

$$\begin{array}{ccc}
 \underline{G}_g & \xrightarrow[\text{tens}]{g\widetilde{\mathfrak{q}}} & \mathbb{1} \\
 \downarrow g\pi_{\underline{}} & \nearrow x\mathfrak{q} & \downarrow p\colon \\
 \underline{D}_x & \xrightarrow[x\mathfrak{q}]{\phantom{x\mathfrak{q}}} & \mathbb{1}\times x
 \end{array}$$

$$p\colon \overbrace{\dot{p}_1\cdots \dot{p}_m}^{p\widetilde{\mathfrak{q}}} = \dot{x}_1\cdots \dot{x}_m\;^x\mathfrak{q}$$

$$\dot{p}_1\,\dot{p}_2\;^p\widetilde{\Omega} = \dot{p}_1\,\dot{p}_2\;\widehat{^p d\widetilde{\mathfrak{q}}} + \frac{1}{2}\underbrace{\dot{p}_1\;^p\widetilde{\mathfrak{q}}}_{}\times \underbrace{\dot{p}_2\;^p\widetilde{\mathfrak{q}}}_{}$$

$$\begin{aligned}
 \dot{x}_1\,\dot{x}_2\;^x\Omega &= \underbrace{\mathfrak{b}\underline{R}_g\;^g\pi_{\underline{}}}_{}\underbrace{\mathfrak{t}\underline{R}_g\;^g\pi_{\underline{}}}_{}\;^{g\pi}\Omega\;\overset{\text{KN}}{\frac{}{76}}\;^o\!\underline{g}\;\left(\mathfrak{b}\underline{R}_g\cdot\mathfrak{t}\underline{R}_g\;^g\widetilde{\Omega}\right) \\
 &= \;^o\!\underline{g}\;\left(\mathfrak{b}\underline{R}_g\cdot\mathfrak{t}\underline{R}_g\;\widehat{^g d\widetilde{\Omega}} + \frac{1}{2}\widehat{\mathfrak{b}\underline{R}_g\;^g\widetilde{\mathfrak{q}}}\times\widehat{\mathfrak{t}\underline{R}_g\;^g\widetilde{\mathfrak{q}}}\right)
 \end{aligned}$$