x_{2}^{\prime} & \bar{x}_{1}^{\prime} & \xi_{3}^{\prime} \end{array}\right),\left(\begin{array}{ccc} \eta_{1}^{\prime} & y_{3}^{ \prime} & \bar{y}_{2}^{\prime} \\ \bar{y}_{3}^{\prime} & \eta_{2}^{\prime} & y_{1}^{\prime} \\ y_{2}^{\prime} & \bar{y}_{1}^{\prime} & \eta_{3}^{\prime} \end{array}\right), \xi^{\prime}, \eta^{\prime}\right) \\ \end{aligned}`	$\varphi_2(A)\left(\left(\begin{array}{ccc} \xi_1 & x_3 & \bar{x}_2 \\ \bar{x}_3 & \xi_2 & x_1 \\ x_2 & \bar{x}_1 & \xi_3 \end{array}\right),\left(\begin{array}{lll} \eta_1 & y_3 & \bar{y}_2 \\ \bar{y}_3 & \eta_2 & y_1 \\ y_2 & \bar{y}_1 & \eta_3 \end{array}\right), \xi, \eta\right) = \left(\left(\begin{array}{ccc} \xi_1^{\prime} & x_3^{ \prime} & \bar{x}_2^{\prime} \\ \bar{x}_3^{\prime} & \xi_2^{\prime} & x_1^{\prime} \\ x_2^{\prime} & \bar{x}_1^{\prime} & \xi_3^{\prime} \end{array}\right),\left(\begin{array}{ccc} \eta_1^{\prime} & y_3^{ \prime} & \bar{y}_2^{\prime} \\ \bar{y}_3^{\prime} & \eta_2^{\prime} & y_1^{\prime} \\ y_2^{\prime} & \bar{y}_1^{\prime} & \eta_3^{\prime} \end{array}\right), \xi^{\prime}, \eta^{\prime}\right)$	$\varphi_2(A)\left(\left(\begin{array}{ccc} \xi_1 & x_3 & \overline{x}_2 \\ \overline{x}_3 & \xi_2 & x_1 \\ x_2 & \overline{x}_1 & \xi_3 \end{array}\right),\left(\begin{array}{lll} \eta_1 & y_3 & \overline{y}_2 \\ \overline{y}_3 & \eta_2 & y_1 \\ y_2 & \overline{y}_1 & \eta_3 \end{array}\right), \xi, \eta\right) = \left(\left(\begin{array}{ccc} \xi_1{}^{\prime} & x_3{}^{ \prime} & \overline{x}_2{}^{\prime} \\ \overline{x}_3{}^{\prime} & \xi_2{}^{\prime} & x_1{}^{\prime} \\ x_2{}^{\prime} & \overline{x}_1{}^{\prime} & \xi_3{}^{\prime} \end{array}\right),\left(\begin{array}{ccc} \eta_1{}^{\prime} & y_3{}^{ \prime} & \overline{y}_2{}^{\prime} \\ \overline{y}_3{}^{\prime} & \eta_2{}^{\prime} & y_1{}^{\prime} \\ y_2{}^{\prime} & \overline{y}_1{}^{\prime} & \eta_3{}^{\prime} \end{array}\right), \xi^{\prime}, \eta^{\prime}\right),$
0902.0431_EQ0400	066	■ 0.351 ● N|+1	`\beta_{1} m=\operatorname{prm} \bar{r}, \quad \beta_{2} m=r m \bar{r} q, \quad \beta_{3} m=\bar{q} r m \bar{r} \bar{p}, \quad m \in \boldsymbol{H} .`	$\beta_1 m=\operatorname{prm} \bar{r}, \quad \beta_2 m=r m \bar{r} q, \quad \beta_3 m=\bar{q} r m \bar{r} \bar{p}, \quad m \in \boldsymbol{H} .$	$\beta_1 m=prm\overline{r}, \quad \beta_2 m=rm\overline{r}q, \quad \beta_3 m=\overline{q}rm\overline{r}\,\overline{p}, \quad m \in \boldsymbol{H} .$
0902.0431_EQ0860	143	■ 0.354 ● W|+1	`\begin{array}{cccccccc} 1 & \longrightarrow & \operatorname{Spin}(10) & \longrightarrow & \left(\left(E_{7}\right)^{\kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)} & \longrightarrow & S^{10} & \longrightarrow \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & SO(10) & \longrightarrow & SO(11) & \longrightarrow & S^{10} & \longrightarrow \end{array}`	$\begin{array}{cccccccc} 1 & \longrightarrow & \operatorname{Spin}(10) & \longrightarrow & \left(\left(E_{7}\right)^{\kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)} & \longrightarrow & S^{10} & \longrightarrow \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & SO(10) & \longrightarrow & SO(11) & \longrightarrow & S^{10} & \longrightarrow \end{array}$	$\begin{array}{ccccccccc} 1 & \longrightarrow & Spin(10) & \longrightarrow & \left(\left(E_{7}\right)^{\kappa, \mu}\right)_{\left(0, E_{1}, 0,1\right)} & \longrightarrow & S^{10} & \longrightarrow & * \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & & \\ 1 & \longrightarrow & SO(10) & \longrightarrow & SO(11) & \longrightarrow & S^{10} & \longrightarrow & * \end{array}$
0902.0431_EQ0876	145	■ 0.358 ● C|+76	`\begin{gathered} \binom{\xi_{1}^{\prime}}{\eta^{ \prime}}=A\binom{\xi_{1}}{\eta}, \quad\binom{\xi^{ \prime}}{\eta_{1}^{\prime}}=A\binom{\xi}{\eta_{1}}, \quad\binom{\eta_{2}^{\prime}}{\xi_{3}^{\prime}}=A \binom{\eta_{2}}{\xi_{3}}, \quad\binom{\eta_{3}^{ \prime}}{\xi_{2}^{\prime}}=A\binom{\eta_{3}}{\xi_{2}} \\ \binom{x_{1}^{\prime}}{y_{1}^{\prime}}=\tau A \binom{x_{1}}{y_{1}}, \quad\binom{x_{2}^{\prime}}{y_{2}^{ \prime}}=\binom{x_{2}}{y_{2}}, \quad\binom{x_{3}^{ \prime}}{y_{3}^{\prime}}=\binom{x_{3}}{y_{3}} . \end{gathered}`	$\begin{gathered} \binom{\xi_1^{\prime}}{\eta^{ \prime}}=A\binom{\xi_1}{\eta}, \quad\binom{\xi^{ \prime}}{\eta_1^{\prime}}=A\binom{\xi}{\eta_1}, \quad\binom{\eta_2^{\prime}}{\xi_3^{\prime}}=A \binom{\eta_2}{\xi_3}, \quad\binom{\eta_3^{ \prime}}{\xi_2^{\prime}}=A\binom{\eta_3}{\xi_2} \\ \binom{x_1^{\prime}}{y_1^{\prime}}=\tau A \binom{x_1}{y_1}, \quad\binom{x_2^{\prime}}{y_2^{ \prime}}=\binom{x_2}{y_2}, \quad\binom{x_3^{ \prime}}{y_3^{\prime}}=\binom{x_3}{y_3} . \end{gathered}$	$\begin{gathered} \binom{\xi_1{}^{\prime}}{\eta^{ \prime}}=A\binom{\xi_1}{\eta}, \quad\binom{\xi^{ \prime}}{\eta_1{}^{\prime}}=A\binom{\xi}{\eta_1}, \quad\binom{\eta_2{}^{\prime}}{\xi_3{}^{\prime}}=A \binom{\eta_2}{\xi_3}, \quad\binom{\eta_3{}^{ \prime}}{\xi_2{}^{\prime}}=A\binom{\eta_3}{\xi_2}, \\ \binom{x_1{}^{\prime}}{y_1{}^{\prime}}=\tau A \binom{x_1}{y_1}, \quad\binom{x_2{}^{\prime}}{y_2{}^{ \prime}}=\binom{x_2}{y_2}, \quad\binom{x_3{}^{ \prime}}{y_3{}^{\prime}}=\binom{x_3}{y_3} . \end{gathered}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0941	156	■ 0.372 ● W|+2	`\begin{aligned} & P=\left(F_{1}(1), 0,0,0\right) \\ & \xrightarrow{f} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}+ \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \\ & \xrightarrow{D}\left(D e_{2} \wedge e_{4} \wedge e_{5}+e_{2} \wedge D e_{4} \wedge e_{5}+e_{2} \wedge e_{4} \wedge D e_{5}\right) \\ & +\left(D e_{3} \wedge e_{6} \wedge e_{4}+e_{3} \wedge D e_{6} \wedge e_{4}+e_{3} \wedge e_{6} \wedge D e_{4}\right) \\ & =\left(b_{12} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}+ \left(b_{22}+\frac{\nu}{3}\right) \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}- \bar{b}_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}-\bar{l}_{23} \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5} \right. \\ & +l_{11} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{5}+l_{31} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{5}+\left(c_{11}-\frac{\nu}{3}\right) \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}-\bar{c}_{13} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{5} \\ & +l_{12} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{1}+l_{32} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{3}+\left(c_{22}-\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}-\bar{c}_{23} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{6}\right) \\ & +\left(b_{13} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}+b_{23} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}+\left(b_{33}+\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}-\bar{l}_{32} \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \right. \\ & +l_{13} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{4}+l_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4}+c_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{4}+\left(c_{33}-\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \\ & \left.+l_{11} e_{3} \wedge e_{6} \wedge e_{1}+l_{21} e_{3} \wedge e_{6} \wedge e_{2}+\left(c_{11}-\frac{\nu}{3}\right) e_{3} \wedge e_{6} \wedge e_{4}-\bar{c}_{12} e_{3} \wedge e_{6} \wedge e_{5}\right) \\ & \xrightarrow{f^{-1}}\left(\begin{array}{ccc} 0 & h\left(b_{13}, c_{13}\right) & 0 \\ * & h\left(b_{23}+\bar{c}_{23}\right) & h\left(b_{22}-c_{33}-\frac{\nu}{3},-b_{33}+c_{33}+\frac{\nu}{3}\right) \\ * & & -h\left(\bar{b}_{23}+c_{23}\right) \end{array}\right) \end{aligned}` `\begin{aligned} & P=\left(F_{1}(1), 0,0,0\right) \\ & \xrightarrow{f} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}+ \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \\ & \xrightarrow{D}\left(D e_{2} \wedge e_{4} \wedge e_{5}+e_{2} \wedge D e_{4} \wedge e_{5}+e_{2} \wedge e_{4} \wedge D e_{5}\right) \\ & +\left(D e_{3} \wedge e_{6} \wedge e_{4}+e_{3} \wedge D e_{6} \wedge e_{4}+e_{3} \wedge e_{6} \wedge D e_{4}\right) \\ & =\left(b_{12} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}+ \left(b_{22}+\frac{\nu}{3}\right) \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}- \bar{b}_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}-\bar{l}_{23} \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5} \right. \\ & +l_{11} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{5}+l_{31} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{5}+\left(c_{11}-\frac{\nu}{3}\right) \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{5}-\bar{c}_{13} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{5} \\ & +l_{12} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{1}+l_{32} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{3}+\left(c_{22}-\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}-\bar{c}_{23} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4} \wedge \boldsymbol{e}_{6}\right) \\ & +\left(b_{13} \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}+b_{23} \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}+\left(b_{33}+\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4}-\bar{l}_{32} \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \right. \\ & +l_{13} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{1} \wedge \boldsymbol{e}_{4}+l_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{2} \wedge \boldsymbol{e}_{4}+c_{23} \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{5} \wedge \boldsymbol{e}_{4}+\left(c_{33}-\frac{\nu}{3}\right) \boldsymbol{e}_{3} \wedge \boldsymbol{e}_{6} \wedge \boldsymbol{e}_{4} \\ & \left.