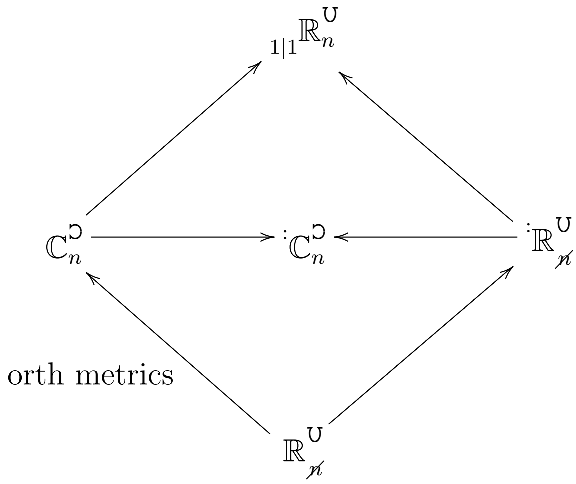
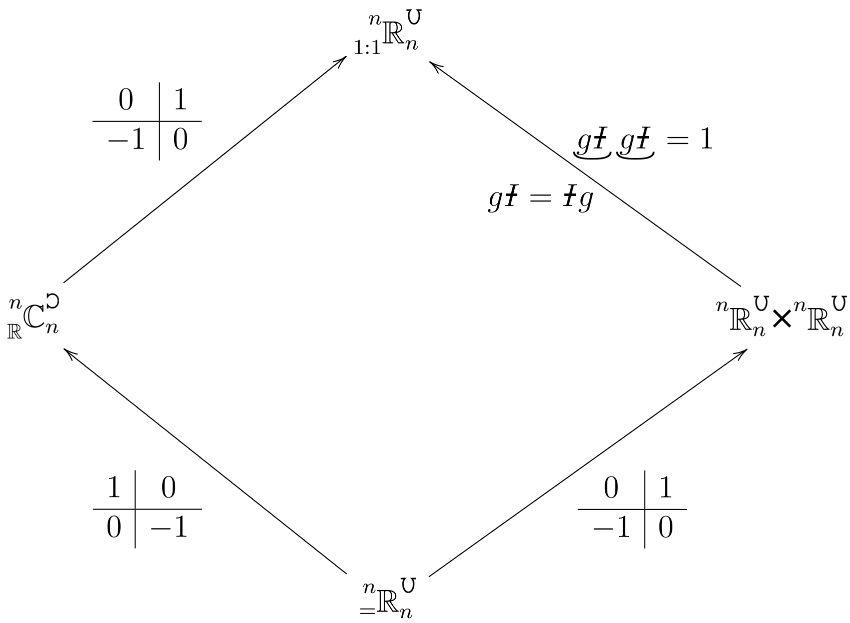
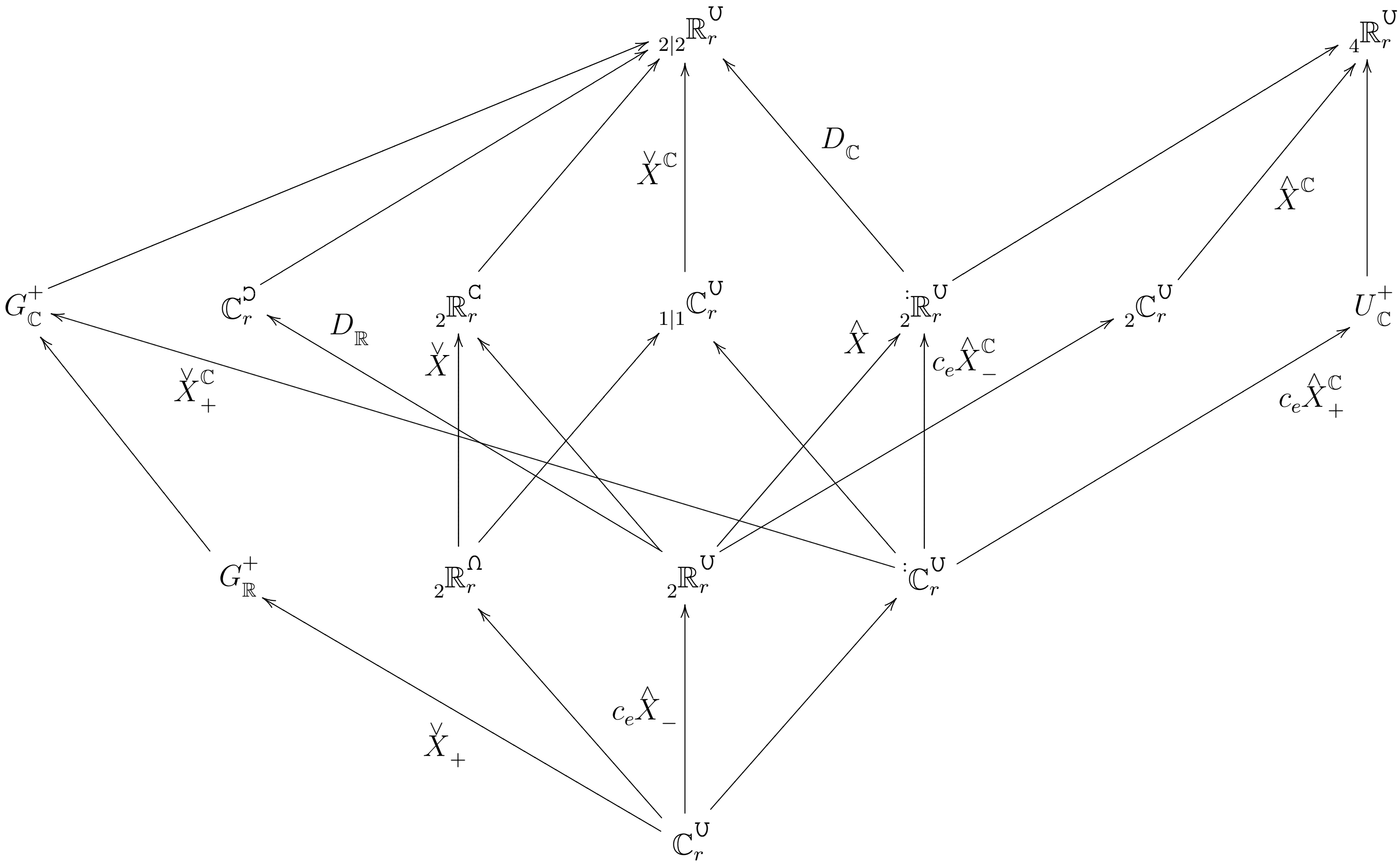
$$X = {}_{2}\mathbb{R}_n^{\text{aher=asym}}$$







