

Lorentz groups

$$^{a+1:1}\mathbb{R}^{\mathcal{U}}_{a+1:1} = {}^2\mathbb{K}^{\mathcal{C}}_2$$

$$^{2:1}\mathbb{R}^{\mathcal{U}}_{2:1} = {}^2\mathbb{R}^{\mathcal{C}}_2$$

$$^{3:1}\mathbb{R}^{\mathcal{U}}_{3:1} = {}^2\mathbb{C}^{\mathcal{C}}_2$$

$$^{5:1}\mathbb{R}^{\mathcal{U}}_{5:1} = {}^2\mathbb{H}^{\mathcal{C}}_2$$

$$^{9:1}\mathbb{R}^{\mathcal{U}}_{9:1} = {}^2\mathbb{O}^{\mathcal{C}}_2$$

$$\operatorname{Aut} \mathbb{R} = 1$$

$$\operatorname{Aut} \mathbb{R} = O(1) = \mathbb{Z}_2$$

$$\operatorname{Aut} \mathbb{R} = SO(3)$$

$$\operatorname{Aut} \mathbb{R} = G_2$$