+l_{11} e_{3} \wedge e_{6} \wedge e_{1}+l_{21} e_{3} \wedge e_{6} \wedge e_{2}+\left(c_{11}-\frac{\nu}{3}\right) e_{3} \wedge e_{6} \wedge e_{4}-\bar{c}_{12} e_{3} \wedge e_{6} \wedge e_{5}\right) \\ & \xrightarrow{f^{-1}}\left(\begin{array}{ccc} 0 & h\left(b_{13}, c_{13}\right) & 0 \\ * & h\left(b_{23}+\bar{c}_{23}\right) & h\left(b_{22}-c_{33}-\frac{\nu}{3},-b_{33}+c_{33}+\frac{\nu}{3}\right) \\ * & & -h\left(\bar{b}_{23}+c_{23}\right) \end{array}\right) \end{aligned}` 19	$P=(F_1(1),0,0,0)$ $\xrightarrow{f} \boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5+\boldsymbol{e}_3\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4$ $\xrightarrow{D}(De_2\wedge e_4\wedge e_5+e_2\wedge De_4\wedge e_5+e_2\wedge e_4\wedge De_5)$ $+(De_3\wedge e_6\wedge e_4+e_3\wedge De_6\wedge e_4+e_3\wedge e_6\wedge De_4)$ $=\left(b_{12}\boldsymbol{e}_1\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5+\left(b_{22}+\frac{\nu}{3}\right)\boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5-\bar{b}_{23}\boldsymbol{e}_3\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5-\bar{l}_{23}\boldsymbol{e}_6\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5\right.$ $+l_{11}\boldsymbol{e}_2\wedge\boldsymbol{e}_1\wedge\boldsymbol{e}_5+l_{31}\boldsymbol{e}_2\wedge\boldsymbol{e}_3\wedge\boldsymbol{e}_5+\left(c_{11}-\frac{\nu}{3}\right)\boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_5-\bar{c}_{13}\boldsymbol{e}_2\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_5$ $+l_{12}\boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_1+l_{32}\boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_3+\left(c_{22}-\frac{\nu}{3}\right)\boldsymbol{e}_3\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4-\bar{c}_{23}\boldsymbol{e}_2\wedge\boldsymbol{e}_4\wedge\boldsymbol{e}_6\right)$ $+\left(b_{13}\boldsymbol{e}_1\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4+b_{23}\boldsymbol{e}_2\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4+\left(b_{33}+\frac{\nu}{3}\right)\boldsymbol{e}_3\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4-\bar{l}_{32}\boldsymbol{e}_5\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4\right.$ $+l_{13}\boldsymbol{e}_3\wedge\boldsymbol{e}_1\wedge\boldsymbol{e}_4+l_{23}\boldsymbol{e}_3\wedge\boldsymbol{e}_2\wedge\boldsymbol{e}_4+c_{23}\boldsymbol{e}_3\wedge\boldsymbol{e}_5\wedge\boldsymbol{e}_4+\left(c_{33}-\frac{\nu}{3}\right)\boldsymbol{e}_3\wedge\boldsymbol{e}_6\wedge\boldsymbol{e}_4$ $+l_{11}e_3\wedge e_6\wedge e_1+l_{21}e_3\wedge e_6\wedge e_2+\left(c_{11}-\frac{\nu}{3}\right)e_3\wedge e_6\wedge e_4-\bar{c}_{12}e_3\wedge e_6\wedge e_5\right)$ $\xrightarrow{f^{-1}}\left(\begin{array}{ccc} 0 & h\left(b_{13},c_{13}\right) & 0 \\ * & h\left(b_{23}+\bar{c}_{23}\right) & h\left(b_{22}-c_{33}-\frac{\nu}{3},-b_{33}+c_{33}+\frac{\nu}{3}\right) \\ * & & -h\left(\bar{b}_{23}+c_{23}\right) \end{array}\right)$	

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0093	019	■ 0.382 ● W|+1	`\begin{aligned} H_{1} H_{1} e_{2} & =H_{1} e_{3}=-e_{2}, \quad \end{aligned}`	$H_1 H_1 e_2 = H_1 e_3 = -e_2,$	$H_1 H_1 e_2 = H_1 e_3 = -e_2, \quad H_1 H_1 e_3 = -H_1 e_2 = -e_3,$ $H_1 H_1 e_4 = -H_1 e_5 = -e_4, \quad H_1 H_1 e_5 = H_1 e_4 = -e,$ $H_1 H_1 e_i = 0$ otherwise.
0902.0431_EQ0371	061	■ 0.388 ● C|+8	`\begin{aligned} & \operatorname{tr}(X)=\operatorname{tr}(\alpha X)(\text { Lemma 2.2.1.(2) })=\sum_{i=1}^{3} \xi_{i}, \\ & (X, X)=(\alpha X, \alpha X)(\text { Lemma 2.2.4 })=\sum_{i=1}^{3} \xi_{i}{ }^{2}, \\ & \operatorname{tr}(X, X, X)=\operatorname{tr}(\alpha X, \alpha X, \alpha X)(\text { Lemma 2.2.4 })=\sum_{i=1}^{3} \xi_{i}{ }^{3} . \end{aligned}`	$\operatorname{tr}(X) = \operatorname{tr}(\alpha X)(\text{ Lemma 2.2.1.(2) }) = \sum_{i=1}^{3} \xi_i,$ $(X, X) = (\alpha X, \alpha X)(\text{ Lemma 2.2.4 }) = \sum_{i=1}^{3} {\xi_i}^2,$ $\operatorname{tr}(X, X, X) = \operatorname{tr}(\alpha X, \alpha X, \alpha X)(\text{ Lemma 2.2.4 }) = \sum_{i=1}^{3} {\xi_i}^3.$	$\operatorname{tr}(X) = \operatorname{tr}(\alpha X)$ (Lemma 2.2.1.(2)) $= \sum_{i=1}^{3} \xi_i,$ $(X, X) = (\alpha X, \alpha X)$ (Lemma 2.2.4) $= \sum_{i=1}^{3} {\xi_i}^2,$ $\operatorname{tr}(X, X, X) = \operatorname{tr}(\alpha X, \alpha X, \alpha X)$ (Lemma 2.2.4) $= \sum_{i=1}^{3} {\xi_i}^3.$
