

Maximal Supergravities in Different Dimensions											
D	$\mathcal{N}$	supercharges	R symmetry	$g_{\mu\nu}$	ϕ	A_μ	$B_{\mu\nu}$	$C_{\lambda\mu\nu}$	$D_{\kappa\lambda\mu\nu}$	Ψ_μ	Ψ
11	1	real 32	—	1	none	none	none	1	none	1 Maj	none
10	2A	real 16 + 16'	—	1	1	1	1	1	none	1 Maj	1 Maj
10	2A	2 real 16	$SO(2)$	1	2	—	2	—	1_{SD}	2 MW	2 MW
9	2	2 real 16	$SO(2)$	1	3	3	2	1	—	2 Maj	4 Maj
8	2	2 cplx 8	$U(2)$	1	7	6	3	2_{SD}	—	2 Maj	6 Maj
7	2	2 psrl 8	$Sp(4)$	1	14	10	5	—	—	2 Dirac	8 Dirac
6	4	2 psrl 4 + 4'	$Sp(4) \times Sp(4)$	1	25	16	10_{SD}	—	—	2 + 2 Weyl	10 + 10 Weyl
5	4	4 psrl 4	$Sp(8)$	1	42	27	—	—	—	4 Dirac	24 Dirac
4	8	8 cplx 2	$U(8)$	1	70	56_{SD}	—	—	—	8 Maj	56 Maj
3	16	16 real 2	$SO(16)$	none*	128	—	—	—	—	none*	128 Maj

* Gravity is non-dynamical in 3 spacetime dimensions.

Bosons of Maximal Supergravities in More Detail

D	$\mathcal{N}$	supercharges	R symmetry	classical continuous symmetry	scalar manifold	A_μ	$B_{\mu\nu}$	$C_{\lambda\mu\nu}$	$D_{\kappa\lambda\mu\nu}$
11	1	real 32	—	—	none	none	none	1	none
10	2A	real 16 + 16'	—	—	$\mathbf{R}^+$	1	1	1	none
10	2A	2 real 16	$SO(2)$	$SL(2, \mathbf{R})$	$\frac{SL(2, \mathbf{R})}{SO(2)} \Big/ SL(2, \mathbf{Z})$	—	2	—	1 _{SD}
9	2	2 real 16	$SO(2)$	$SL(2, \mathbf{R})$	$\left[\frac{SL(2, \mathbf{R})}{SO(2)} \Big/ SL(2, \mathbf{Z}) \right] \times \mathbf{R}^+$	2 + 1	2	1	—
8	2	2 cplx 8	$U(2)$	$SL(3, \mathbf{R}) \times SL(2, \mathbf{R})$	$\left[\frac{SL(3, \mathbf{R})}{SO(3)} \Big/ SL(3, \mathbf{Z}) \right] \times \left[\frac{SL(2, \mathbf{R})}{SO(2)} \Big/ SL(2, \mathbf{Z}) \right]$	(3, 2)	(3, 1)	(1, 2) _{SD}	—
7	2	2 psrl 8	$Sp(4)$	$SL(5, \mathbf{R})$	$\frac{SL(5, \mathbf{R})}{SO(5)} \Big/ SL(5, \mathbf{Z})$	10	5	—	—
6	4	2 psrl 4 + 4'	$Sp(4) \times Sp(4)$	$SO(5, 5)$	$\frac{SO(5, 5)}{SO(5) \times SO(5)} \Big/ SO(5, 5, \mathbf{Z})$	16	10 _{SD}	—	—
5	4	4 psrl 4	$Sp(8)$	$E_{6(6)}$	$\frac{E_{6(6)}}{Sp(8)} \Big/ E_{6(6)}(\mathbf{Z})$	27	—	—	—
4	8	8 cplx 2	$U(8)$	$E_{7(7)}$	$\frac{E_{7(7)}}{SU(8)} \Big/ E_{7(7)}(\mathbf{Z})$	56 _{SD}	—	—	—
3*	16	16 real 2	$SO(16)$	$E_{8(8)}$	$\frac{E_{8(8)}}{SO(16)} \Big/ E_{8(8)}(\mathbf{Z})$	—	—	—	—