$$\begin{array}{ccc} {}_{\mathbb{C}}\underset{\triangledown}{Z} & \xrightarrow{\pi} & {}_{\mathbb{R}}\underset{\triangledown}{Z} \\ \gamma\big\downarrow & & \big\downarrow\gamma \\ {}_{\mathbb{C}}\underset{\triangledown}{Z} & \xrightarrow[\pi]{} & {}_{\mathbb{R}}\underset{\triangledown}{Z} \end{array}$$

$$\begin{cases} x \in {}_{\mathbb{R}}\underset{\triangledown}{Z} \\ y \in {}_{\mathbb{R}}\underset{\triangledown}{Z} i \end{cases} \Longrightarrow y\Lambda \in \overset{-1}{\pi}(0) \subset {}_{\mathbb{C}}\underset{\triangledown}{Z} \Longrightarrow w = {}^{y\Lambda}\gamma_x \in {}_{\mathbb{C}}\underset{\triangledown}{Z} \Longrightarrow w = u + v \begin{cases} u = \overset{\sharp}{u} \in {}_{\mathbb{R}}\underset{\triangledown}{Z} \\ v = -\overset{\sharp}{v} \in {}_{\mathbb{R}}\underset{\triangledown}{Z} i \end{cases}$$

$$\begin{cases} u = \dfrac{w + \overset{\sharp}{w}}{2} \\ v = \dfrac{w - \overset{\sharp}{w}}{2} \end{cases} \in {}_{\mathbb{C}}\underset{\triangledown}{Z}\ \text{conv}$$

$$x{:}y \in {}_{\mathbb{R}}\underset{\triangledown}{Z} \times \overset{-1}{\pi}(0) \xrightarrow[\exists]{\int} {}_{\mathbb{C}}\underset{\triangledown}{Z} \ni y\gamma_x = {}^{y}\gamma_x = y_{-x}{}^{x}B_x^{1/2} + x$$

$$y\overset{\sharp}{\gamma}_x = \overbrace{{}^{y}\gamma_x}^{\sharp} = \overbrace{y_{-x}{}^{x}B_x^{1/2} + x}^{\sharp} = \overset{\sharp}{y}_{-x}{}^{x}B_x^{1/2} + x = {}_{x:\overset{\sharp}{y}}\int$$

$${}_{0:y}\int = {}^{y}\gamma_0 = y$$

$$\dot{x} : \dot{y}\ {}_{0:y}\underset{-}{\int} = \dot{x} + \dot{y} - y\,\dot{x}\,y$$

$$\overset{-1}{\pi}(x) = \begin{cases} y\gamma_x \\ x \in {}_{\mathbb{R}}\underset{\triangledown}{Z} \\ y \in \overset{-1}{\pi}(0) \end{cases}$$

$$\pi\left(y\gamma_x\right) = \pi\left({}^{y}\gamma_x\right) = {}^{\pi(y)}\gamma_x = {}^{0}\gamma_x = x$$

$$\int_{dw}^{{}_{\mathbb{C}}\underset{\triangledown}{Z}} {}^{w}_{\mathbb{C}}\Delta_w^{-p}\ {}_{w}J \underset{\text{Leb}}{=} \int_{dx}^{{}_{\mathbb{R}}\underset{\triangledown}{Z}} \int_{dy}^{\overset{-1}{\pi}(0)} \overline{\underline{\gamma}\,(x{:}y)}\ {}^{y\gamma_x}_{\mathbb{C}}\Delta^{-p}_{y\gamma_x}\ {}_{y\gamma_x}J$$

$$ {}^{z}_{\mathbb{C}}\Delta^{\nu}_{z} \; {}^{z}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar{z}} \; G_{\mathbb{R}} \text{ inv} $$

$$ {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{0g} = {}^{z}\underline{g}^{\nu/p} \, {}^{z}_{\mathbb{C}}\Delta^{\nu}_{0} \, {}^{0}\underline{\bar{g}}^{\nu/p} = {}^{z}\underline{g}^{\nu/p} \, {}^{0}\underline{\bar{g}}^{\nu/p} \Longrightarrow {}^{0g}_{\mathbb{C}}\Delta^{\nu}_{0g} = {}^{0}\underline{g}^{\nu/p} \, {}^{0}\underline{\bar{g}}^{\nu/p} = {}^{0}\underline{g}^{2\nu/p} \Longrightarrow \begin{cases} {}^{0}\underline{g}^{\nu/p} = {}^{0g}_{\mathbb{C}}\Delta^{\nu/2}_{0g} \\ {}^{z}\underline{g}^{\nu/p} = {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{-\nu/2}_{0g} \end{cases} $$