0902.0431_EQ0602	100	■ 0.396 ● K|+0	`\left.\left.\begin{array}{rl} \left(\mathfrak{J}^{C} \right)_{\tau \gamma} & =\left\{X \in \mathfrak{J}^{C} \mid \tau \gamma X=X\right\} \\ & =\left\{\left(\begin{array}{ccc} \mu_{1} & m_{3} & \bar{m}_{2} \\ \bar{m}_{3} & \mu_{2} & m_{1} \\ m_{2} & \bar{m}_{1} & \mu_{3} \end{array}\right)+i\left(\begin{array}{ccc} 0 & a_{3} e_{4} & -a_{2} e_{4} \\ -a_{3} e_{4} & 0 & a_{1} e_{4} \\ a_{2} e_{4} & -a_{1} e_{4} & 0 \end{array}\right)\right. \end{array} \right\rvert\, \begin{array}{l} \mu_{i} \in \boldsymbol{R} \\ m_{i}, a_{i} \in \boldsymbol{H} \end{array}\right\}`	$\begin{aligned} \left(\mathfrak{J}^{C}\right)_{\tau\gamma} &= \left\{X \in \mathfrak{J}^{C} \mid \tau\gamma X = X\right\} \\ &= \left\{ \left(\begin{array}{ccc} \mu_1 & m_3 & \bar{m}_2 \\ \bar{m}_3 & \mu_2 & m_1 \\ m_2 & \bar{m}_1 & \mu_3 \end{array}\right) + i \left(\begin{array}{ccc} 0 & a_3 e_4 & -a_2 e_4 \\ -a_3 e_4 & 0 & a_1 e_4 \\ a_2 e_4 & -a_1 e_4 & 0 \end{array}\right) \middle\vert \begin{array}{l} \mu_i \in \boldsymbol{R} \\ m_i, a_i \in \boldsymbol{H} \end{array} \right\} \end{aligned}$	$\begin{aligned} \left(\mathfrak{J}^{C}\right)_{\tau\gamma} &= \left\{X \in \mathfrak{J}^{C} \mid \tau\gamma X = X\right\} \\ &= \left\{ \left(\begin{array}{ccc} \mu_1 & m_3 & \overline{m}_2 \\ \overline{m}_3 & \mu_2 & m_1 \\ m_2 & \overline{m}_1 & \mu_3 \end{array}\right) + i \left(\begin{array}{ccc} 0 & a_3 e_4 & -a_2 e_4 \\ -a_3 e_4 & 0 & a_1 e_4 \\ a_2 e_4 & -a_1 e_4 & 0 \end{array}\right) \middle\vert \begin{array}{l} \mu_i \in \boldsymbol{R} \\ m_i, a_i \in \boldsymbol{H} \end{array} \right\} \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0900	149	■ 0.397 ● C|+9	`\begin{aligned} P= & (X, Y, \xi, \eta) \\ \stackrel{\chi}{\longrightarrow} & k\left(g X-\frac{\xi}{2} E \right) J+e_{1} k\left(g(\gamma Y)-\frac{\eta}{2} E \right) J \\ \longrightarrow & e_{1} k(T) k\left(g X-\frac{\xi}{2} E\right) J-k(T) k\left(g(\gamma Y)-\frac{\eta}{2} E\right) J \\ & +e_{1} k\left(g X-\frac{\xi}{2} E\right) J^{t} k(T)-k\left(g(\gamma Y)-\frac{\eta}{2} E\right) J^{t} k(T) \\ = & k(-T g(\gamma Y)-g(\gamma Y) T+\eta T) J+e_{1} k(T(g X)+(g X) T-\xi T) J \\ = & k(-2 g A \circ g(\gamma Y)+\eta g A) J+e_{1} k(2 g A \circ g X-\xi g A) J \\ = & k\left(-2 g(\gamma A \times Y)-\frac{1}{2}(A, Y) E+\eta g A\right) J \\ & +e_{1} k\left(2 g(\gamma A \times \gamma X)+\frac{1}{2}(\gamma A, X) E-\xi g A\right) J(\text { Lemma } 3.12 .1) \\ = & \chi\left(\begin{array}{cccc} -2 \gamma A \times Y+ \eta A \\ 2 A \times X-\xi \gamma A \\ (A, Y) \end{array} \right)=\chi\left(\left(\begin{array}{cccc} 0 & -2 \gamma A & 0 & A \\ 2 A & 0 & -\gamma A & 0 \\ 0 & A & 0 & 0 \\ -\gamma A & 0 & 0 & 0 \end{array}\right) \left(\begin{array}{c} X \\ Y \\ \xi \\ \eta \end{array} \right)\right) \\ = & \chi(\Phi(0, A,-\gamma A, 0) P) \end{aligned}`	$P =(X, Y, \xi, \eta)$ $\xrightarrow{\chi} k\left(gX-\frac{\xi}{2}E\right)J+e_1k\left(g(\gamma Y)-\frac{\eta}{2}E\right)J$ $\longrightarrow e_1k(T)k\left(gX-\frac{\xi}{2}E\right)J-k(T)k\left(g(\gamma Y)-\frac{\eta}{2}E\right)J$ $+e_1k\left(gX-\frac{\xi}{2}E\right)J^tk(T)-k\left(g(\gamma Y)-\frac{\eta}{2}E\right)J^tk(T)$ $=k(-Tg(\gamma Y)-g(\gamma Y)T+\eta T)J+e_1k(T(gX)+(gX)T-\xi T)J$ $=k(-2gA\circ g(\gamma Y)+\eta gA)J+e_1k(2gA\circ gX-\xi gA)J$ $=k\left(-2g(\gamma A\times Y)-\frac{1}{2}(A,Y)E+\eta gA\right)J$ $+e_1k\left(2g(\gamma A\times\gamma X)+\frac{1}{2}(\gamma A,X)E-\xi gA\right)J(\text{ Lemma } 3.12.1)$ $=\chi\begin{pmatrix}-2\gamma A\times Y+\eta A\\ 2A\times X-\xi\gamma A\\ (A,Y)\end{pmatrix}=\chi\left(\begin{pmatrix}0&-2\gamma A&0&A\\ 2A&0&-\gamma A&0\\ 0&A&0&0\\ -\gamma A&0&0&0\end{pmatrix}\begin{pmatrix}X\\ Y\\ \xi\\ \eta\end{pmatrix}\right)$ $=\chi(\Phi(0,A,-\gamma A,0)P)$	$P=(X,Y,\xi,\eta)$ $\xrightarrow{\chi} k\Big(gX-\frac{\xi}{2}E\Big)J+e_1k\Big(g(\gamma Y)-\frac{\eta}{2}E\Big)J$ $\longrightarrow e_1k(T)k\Big(gX-\frac{\xi}{2}E\Big)J-k(T)k\Big(g(\gamma Y)-\frac{\eta}{2}E\Big)J$ $+e_1k\Big(gX-\frac{\xi}{2}E\Big)J\,{}^tk(T)-k\Big(g(\gamma Y)-\frac{\eta}{2}E\Big)J^tk(T)$ $=k(-Tg(\gamma Y)-g(\gamma Y)T+\eta T)J+e_1k(T(gX)+(gX)T-\xi T)J$ $=k(-2gA\circ g(\gamma Y)+\eta gA)J+e_1k(2gA\circ gX-\xi gA)J$ $=k\Big(-2g(\gamma A\times Y)-\frac{1}{2}(A,Y)E+\eta gA\Big)J$ $+e_1k\Big(2g(\gamma A\times\gamma X)+\frac{1}{2}(\gamma A,X)E-\xi gA\Big)J$ (Lemma 3.12.1) $=\chi\begin{pmatrix}-2\gamma A\times Y+\eta A\\ 2A\times X-\xi\gamma A\\ (A,Y)\\ (-\gamma A,X)\end{pmatrix}=\chi\Big(\begin{pmatrix}0&-2\gamma A&0&A\\ 2A&0&-\gamma A&0\\ 0&A&0&0\\ -\gamma A&0&0&0\end{pmatrix}\begin{pmatrix}X\\ Y\\ \xi\\ \eta\end{pmatrix}\Big)$ $=\chi(\Phi(0,A,-\gamma A,0)P).$