$${}^{n}_{1:1}\mathbb{R}^{\cup}_{n} \ni \begin{array}{c|c} a & b \\ \hline \overset{+}{b} & d \end{array} \quad \begin{cases} a = -\overset{+}{a} \\ d = -\overset{+}{d} \end{cases}$$

$${}^{n}_{\times}\mathbb{R}^{\cup}_{n} \ni \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} \quad \begin{cases} a = -\overset{+}{a} \\ d = -\overset{+}{d} \end{cases}$$

$$\begin{array}{c|c} a & b \\ \hline \overset{+}{b} & d \end{array} = \not\mathcal{I} \begin{array}{c|c} a & b \\ \hline \overset{+}{b} & d \end{array} \not\mathcal{I} = \begin{array}{c|c} a & -b \\ \hline -\overset{+}{b} & d \end{array} \iff b = 0$$

$${}^{n}_{\mathbb{R}}\mathbb{C}^{\supset}_{n} \ni \begin{array}{c|c} a & b \\ \hline -b & a \end{array} \quad \begin{cases} a = -\overset{+}{a} \\ b = -\overset{+}{b} \end{cases} \qquad a + ib \in {}^{n}\mathbb{C}^{\supset}_{n}$$

$$\begin{array}{c|c} a & b \\ \hline \overset{+}{b} & d \end{array} = \not\mathcal{I} \begin{array}{c|c} a & b \\ \hline \overset{+}{b} & d \end{array} \not\mathcal{I}^{-1} = \begin{array}{c|c} d & -\overset{+}{b} \\ \hline -b & a \end{array} \iff \begin{cases} a = d \\ b = -\overset{+}{b} \end{cases}$$

$${}^{n}_{=}\mathbb{R}^{\cup}_{n} \ni \begin{array}{c|c} a & 0 \\ \hline 0 & a \end{array} : \quad a = -\overset{+}{a}$$

$$\begin{array}{c|c} a & b \\ \hline -b & a \end{array} = J \begin{array}{c|c} a & b \\ \hline -b & a \end{array} J = \begin{array}{c|c} a & -b \\ \hline b & a \end{array} \Leftrightarrow b = 0$$

$$\begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} = J \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} J = \begin{array}{c|c} d & 0 \\ \hline 0 & a \end{array} \Leftrightarrow a = d$$

$$g \in {}^{n}_{\mathbb{R}}\mathbb{C}_n^{\supset} \begin{cases} g\text{Ɉ} = \text{Ɉ}g \\ \overset{*}{g}\text{Ɨ}g = \text{Ɨ} \end{cases}$$

$$g = \begin{array}{c|c} a & b \\ \hline -b & a \end{array} = J \begin{array}{c|c} a & b \\ \hline -b & a \end{array} J = \begin{array}{c|c} a & -b \\ \hline b & a \end{array} \Leftrightarrow b = 0 \Leftrightarrow g = \begin{array}{c|c} a & 0 \\ \hline 0 & a \end{array}$$