$$ {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{zg} = {}^{z}\underline{g}^{\nu/p} \, {}^{z}_{\mathbb{C}}\Delta^{\nu}_{z} \, {}^{z}\underline{\bar{g}}^{\nu/p} = {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{-\nu}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{\nu}_{zg} \, {}^{z}_{\mathbb{C}}\Delta^{\nu}_{z} $$

$$ {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{zg} \, {}^{zg}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{z}g} = {}^{zg}_{\mathbb{C}}\Delta^{\nu}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{-\nu}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{\nu}_{zg} \, {}^{z}_{\mathbb{C}}\Delta^{\nu}_{z} \, {}^{zg}_{\mathbb{C}}\Delta^{-\nu/2}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{\nu/2}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{z}g} \, {}^{z}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{z}} = {}^{0g}_{\mathbb{C}}\Delta^{-\nu/2}_{0g} \, {}^{0g}_{\mathbb{C}}\Delta^{\nu}_{zg} \, {}^{z}_{\mathbb{C}}\Delta^{\nu}_{z} \, {}^{z}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{z}} $$

$$ {}^{\zeta\mathfrak{g}_w}_{\mathbb{C}}\Delta^{\nu}_{\zeta\mathfrak{g}_w} \, {}^{\zeta\mathfrak{g}_w}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{\zeta}\mathfrak{g}_w} = {}^{\zeta\mathfrak{g}_w}_{\mathbb{C}}\Delta^{\nu}_{\zeta\mathfrak{g}_w} \, {}^{\zeta\mathfrak{g}_w}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar{\zeta}\mathfrak{g}_w} \, {}^{\bar{\zeta}\mathfrak{g}_w}_{\mathbb{C}}\Delta^{\nu/2}_{\zeta\mathfrak{g}_w} = {}^{\zeta}_{\mathbb{C}}\Delta^{\nu}_{\zeta} \, {}^{\zeta}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar{\zeta}} \, {}^{\bar{\zeta}\mathfrak{g}_w}_{\mathbb{C}}\Delta^{\nu/2}_{\zeta\mathfrak{g}_w} = {}^{\zeta}_{\mathbb{C}}\Delta^{\nu}_{\zeta} \, {}^{\zeta}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{\zeta}} \, {}^{\bar{\zeta}}_{\mathbb{C}}\Delta^{-\nu/2}_{\zeta} \, {}^{\bar{\zeta}\mathfrak{g}_w}_{\mathbb{C}}\Delta^{\nu/2}_{\zeta\mathfrak{g}_w} $$

$$ {}^{z}I_{\nu} = {}^{z}_{\mathbb{C}}\Delta^{-\nu/2}_{\bar{z}} $$

$$ \mathcal{T}^{\mathbb{R}}_{\varrho_\nu \lrcorner} = \mathcal{T}^{\mathbb{C}}_{\lrcorner} \, I_{\nu} $$

$$ {}_{\mathbb{R}}\overset{Z}{\triangledown}\underset{\infty}{\triangle}\mathbb{C} \xleftarrow[G_{\mathbb{R}} \text{ inv}]{\varrho_\nu} {}_{\mathbb{C}}\overset{Z}{\triangledown}\underset{\infty}{\triangle}\mathbb{C} $$

$$ \overset{*}{\mathcal{T}}^{\mathbb{R}} = \varrho/ \, I_{\nu} $$

$$ {}^{x}\overset{*}{\mathcal{T}}^{\mathbb{R}}_{\urcorner} = {}^{x}_{\mathbb{C}}\Delta^{\nu/2}_{x} \, {}^{x}\urcorner = {}^{x}_{\mathbb{R}}\Delta^{\nu}_{x} \, {}^{x}\urcorner $$

$$\int_{dx}^{\mathbb{R}\,\not\nabla} {}^{x}_{\mathbb{R}}\Delta_{x}^{\nu-p}\ {}^{x}\bar{\rceil}\ {}^{x}\overbrace{\varrho_{\nu}\rfloor} = \int_{dz}^{\mathbb{C}\,\not\nabla} {}^{z}_{\mathbb{C}}\Delta_{z}^{\nu-p}\ {}^{z}_{\mathbb{C}}\overline{\Delta}_{\bar{z}}^{-\nu}\ {}^{z}\overline{\rceil/I_{\nu}}\ {}_{z}\rfloor$$

$${}^{z}\bar{I}_{\nu}\ {}^{z}I_{\nu} = {}^{z}_{\mathbb{C}}\overline{\Delta}_{\bar{z}}^{-\nu}$$