0902.0431_EQ1080	183	■ 0.403 ● N|+0	`S_{1} \tau S_{2}-S_{2} \tau S_{1}-\frac{1}{8}\left(S_{1} \tau S_{2}-S_{2} \tau S_{1}\right) \in \mathfrak{s u}(8),`	$S_1\tau S_2-S_2\tau S_1-\frac{1}{8}\left(S_1\tau S_2-S_2\tau S_1\right)\in\mathfrak{su}(8),$	$S_1\tau S_2-S_2\tau S_1-\frac{1}{8}(S_1\tau S_2-S_2\tau S_1)\in\mathfrak{su}(8),$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ1030	173	0.410 W|-1	\begin{aligned} & \lambda_{0}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=2 \quad 4 \quad 5 \quad 4 \quad 3 \quad 2 \\ & \lambda_{0}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=2 \quad 3 \quad 5 \quad 4 \quad 3 \quad 2 \\ & \lambda_{1}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \\ & \lambda_{1}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \end{aligned}	$\begin{aligned} & \lambda_{0}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=2 \quad 4 \quad 5 \quad 4 \quad 3 \quad 2 \\ & \lambda_{0}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=2 \quad 3 \quad 5 \quad 4 \\ & \lambda_{1}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=0 \quad 1 \quad 1 \quad 1 \quad 2 \\ & \lambda_{1}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \end{aligned}$	$\begin{aligned} & \lambda_{0}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=2 \quad 4 \quad 5 \quad 4 \quad 3 \quad 2 \quad 1 \quad 2 \\ & \lambda_{0}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=2 \quad 3 \quad 5 \quad 4 \quad 3 \quad 2 \quad 1 \quad 3 \\ & \lambda_{1}+\frac{1}{2} \mu_{1}-\frac{2}{3} \nu=0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 0 \\ & \lambda_{1}-\frac{1}{2} \mu_{1}+\frac{2}{3} \nu=0 \quad 0 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \end{aligned}$
0902.0431_EQ0492	081	0.411 W|+0	\delta\left(\begin{array}{ccc} \xi_{1} & x_{12} & x_{13} \\ x_{21} & \xi_{2} & x_{23} \\ x_{31} & x_{32} & \xi_{3} \end{array}\right)=\left(\begin{array}{ccc} 0 & \delta_{3} x_{12} & \bar{\delta}_{2} \bar{x}_{13} \\ \bar{\delta}_{3} \bar{x}_{21} & 0 & \delta_{1} x_{23} \\ \delta_{2} x_{31} & \bar{\delta}_{1} \bar{x}_{32} & 0 \end{array}\right) .	$\delta\left(\begin{array}{ccc} \xi_{1} & x_{12} & x_{13} \\ x_{21} & \xi_{2} & x_{23} \\ x_{31} & x_{32} & \xi_{3} \end{array}\right)=\left(\begin{array}{ccc} 0 & \delta_{3} x_{12} & \bar{\delta}_{2} \bar{x}_{13} \\ \bar{\delta}_{3} \bar{x}_{21} & 0 & \delta_{1} x_{23} \\ \delta_{2} x_{31} & \bar{\delta}_{1} \bar{x}_{32} & 0 \end{array}\right) .$	$\delta\left(\begin{array}{ccc} \xi_{1} & x_{12} & x_{13} \\ x_{21} & \xi_{2} & x_{23} \\ x_{31} & x_{32} & \xi_{3} \end{array}\right)=\left(\begin{array}{ccc} 0 & \delta_{3} x_{12} & \overline{\delta_{2} \overline{x}_{13}} \\ \overline{\delta_{3} \overline{x}_{21}} & 0 & \delta_{1} x_{23} \\ \delta_{2} x_{31} & \overline{\delta_{1} \overline{x}_{32}} & 0 \end{array}\right) .$
0902.0431_EQ1097	186	0.420 W|+2	\begin{aligned} \zeta[(i c E), l(S) I]=\zeta(2 l(i c S) I) \\ \quad=\Theta\left(0,4 \lambda \gamma \chi^{-1}(i c S), 4 \chi^{-1}(i c S), 0,0,0\right) \\ \quad=\Theta \left(0,4 \chi^{-1}(c S),-4 \lambda \gamma \chi^{-1}(c S), 0,0,0\right) \quad(\text { Lemma 5.8.3 }) \\ \quad= \left[\Theta(0,0,0,0,2 c,-2 c), \Theta\left(0,2 \lambda \gamma \chi^{-1} S, 2 \chi^{-1} S, 0,0,0\right)\right] \\ \quad=[\zeta l(i c E), \zeta(l(S) I)] . \end{aligned}	$\begin{aligned} \zeta[(icE), l(S)I] &= \zeta(2l(icS)I) \\ &= \Theta\left(0, 4\lambda\gamma\chi^{-1}(icS), 4\chi^{-1}(icS), 0, 0, 0\right) \\ &= \Theta\left(0, 4\chi^{-1}(cS), -4\lambda\gamma\chi^{-1}(cS), 0, 0, 0\right) \quad (\text{ Lemma 5.8.3 }) \\ &= \left[\Theta(0,0,0,0,2c,-2c), \Theta\left(0, 2\lambda\gamma\chi^{-1}S, 2\chi^{-1}S, 0, 0, 0\right)\right] \\ &= [\zeta l(icE), \zeta(l(S)I)]. \end{aligned}$	$\begin{aligned} \zeta[(icE), l(S)I] &= \zeta(2l(icS)I) \\ &= \Theta(0, 4\lambda\gamma\chi^{-1}(icS), 4\chi^{-1}(icS), 0, 0, 0) \\ &= \Theta(0, 4\chi^{-1}(cS), -4\lambda\gamma\chi^{-1}(cS), 0, 0, 0) \quad \text{(Lemma 5.8.3)} \\ &= [\Theta(0,0,0,0,2c,-2c), \Theta(0, 2\lambda\gamma\chi^{-1}S, 2\chi^{-1}S, 0, 0, 0)] \\ &= [\zeta l(icE), \zeta(l(S)I)]. \end{aligned}$
0902.0431_EQ0694	115	0.434 N|+1	\mathfrak{e}_{7}^{C} \ni f_{r} \Phi f_{r}{ }^{-1}=\left(\begin{array}{cccc} g & r^{-1} l & r^{-2} C & r A \\ r k & h & r^{-1} B & r^{2} D \\ r^{2} c & r a & \nu & r^{3} \lambda \\ r^{-1} b & r^{-2} d & r^{-3} k & \mu \end{array}\right)	$\mathfrak{e}_{7}^{C} \ni f_{r} \Phi f_{r}{ }^{-1}=\left(\begin{array}{cccc} g & r^{-1} l & r^{-2} C & r A \\ r k & h & r^{-1} B & r^{2} D \\ r^{2} c & r a & \nu & r^{3} \lambda \\ r^{-1} b & r^{-2} d & r^{-3} k & \mu \end{array}\right)$	$\mathfrak{e}_{7}{}^{C} \ni f_{r} \Phi f_{r}{}^{-1}=\left(\begin{array}{cccc} g & r^{-1} l & r^{-2} C & r A \\ r k & h & r^{-1} B & r^{2} D \\ r^{2} c & r a & \nu & r^{3} \lambda \\ r^{-1} b & r^{-2} d & r^{-3} k & \mu \end{array}\right)$
