

$$D = 9$$

$$E_8^6 = GL_2^{\mathbb{R}}: \text{ scalar coset } GL_2^{\mathbb{R}}$$

$$E_7^6 = O_{1:1}: \text{ scalar coset } \mathbb{R}_> \ni \mathbb{Q}$$

$$\begin{cases} \mathbb{Q} \mathbb{Q} \\ \mathcal{Z} \\ \mathcal{X} \end{cases} = \boxed{\mathbb{Q}} + \sqrt{\mathbb{Q}} - e^{2\mathbb{Q}/\sqrt{7}} \sqrt{\mathcal{Z}} - e^{-4\mathbb{Q}/\sqrt{7}} \sqrt{\mathcal{X}} - \sqrt{\mathcal{Z}} \mathcal{X}$$

$$E_6^6 = 1: \text{ impossible}$$

$$D_8^6 = O_{1:1} \times O_{1:1}: \text{ scalar coset } \mathbb{R}_> \times \mathbb{R}_>$$