$$\text{LHS} = \int_{dx}^{\mathbb{R}\,\not\nabla} {}^{x}_{\mathbb{R}}\Delta_{x}^{-p}\ {}^{x}_{\mathbb{R}}\Delta_{x}^{\nu}\ {}^{x}\bar{\rceil}\ {}^{x}\overbrace{\varrho_{\nu}\rfloor} = \int_{dx}^{\mathbb{R}\,\not\nabla} {}^{x}_{\mathbb{R}}\Delta_{x}^{-p}\ {}^{x}\overline{\overset{*}{\mathcal{I}}^{\mathbb{R}}\rceil}\ {}^{x}\overbrace{\varrho_{\nu}\rfloor}$$

$$= \underbrace{\overset{*}{\mathcal{I}}^{\mathbb{R}}\rceil}\ \underset{\mathbb{R}}{\bowtie}\ \underbrace{\varrho_{\nu}\rfloor} = \rceil \underset{\nu}{\bowtie} \mathcal{T}^{\mathbb{R}}_{\varrho_{\nu}\rfloor} = \rceil \underset{\nu}{\bowtie} \underbrace{\mathcal{T}^{\mathbb{C}}_{\rfloor} I_{\nu}} = \rceil \underset{\nu}{\bowtie} \underbrace{\rfloor I_{\nu}} = \underbrace{\rceil/I_{\nu}} \underset{\nu}{\bowtie} \underbrace{\bar{I}_{\nu} I_{\nu}\rfloor} = \text{RHS}$$

$${}^{\mathbb{R}}\not\nabla_{\infty}\mathbb{C} \xleftarrow{\mathcal{P}_{\nu}} {}^{\mathbb{C}}\not\nabla_{\infty}\mathbb{C}: \quad {}^{x}\overbrace{\mathcal{P}_{\nu}\rfloor} = {}^{x}_{\mathbb{R}}\Delta_{x}^{p} \int_{dy}^{\overset{-1}{\pi}(0)} {}^{y}_{\mathbb{C}}\Delta_{y}^{\nu}\ {}^{y}_{\mathbb{C}}\overline{\Delta}_{y^{\sharp}}^{-\nu}\ \overline{\underline{\gamma}\,(x{:}y)}\ {}^{y\gamma_{x}}_{\mathbb{C}}\Delta_{y\gamma_{x}}^{-p}\ {}_{y\gamma_{x}}\rfloor$$

$$\mathcal{P}_{\nu}\ \underbrace{\rfloor\overbrace{\pi \ltimes 1}} = \underbrace{\mathcal{P}_{\nu}\rfloor}\,1$$

$${}_{y\gamma_{x}}\underbrace{\rfloor\overbrace{\pi \ltimes 1}} = {}_{y\gamma_{x}}\rfloor\ {}_{y\gamma_{x}}\underbrace{\pi \ltimes 1} = {}_{y\gamma_{x}}\rfloor^{\left(y\gamma_{x}\right)\pi}1 = {}_{y\gamma_{x}}\rfloor\ {}^{x}1$$

$${}^{x}\text{LHS} = {}^{x}_{\mathbb{R}}\Delta_{x}^{p} \int_{dy}^{\overset{-1}{\pi}(0)} {}^{y}_{\mathbb{C}}\Delta_{y}^{\nu}\ {}^{y}_{\mathbb{C}}\overline{\Delta}_{y^{\sharp}}^{-\nu}\ \overline{\underline{\gamma}\,(x{:}y)}\ {}^{y\gamma_{x}}_{\mathbb{C}}\Delta_{y\gamma_{x}}^{-p}\ {}_{y\gamma_{x}}\underbrace{\overbrace{\pi \ltimes 1}\rfloor}$$

$$= {}^{x}_{\mathbb{R}}\Delta_{x}^{p} \int_{dy}^{\overset{-1}{\pi}(0)} {}^{y}_{\mathbb{C}}\Delta_{y}^{\nu}\ {}^{y}_{\mathbb{C}}\overline{\Delta}_{y^{\sharp}}^{-\nu}\ \overline{\underline{\gamma}\,(x{:}y)}\ {}^{y\gamma_{x}}_{\mathbb{C}}\Delta_{y\gamma_{x}}^{-p}\ {}_{y\gamma_{x}}\rfloor\ {}^{x}1 = {}^{x}\text{RHS}$$

$$\int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{\mathcal{P}_\nu \mathsf{J}} \;=\; \int_{dz}^{\mathbb{C}\nabla} {}^{z}_{\mathbb{C}}\Delta_z^{\nu-p}\; {}^{z}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{z^\sharp}\; {}_{z}\mathsf{J}$$