0902.0431_EQ0642	106	0.434 W|+0	\begin{aligned} & h(a, b)+h\left(a^{\prime}, b^{\prime}\right)=h\left(a+a^{\prime}, b+b^{\prime}\right), \quad h(c a, c b)=c h(a, b), c \in \boldsymbol{C} \\ & h(A, B)+h\left(A^{\prime}, B^{\prime}\right)=h\left(A+A^{\prime}, B+B^{\prime}\right), \quad h(c A, c B)=h(A, B), c \in C . \end{aligned}	$\begin{aligned} & h(a, b)+h\left(a^{\prime}, b^{\prime}\right)=h\left(a+a^{\prime}, b+b^{\prime}\right), \quad h(ca, cb)=ch(a, b), c \in \boldsymbol{C} \\ & h(A, B)+h\left(A^{\prime}, B^{\prime}\right)=h\left(A+A^{\prime}, B+B^{\prime}\right), \quad h(cA, cB)=h(A, B), c \in C. \end{aligned}$	$\begin{aligned} & h(a, b)+h(a', b')=h(a+a', b+b'), \quad h(ca, cb)=ch(a, b), c \in \boldsymbol{C}, \\ & h(A, B)+h(A', B')=h(A+A', B+B'), \quad h(cA, cB)=h(A, B), c \in \boldsymbol{C}. \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0558	094	■ 0.435 ● C|+5	`\begin{array}{clcccccc} 1 & \longrightarrow & S p i n(9) & \longrightarrow & \left(E_{6}\right)_{E_{1}} & \longrightarrow & S^{9} & \longrightarrow & * \\ & & & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & S O(9) & \longrightarrow & S O(10) & \longrightarrow & S^{9} & \longrightarrow & * \end{array}`	$\begin{array}{clcccccc} 1 & \longrightarrow & Spin(9) & \longrightarrow & (E_{6})_{E_{1}} & \longrightarrow & S^{9} & \longrightarrow & * \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & SO(9) & \longrightarrow & SO(10) & \longrightarrow & S^{9} & \longrightarrow & * \end{array}$	$\begin{array}{clcccccc} 1 & \longrightarrow & Spin(9) & \longrightarrow & (E_{6})_{E_{1}} & \longrightarrow & S^{9} & \longrightarrow & * \\ & & \downarrow p^{\prime} & & \downarrow p & & \downarrow= & \\ 1 & \longrightarrow & SO(9) & \longrightarrow & SO(10) & \longrightarrow & S^{9} & \longrightarrow & * \end{array}$
0902.0431_EQ0332	053	■ 0.438 ● W|+0	`\begin{aligned} \pm\left(\lambda_{k}-\lambda_{l} \right), & \pm\left(\lambda_{k}+\lambda_{l}\right), \quad 0 \leq k<l \leq 3, \\ \pm \lambda_{0}, \quad \pm \lambda_{1}, \quad & \pm \lambda_{2}, \quad \pm \lambda_{3}, \\ \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right) . \end{aligned}`	$\begin{aligned} \pm\left(\lambda_{k}-\lambda_{l} \right), & \pm\left(\lambda_{k}+\lambda_{l}\right), \quad 0 \leq k<l \leq 3, \\ \pm \lambda_{0}, \quad \pm \lambda_{1}, \quad & \pm \lambda_{2}, \quad \pm \lambda_{3}, \\ \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right) . \end{aligned}$	$\begin{aligned} \pm\left(\lambda_{k}-\lambda_{l} \right), & \pm\left(\lambda_{k}+\lambda_{l}\right), \quad 0 \leq k<l \leq 3, \\ \pm \lambda_{0}, \quad \pm \lambda_{1}, \quad & \pm \lambda_{2}, \quad \pm \lambda_{3}, \\ \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}-\lambda_{1}+\lambda_{2}-\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}+\lambda_{1}+\lambda_{2}-\lambda_{3}\right), \\ \pm \frac{1}{2}\left(\lambda_{0}+\lambda_{1}+\lambda_{2}+\lambda_{3}\right), & \pm \frac{1}{2}\left(-\lambda_{0}-\lambda_{1}+\lambda_{2}+\lambda_{3}\right). \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ1211	203	■ 0.448 ● C|+195	`\begin{aligned} \exp (\operatorname{ad} & (Z, 0))(C, D, \boldsymbol{x} \otimes \boldsymbol{a}, \boldsymbol{b} \otimes \boldsymbol{y}, \boldsymbol{c} \otimes \boldsymbol{z}, \boldsymbol{w} \otimes \boldsymbol{d}) \\ = & (\exp (\operatorname{ad}(Z)) C, D,((\exp Z) \boldsymbol{x}) \otimes \boldsymbol{a}, \\ & ((\exp Z) \boldsymbol{b}) \otimes \boldsymbol{y},\left(\left(\exp \left(-{ }^{t} Z\right)\right) \boldsymbol{c} \otimes \boldsymbol{z},\left(\left(\exp \left(-{ }^{t} Z\right)\right) \boldsymbol{w}\right) \otimes \boldsymbol{d}\right) \\ = & (\operatorname{Ad}(\exp Z) C, D,((\exp Z) \boldsymbol{x}) \otimes \boldsymbol{a}, \\ & ((\exp Z) \boldsymbol{b}) \otimes \boldsymbol{y},\left({ }^{t}(\exp Z)^{-1} \boldsymbol{c}\right) \otimes \boldsymbol{z},\left({ }^{t}(\exp Z)^{-1} \boldsymbol{w}\right) \otimes \boldsymbol{d}\right) \\ = & \varphi_{1}(\exp Z)(C, D, \boldsymbol{x} \otimes \boldsymbol{a}, \boldsymbol{b} \otimes \boldsymbol{y}, \boldsymbol{c} \otimes \boldsymbol{z}, \boldsymbol{w} \otimes \boldsymbol{d}) . \end{aligned}`	$\begin{aligned} \exp (\operatorname{ad} & (Z, 0))(C, D, \boldsymbol{x} \otimes \boldsymbol{a}, \boldsymbol{b} \otimes \boldsymbol{y}, \boldsymbol{c} \otimes \boldsymbol{z}, \boldsymbol{w} \otimes \boldsymbol{d}) \\ = & (\exp (\operatorname{ad}(Z)) C, D,((\exp Z) \boldsymbol{x}) \otimes \boldsymbol{a}, \\ & ((\exp Z) \boldsymbol{b}) \otimes \boldsymbol{y},\left(\left(\exp \left(-{ }^{t} Z\right)\right) \boldsymbol{c} \otimes \boldsymbol{z},\left(\left(\exp \left(-{ }^{t} Z\right)\right) \boldsymbol{w}\right) \otimes \boldsymbol{d}\right) \\ = & (\operatorname{Ad}(\exp Z) C, D,((\exp Z) \boldsymbol{x}) \otimes \boldsymbol{a}, \\ & ((\exp Z) \boldsymbol{b}) \otimes \boldsymbol{y},\left({ }^{t}(\exp Z)^{-1} \boldsymbol{c}\right) \otimes \boldsymbol{z},\left({ }^{t}(\exp Z)^{-1} \boldsymbol{w}\right) \otimes \boldsymbol{d}\right) \\ = & \varphi_{1}(\exp Z)(C, D, \boldsymbol{x} \otimes \boldsymbol{a}, \boldsymbol{b} \otimes \boldsymbol{y}, \boldsymbol{c} \otimes \boldsymbol{z}, \boldsymbol{w} \otimes \boldsymbol{d}) . \end{aligned}$	$\begin{aligned} \exp(\operatorname{ad}(Z,0))(C,D,\boldsymbol{x}\otimes\boldsymbol{a},\boldsymbol{b}\otimes\boldsymbol{y},\boldsymbol{c}\otimes\boldsymbol{z},\boldsymbol{w}\otimes\boldsymbol{d}) \\ &= (\exp(\operatorname{ad}(Z))C,D,((\exp Z)\boldsymbol{x})\otimes\boldsymbol{a}, \\ &\quad ((\exp Z)\boldsymbol{b})\otimes\boldsymbol{y},((\exp(-{}^tZ))\boldsymbol{c}\otimes\boldsymbol{z},((\exp(-{}^tZ))\boldsymbol{w})\otimes\boldsymbol{d}) \\ &= (\operatorname{Ad}(\exp Z)C,D,((\exp Z)\boldsymbol{x})\otimes\boldsymbol{a}, \\ &\quad ((\exp Z)\boldsymbol{b})\otimes\boldsymbol{y},({}^t(\exp Z)^{-1}\boldsymbol{c})\otimes\boldsymbol{z},({}^t(\exp Z)^{-1}\boldsymbol{w})\otimes\boldsymbol{d}) \\ &= \varphi_1(\exp Z)(C,D,\boldsymbol{x}\otimes\boldsymbol{a},\boldsymbol{b}\otimes\boldsymbol{y},\boldsymbol{c}\otimes\boldsymbol{z},\boldsymbol{w}\otimes\boldsymbol{d}). \end{aligned}$
0902.0431_EQ1039	177	■ 0.452 ● W|+2	`\begin{aligned} H_{\alpha_{3}} & =\left(0,0,0, \frac{1}{60}, 0,0\right), \\ H_{\alpha_{4}} & =\left(\Phi\left(\frac{1}{90}\left(-E_{1}+2 E_{2}-E_{3} \right)^{\sim}, 0,0,-\frac{1}{120}\right), 0,0,- \frac{1}{120}, 0,0\right), \\ H_{\alpha_{5}} & =\left(\Phi\left(\frac{1}{60}\left(H_{3}-\left(E_{2}-E_{3} \right)^{\sim}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{6}} & =\left(\Phi\left(\frac{1}{60} \left(H_{2}-H_{3}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{7}} & =\left(\Phi\left(\frac{1}{60} \left(H_{1}-H_{2}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{8}} & =\left(\Phi\left(0,0,0, \frac{1}{40} \right), 0,0,-\frac{1}{120}, 0,0\right) . \end{aligned}`	$\begin{aligned} H_{\alpha_{3}} & =\left(0,0,0, \frac{1}{60}, 0,0\right), \\ H_{\alpha_{4}} & =\left(\Phi\left(\frac{1}{90}\left(-E_{1}+2 E_{2}-E_{3} \right)^{\sim}, 0,0,-\frac{1}{120}\right), 0,0,- \frac{1}{120}, 0,0\right), \\ H_{\alpha_{5}} & =\left(\Phi\left(\frac{1}{60}\left(H_{3}-\left(E_{2}-E_{3} \right)^{\sim}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{6}} & =\left(\Phi\left(\frac{1}{60} \left(H_{2}-H_{3}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{7}} & =\left(\Phi\left(\frac{1}{60} \left(H_{1}-H_{2}\right), 0,0,0\right), 0,0,0,0,0\right), \\ H_{\alpha_{8}} & =\left(\Phi\left(0,0,0, \frac{1}{40} \right), 0,0,-\frac{1}{120}, 0,0\right) . \end{aligned}$	$\begin{aligned} H_{\alpha_3} &= \Big(0,0,0,\frac{1}{60},0,0\Big), \\ H_{\alpha_4} &= \Big(\Phi\Big(\frac{1}{90}(-E_1+2E_2-E_3)^{\sim},0,0,-\frac{1}{120}\Big),0,0,-\frac{1}{120},0,0\Big), \\ H_{\alpha_5} &= \Big(\Phi\Big(\frac{1}{60}(H_3-(E_2-E_3)^{\sim}),0,0,0\Big),0,0,0,0,0\Big), \\ H_{\alpha_6} &= \Big(\Phi\Big(\frac{1}{60}(H_2-H_3),0,0,0\Big),0,0,0,0,0\Big), \\ H_{\alpha_7} &= \Big(\Phi\Big(\frac{1}{60}(H_1-H_2),0,0,0\Big),0,0,0,0,0\Big), \\ H_{\alpha_8} &= \Big(\Phi\Big(0,0,0,\frac{1}{40}\Big),0,0,-\frac{1}{120},0,0\Big). \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
0902.0431_EQ0939	156	■ 0.471 ● W|+0	\left.\begin{array}{l} \xrightarrow{\stackrel{f^{-1}}{ \longrightarrow}}\left(\begin{array}{ccc} h \left(b_{11}-c_{11}-\frac{\nu}{3}\right) & -h \left(c_{12}, b_{12}\right) & -h\left(c_{13}, b_{13} \right) \\ -h\left(\bar{b}_{12}, \bar{c}_{12}\right) & 0 & 0 \\ -h\left(\bar{b}_{13}, \bar{c}_{13}\right) & 0 & 0 \end{array}\right) \\ =\left(\begin{array}{ccc} 0 & 0 & 0 \\ 0 & h\left(l_{33}\right) & -h\left(l_{23}, \bar{l}_{32}\right) \\ 0 & -h\left(l_{32}, \bar{l}_{23}\right) & h\left(l_{22}\right) \end{array}\right) \\ 0 \\ -h\left(\bar{l}_{11}\right) \end{array}\right) .	*(not rendered)*	$\xrightarrow{f^{-1}} \left(\begin{array}{c} \begin{pmatrix} h\left(b_{11}-c_{11}-\frac{\nu}{3}\right) & -h(c_{12},b_{12}) & -h(c_{13},b_{13}) \\ -h(\bar{b}_{12},\bar{c}_{12}) & 0 & 0 \\ -h(\bar{b}_{13},\bar{c}_{13}) & 0 & 0 \end{pmatrix} \\ \begin{pmatrix} 0 & 0 & 0 \\ 0 & h(l_{33}) & -h(l_{23},\bar{l}_{32}) \\ 0 & -h(l_{32},\bar{l}_{23}) & h(l_{22}) \end{pmatrix} \\ 0 \\ -h(\bar{l}_{11}) \end{array} \right) = \begin{pmatrix} \phi_{\boldsymbol{C}}(B,C)E_1 + \frac{i\nu e_1}{3}E_1 \\ 2h(L)\times E_1 \\ 0 \\ -(\tau h(L), E_1) \end{pmatrix} = \Phi(\phi_{\boldsymbol{C}}(B,C), h(L), -\tau h(L), -i\nu e_1) \begin{pmatrix} E_1 \\ 0 \\ 0 \\ 0 \end{pmatrix}.$
