

$$\begin{array}{ccc}
{}^n\mathbb{C}\mathbb{R}_n & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{R}_n^{\mathfrak{D}} \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
{}^n\mathbb{E}\mathbb{R}_n & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{R}_n^{\mathfrak{D}}
\end{array}$$

$$\sqrt{\cdot} \times_A \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} = \sqrt{\cdot} \times_A \mathbb{A}^* \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} A$$

$$A = \frac{1}{\sqrt{2}} \frac{1 \mid -1}{1 \mid 1} \Rightarrow \mathfrak{D} \mathbb{X}^* = \mathcal{U} \Rightarrow A \mathcal{U} \mathbb{A}^* = \mathcal{U}^* \text{-inv} / {}^n\mathbb{C}\mathbb{R}_n$$

$$\begin{array}{ccc}
{}^n\mathbb{C}\mathbb{C}_n & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{R}_n^{\mathfrak{D}} \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
{}^n\mathbb{C}\mathbb{C}_n^{\mathfrak{D}} & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{R}_n^{\mathfrak{D}}
\end{array}$$

$$\sqrt{\cdot} \times \frac{\mathbb{J} \mid \sqrt{\cdot}}{-\sqrt{\cdot} \mid \mathbb{J}} = \sqrt{\cdot} \frac{\mathbb{J} \mid \sqrt{\cdot}}{-\sqrt{\cdot} \mid \mathbb{J}}$$

$$\mathfrak{D} = \mathcal{U} \Rightarrow \mathcal{U} = D \mathfrak{D} \mathbb{D}^* \text{-inv} / {}^n\mathbb{C}\mathbb{C}_n \subset {}^{2n}\mathbb{R}_{2n}^{\mathfrak{D}} \cap D'$$

$$D = \frac{1}{\sqrt{2}} \frac{1 \mid *}{-\sqrt{\cdot} \mid 1}$$

$$\begin{array}{ccc}
{}^n\mathbb{C}\mathbb{C}_n & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{C}\mathbb{C}_n^{\mathfrak{W}} \\
\uparrow \text{exp} & & \uparrow \text{exp} \\
{}^n\mathbb{E}\mathbb{C}_n & \xrightarrow{\text{on}} & \mathcal{U}|_{\mathcal{U}}{}^n\mathbb{C}\mathbb{C}_n^{\mathfrak{W}}
\end{array}$$

$$\sqrt{\cdot} \rtimes_A \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} = \sqrt{\cdot} \rtimes \dot{A} \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} A$$

$$A = \frac{1}{\sqrt{2}} \frac{1 \mid -1}{1 \mid 1} \Rightarrow \mathfrak{U} \dot{A} = \mathfrak{U} \Rightarrow AU \dot{A} = \mathfrak{W} \text{ *-inv } / {}^n\mathfrak{C}_n$$

$$\begin{array}{ccc} {}^{2n}\mathfrak{C}_{2n}^\Omega & \xrightarrow{\text{on}} & \mathfrak{U} \mid \mathfrak{U} {}^n\mathfrak{H}_n^\mathfrak{U} \\ \text{exp} \uparrow & & \uparrow \text{exp} \\ {}^{2n}\mathfrak{C}_{2n}^\mathfrak{E} & \xrightarrow{\text{on}} & \mathfrak{U} \mid \mathfrak{U} {}^n\mathfrak{H}_n^\mathfrak{U} \end{array}$$

$$\sqrt{\cdot} \rtimes_C \frac{\mathbb{J} \mid \mathbb{J}}{\mathbb{J} \mid \mathbb{J}} = \sqrt{\cdot} \rtimes \dot{C} \frac{\mathbb{J} \mid \mathbb{J}}{\mathbb{J} \mid \mathbb{J}} C$$

$$C = \frac{1}{\sqrt{2}} \frac{j \mid ji}{i \mid 1} \Rightarrow C\mathfrak{W} \dot{C} = -j\mathfrak{U} \Rightarrow CU \dot{C} = -ij\mathfrak{U} \text{ *-inv } / {}^{2n}\mathfrak{C}_{2n}^\Omega$$

$$\Rightarrow j \rtimes \frac{\mathbb{J} \mid \mathbb{J}}{\mathbb{J} \mid \mathbb{J}} \mathfrak{E} = j \frac{\bar{\mathbb{J}} \mid -\bar{\mathbb{J}}}{\mathbb{J} \mid -\mathbb{J}} = \frac{\mathbb{J} \mid -\mathbb{J}}{\mathbb{J} \mid -\mathbb{J}} j = \frac{\mathbb{J} \mid \mathbb{J}}{\mathbb{J} \mid \mathbb{J}} j\mathfrak{U}$$

$$\begin{array}{ccc} {}^n\mathfrak{H}_n & \xrightarrow{\text{on}} & \mathfrak{U} \mid \mathfrak{U} {}^n\mathfrak{H}_n^\mathfrak{U} \\ \text{exp} \uparrow & & \uparrow \text{exp} \\ {}^n\mathfrak{H}_n & \xrightarrow{\text{on}} & \mathfrak{U} \mid \mathfrak{U} {}^n\mathfrak{H}_n^\mathfrak{U} \end{array}$$

$$\sqrt{\cdot} \rtimes_A \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} = \sqrt{\cdot} \rtimes \dot{A} \frac{\mathbb{J}^{-1} \mid 0}{0 \mid \mathbb{J}} A$$

$$A = \frac{1}{\sqrt{2}} \frac{1 \mid -1}{1 \mid 1} \Rightarrow \mathfrak{U} \dot{A} = \mathfrak{U} \Rightarrow AU \dot{A} = \mathfrak{W} \text{ *-inv } / {}^n\mathfrak{H}_n$$