$${}^{y^\sharp}\gamma_x = {}^{y}\gamma_x^\sharp$$

$$\mathrm{LHS} = \int_{dx}^{\mathbb{R}\nabla}\int_{dy}^{\overset{-1}{\pi}(0)} {}^{y}_{\mathbb{C}}\Delta_y^{\nu}\; {}^{y}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{y^\sharp}\; \overline{\underline{\gamma}\,(x{:}y)}\; {}^{y\gamma_x}_{\mathbb{C}}\Delta^{-p}_{y\gamma_x}\; {}_{y\gamma_x}\mathsf{J} \underset{\mathrm{inv}}{=} \int_{dx}^{\mathbb{R}\nabla}\int_{dy}^{\overset{-1}{\pi}(0)} \overline{\underline{\gamma}\,(x{:}y)}\; {}^{y\gamma_x}_{\mathbb{C}}\Delta^{\nu-p}_{y\gamma_x}\; {}^{y\gamma_x}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{y\gamma_x^\sharp}\; {}_{y\gamma_x}\mathsf{J} = \mathrm{RHS}$$

$${}^{\mathbb{R}}\nabla_{\infty}\mathbb{C} \xleftarrow[G_{\mathbb{R}}\ \mathrm{inv}]{\mathcal{P}_\nu} {}^{\mathbb{C}}\nabla_{\infty}\mathbb{C}: \quad \mathcal{P}_\nu\, \underbrace{g \ltimes \mathsf{J}} = g \ltimes \underbrace{\mathcal{P}_\nu \mathsf{J}}$$

$$\int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{g\ltimes\mathsf{1}}\; {}^{x}\overbrace{\mathcal{P}_\nu \underbrace{g\ltimes\mathsf{J}}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{\mathcal{P}_\nu\underbrace{\overbrace{g\ltimes\mathsf{J}}\,\overbrace{\pi\ltimes\underbrace{g\ltimes\mathsf{1}}}}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{\mathcal{P}_\nu\underbrace{g\ltimes\mathsf{J}\,\overbrace{\pi\ltimes\mathsf{1}}}}$$

$$= \int_{dz}^{\mathbb{C}\nabla} {}^{z}_{\mathbb{C}}\Delta_z^{-p}\; {}^{z}_{\mathbb{C}}\Delta_z^{\nu}\; {}^{z}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar z}\; {}_{zg}\underbrace{\mathsf{J}\overbrace{\pi\ltimes\mathsf{1}}} \underset{\mathrm{inv}}{=} \int_{dz}^{\mathbb{C}\nabla} {}^{z}_{\mathbb{C}}\Delta_z^{-p}\; {}^{zg}_{\mathbb{C}}\Delta_{zg}^{\nu}\; {}^{zg}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\overline{zg}}\; {}_{zg}\underbrace{\mathsf{J}\overbrace{\pi\ltimes\mathsf{1}}} = \int_{dw}^{\mathbb{C}\nabla} {}^{w}_{\mathbb{C}}\Delta_w^{-p}\; {}^{w}_{\mathbb{C}}\Delta_w^{\nu}\; {}^{w}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar w}\; {}_{w}\underbrace{\mathsf{J}\overbrace{\pi\ltimes\mathsf{1}}}$$

$$= \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{\mathcal{P}_\nu\underbrace{\mathsf{J}\overbrace{\pi\ltimes\mathsf{1}}}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\mathsf{1}\; {}^{x}\overbrace{\mathcal{P}_\nu\mathsf{J}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{xg}\mathsf{1}\; {}^{xg}\overbrace{\mathcal{P}_\nu\mathsf{J}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{g\ltimes\mathsf{1}}\; {}^{x}\overbrace{g\ltimes\underbrace{\mathcal{P}_\nu\mathsf{J}}}$$

$$\int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{\nu-p}\; {}^{x}\bar{\urcorner}\; {}^{x}\overbrace{\varrho_\nu\mathsf{J}} = \int_{dx}^{\mathbb{R}\nabla} {}^{x}_{\mathbb{R}}\Delta_x^{-p}\; {}^{x}\overbrace{\mathcal{P}_\nu\underbrace{\overline{\urcorner/I_\nu}\mathsf{J}}}$$

$$\mathrm{LHS} = \int_{dz}^{\mathbb{C}\nabla} {}^{z}_{\mathbb{C}}\Delta_z^{\nu-p}\; {}^{z}_{\mathbb{C}}\overline{\Delta}^{-\nu}_{\bar z}\; {}^{z}\overline{\urcorner/I_\nu}\; {}_{z}\mathsf{J} = \mathrm{RHS}$$