0902.0431_EQ1196	201	■ 0.477 ● K|+0	\begin{aligned} \mathfrak{g}_{01} & =\left\{(C, 0) \in \mathfrak{g}_{0} \mid C \in \mathfrak{s l}(5, C)\right\} \cong \mathfrak{s l}(5, C) \\ \mathfrak{g}_{02} & =\left\{(0, D) \in \mathfrak{g}_{0} \mid D \in \mathfrak{s l}(5, C)\right\} \cong \mathfrak{s l}(5, C) \\ \mathfrak{q} & =\mathfrak{g}_{1} \oplus \mathfrak{g}_{2} \oplus \mathfrak{g}_{-2} \oplus \mathfrak{g}_{-1} . \end{aligned}	$\mathfrak{g}_{01} = \{(C,0)\in\mathfrak{g}_0 \mid C\in\mathfrak{sl}(5,C)\} \cong \mathfrak{sl}(5,C)$ $\mathfrak{g}_{02} = \{(0,D)\in\mathfrak{g}_0 \mid D\in\mathfrak{sl}(5,C)\} \cong \mathfrak{sl}(5,C)$ $\mathfrak{q} = \mathfrak{g}_1 \oplus \mathfrak{g}_2 \oplus \mathfrak{g}_{-2} \oplus \mathfrak{g}_{-1}.$	$\begin{aligned} \mathfrak{g}_{01} &= \{(C,0)\in\mathfrak{g}_0 \mid C\in\mathfrak{sl}(5,C)\} \cong \mathfrak{sl}(5,C), \\ \mathfrak{g}_{02} &= \{(0,D)\in\mathfrak{g}_0 \mid D\in\mathfrak{sl}(5,C)\} \cong \mathfrak{sl}(5,C), \\ \mathfrak{q} &= \mathfrak{g}_1 \oplus \mathfrak{g}_2 \oplus \mathfrak{g}_{-2} \oplus \mathfrak{g}_{-1}. \end{aligned}$
0902.0431_EQ1195	201	■ 0.485 ● N|+0	\begin{aligned} & (-*(y \wedge *(x \wedge a)), b)=-(x \wedge a, y \wedge b) \\ & \quad=\left(y, a_{1} \right)\left(x \wedge a_{2}, b\right)-\left(y, a_{2} \right)\left(x \wedge a_{1}, b\right)-(x, y)(a, b) . \end{aligned}	$(-*(y\wedge *(x\wedge a)), b) = -(x\wedge a, y\wedge b)$ $= (y,a_1)\,(x\wedge a_2, b) - (y,a_2)\,(x\wedge a_1, b) - (x,y)(a,b).$	$\begin{aligned} (-*(\boldsymbol{y}\wedge *(\boldsymbol{x}\wedge \boldsymbol{a})), \boldsymbol{b}) &= -(\boldsymbol{x}\wedge\boldsymbol{a}, \boldsymbol{y}\wedge\boldsymbol{b}) \\ &= (\boldsymbol{y},\boldsymbol{a}_1)(\boldsymbol{x}\wedge\boldsymbol{a}_2,\boldsymbol{b}) - (\boldsymbol{y},\boldsymbol{a}_2)(\boldsymbol{x}\wedge\boldsymbol{a}_1,\boldsymbol{b}) - (\boldsymbol{x},\boldsymbol{y})(\boldsymbol{a},\boldsymbol{b}). \end{aligned}$
0902.0431_EQ1104	187	■ 0.490 ● W|+0	\varphi(R) R_{1}=\left[R, R_{1}\right], \quad R \in\left(\mathfrak{e}_{8(8)}\right)^{\tilde{\lambda} \gamma}, R_{1} \in\left(\mathfrak{e}_{8(8)}\right)_{-\widetilde{ \lambda} \gamma} .	$\varphi(R)R_1 = [R,R_1], \quad R\in\left(\mathfrak{e}_{8(8)}\right)^{\tilde{\lambda}\gamma}, R_1\in\left(\mathfrak{e}_{8(8)}\right)_{-\tilde{\lambda}\gamma}.$	$\varphi(R)R_1 = [R,R_1], \quad R\in\left(\mathfrak{e}_{8(8)}\right)^{\widetilde{\lambda}\gamma}, R_1\in\left(\mathfrak{e}_{8(8)}\right)_{-\widetilde{\lambda}\gamma}.$
0902.0431_EQ1010	168	■ 0.494 ●	\begin{aligned} \mathfrak{e}_{8} & =\left\{R \in \mathfrak{e}_{8}{ }^{C} \mid \tau \tilde{\lambda} R=R \right\} \\ & =\left\{(\Phi, P,-\tau \lambda P, r, s,-\tau s) \in \mathfrak{e}_{8}{ }^{C} \mid \Phi \in \mathfrak{e}_{7}, P \in \mathfrak{P}^{C}, r \in i \boldsymbol{R}, s \in C\right\} . \end{aligned}	$\mathfrak{e}_8 = \left\{R\in\mathfrak{e}_8{}^C \mid \tau\tilde{\lambda}R = R\right\}$ $= \left\{(\Phi,P,-\tau\lambda P,r,s,-\tau s)\in\mathfrak{e}_8{}^C \mid \Phi\in\mathfrak{e}_7, P\in\mathfrak{P}^C, r\in i\boldsymbol{R}, s\in C\right\}.$	$\begin{aligned} \mathfrak{e}_8 &= \{R\in\mathfrak{e}_8{}^C \mid \tau\widetilde{\lambda}R = R\} \\ &= \{(\Phi,P,-\tau\lambda P,r,s,-\tau s)\in\mathfrak{e}_8{}^C \mid \Phi\in\mathfrak{e}_7, P\in\mathfrak{P}^C, r\in i\boldsymbol{R}, s\in C\}. \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
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0902.0431_EQ0952	158	■ 0.496 ●	`\begin{aligned} D & =\left(\begin{array}{cc} B & L \\ -L^{*} & C \end{array}\right)+\frac{\nu}{3}\left(\begin{array}{cc} E & 0 \\ 0 & -E \end{array}\right) \in \mathfrak{s u}(6), \\ \widetilde{M} & =\left(\begin{array}{cc} -N_{2}-N_{1} e_{1} & M_{2}+M_{1} e_{1} \\ M_{2}-M_{1} e_{1} & N_{2}-N_{1} e_{1} \end{array} \right), \quad M_{i}, N_{i} \in M(3, \boldsymbol{C}), \\ M & =M_{1}+i M_{2}, N=N_{1}+i N_{2} . \end{aligned}`	$D = \left(\begin{array}{cc} B & L \\ -L^{*} & C \end{array}\right)+\frac{\nu}{3}\left(\begin{array}{cc} E & 0 \\ 0 & -E \end{array}\right) \in \mathfrak{s u}(6),$ $\widetilde{M} = \left(\begin{array}{cc} -N_{2}-N_{1} e_{1} & M_{2}+M_{1} e_{1} \\ M_{2}-M_{1} e_{1} & N_{2}-N_{1} e_{1} \end{array} \right), \quad M_{i}, N_{i} \in M(3, \boldsymbol{C}),$ $M = M_{1}+i M_{2}, N = N_{1}+i N_{2} .$	$D = \left(\begin{array}{cc} B & L \\ -L^{*} & C \end{array}\right)+\frac{\nu}{3}\left(\begin{array}{cc} E & 0 \\ 0 & -E \end{array}\right) \in \mathfrak{s u}(6),$ $\widetilde{M} = \left(\begin{array}{cc} -N_{2}-N_{1} e_{1} & M_{2}+M_{1} e_{1} \\ M_{2}-M_{1} e_{1} & N_{2}-N_{1} e_{1} \end{array} \right), \quad M_{i}, N_{i} \in M(3, \boldsymbol{C}),$ $M = M_{1}+i M_{2}, N = N_{1}+i N_{2} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
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Inline formulas (first occurrence)

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