$$g = \overbrace{J - z}^{-1} \underbrace{J + z} \in {}^{n}_{1:1}\mathbb{R}_n^{\cup} \Leftrightarrow z\text{Ɉ} = -(\overset{*}{z\text{Ɉ}}) \in {}^{n}_{2}\mathbb{R}_n^{\Cap} \Leftrightarrow z = \begin{array}{c|c} a & b \\ \hline c & \overset{*}{a} \end{array} \begin{cases} b = -\overset{*}{b} \\ c = -\overset{*}{c} \end{cases}$$

$$\overbrace{J + z}^{-1} \underbrace{J - z} = \overset{-1}{g} = \text{Ɨ}\,\overset{*}{g}\,\text{Ɨ} = \text{Ɨ} \underbrace{J + \overset{*}{z}} \overbrace{J - \overset{*}{z}}^{-1} \text{Ɨ} = \underbrace{\text{Ɉ} + \text{Ɨ}\overset{*}{z}} \overbrace{\text{Ɉ} - \text{Ɨ}\overset{*}{z}}^{-1}$$

$$J\text{Ɉ} - z\text{Ɉ} + J\text{Ɨ}\overset{*}{z} + z\text{Ɨ}\overset{*}{z} = \underbrace{J - z}\underbrace{\text{Ɉ} - \text{Ɨ}\overset{*}{z}} = \underbrace{J + z}\underbrace{\text{Ɉ} + \text{Ɨ}\overset{*}{z}} = J\text{Ɉ} + z\text{Ɉ} + J\text{Ɨ}\overset{*}{z} + z\text{Ɨ}\overset{*}{z}$$

$$z\text{Ɉ} = -J\text{Ɨ}\overset{*}{z} = \text{Ɉ}\overset{*}{z} = -\overset{*}{\overbrace{z\text{Ɉ}}}$$

$$Jz = -zJ \Leftrightarrow z = \begin{array}{c|c} a & b \\ \hline -b & -a \end{array} \begin{cases} a = -\overset{*}{a} \\ b = -\overset{*}{b} \end{cases}$$

$${}^{n}\mathbb{R}_n^{\Cap} \xrightarrow{\qquad\qquad} \frac{{}^{n}_{\mathbb{R}}\mathbb{C}_n^{\supset}}{{}^{n}_{=}\mathbb{R}_n^{\cup}}$$

$$z\text{Ɉ} \in {}^{n}_{2}\mathbb{R}_n^{\Cap} \xrightarrow{\qquad\qquad} {}^{n}_{1:1}\mathbb{R}_n^{\cup} \ni \overbrace{J - z}^{-1} \underbrace{J + z}$$

$${}^{n}\mathbb{R}_n^{\Cap} \xrightarrow{\qquad\qquad} \frac{{}^{n}_{\times}\mathbb{R}_n^{\cup}}{{}^{n}_{=}\mathbb{R}_n^{\cup}}$$

$${}^{n}\mathbb{C}_n^{\supset} \ni y = \begin{array}{c|c} a & b \\ \hline -b & a \end{array} = \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} \begin{array}{c|c} a & b \\ \hline -b & a \end{array} \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} = \begin{array}{c|c} a & -b \\ \hline b & a \end{array} \Leftrightarrow y = \begin{array}{c|c} a & 0 \\ \hline 0 & a \end{array} \in {}^{n}\mathbb{R}_n^{\cup}$$

$$
{}^{n}_{1:1}\mathbb{R}^{\cup}_{n} \ni y = \begin{array}{c|c} a & b \\ \hline c & d \end{array} = \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} \begin{array}{c|c} a & b \\ \hline c & d \end{array} \begin{array}{c|c} 1 & 0 \\ \hline 0 & -1 \end{array} = \begin{array}{c|c} a & -b \\ \hline -c & d \end{array} \Leftrightarrow y = \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} \in {}^{n}\mathbb{R}^{\cup}_{n} \times {}^{n}\mathbb{R}^{\cup}_{n}
$$

$$
{}^{n}\mathbb{R}^{\cup}_{n} \times {}^{n}\mathbb{R}^{\cup}_{n} \ni y = \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} = \begin{array}{c|c} 0 & -1 \\ \hline 1 & 0 \end{array} \begin{array}{c|c} a & 0 \\ \hline 0 & d \end{array} \begin{array}{c|c} 0 & 1 \\ \hline -1 & 0 \end{array} = \begin{array}{c|c} d & 0 \\ \hline 0 & a \end{array} \Leftrightarrow y = \begin{array}{c|c} a & 0 \\ \hline 0 & a \end{array} \in {}^{n}\mathbb{R}^{\cup}_{n}
$$

$$
\underline{G} = H_{\mathbb{C}}
$$

$$
\bar{G}_{h} \asymp G_{p}
$$