

Transitive Groups of Degree 9

No	Group	Order	2-Index	Molien Series
1	"C9=9"	9	$1 + t + 4t^2 + 10t^3 + 14t^4 + 14t^5 + 10t^6 + 4t^7 + t^8 + t^9$	$1 + t + 5t^2 + 19t^3 + 55t^4 + 143t^5 + 335t^6 + 715t^7 + 1430t^8 + 2704t^9 + 4862t^{10}$
2	"E9=3[x]3"	9	$1 + t + 4t^2 + 12t^3 + 14t^4 + 14t^5 + 12t^6 + 4t^7 + t^8 + t^9$	$1 + t + 5t^2 + 21t^3 + 55t^4 + 143t^5 + 339t^6 + 715t^7 + 1430t^8 + 2710t^9 + 4862t^{10}$
3	"D9=9:2"	18	$1 + t + 4t^2 + 7t^3 + 10t^4 + 10t^5 + 7t^6 + 4t^7 + t^8 + t^9$	$1 + t + 5t^2 + 12t^3 + 35t^4 + 79t^5 + 185t^6 + 375t^7 + 750t^8 + 1387t^9 + 2494t^{10}$
4	"S3[x]3"	18	$1 + t + 3t^2 + 8t^3 + 9t^4 + 9t^5 + 8t^6 + 3t^7 + t^8 + t^9$	$1 + t + 4t^2 + 14t^3 + 34t^4 + 83t^5 + 190t^6 + 389t^7 + 764t^8 + 1428t^9 + 2536t^{10}$
5	"S3[1/2]S3=3^2:2"	18	$1 + t + 4t^2 + 8t^3 + 10t^4 + 10t^5$	$1 + t + 5t^2 + 13t^3 + 35t^4 + 79t^5$

			$t^5 + 8t^6 + 4t^7 + t^8 + t^9$	$+187t^6 + 375t^7 + 750t^8 + 1390t^9 + 2494t^{10}$
6	"1/3[3^3]3"	27	$1 + t + 2t^2 + 4t^3 + 6t^4 + 6t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 9t^3 + 23t^4 + 55t^5 + 123t^6 + 255t^7 + 500t^8 + 934t^9 + 1664t^{10}$
7	"E9:3=[3^2]3"	27	$1 + t + 2t^2 + 6t^3 + 6t^4 + 6t^5 + 6t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 11t^3 + 23t^4 + 55t^5 + 127t^6 + 255t^7 + 500t^8 + 940t^9 + 1664t^{10}$
8	"S3[x]S3=E9:D_4"	36	$1 + t + 3t^2 + 6t^3 + 7t^4 + 7t^5 + 6t^6 + 3t^7 + t^8 + t^9$	$1 + t + 4t^2 + 10t^3 + 24t^4 + 51t^5 + 114t^6 + 219t^7 + 424t^8 + 768t^9 + 1352t^{10}$
9	"E9:4"	36	$1 + t + 2t^2 + 4t^3 + 6t^4 + 6t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 7t^3 + 19t^4 + 41t^5 + 95t^6 + 189t^7 + 378t^8 + 698t^9 + 1250t^{10}$
10	"[3^2]S3_6"	54	$1 + t + 2t^2 + 3t^3 + 4t^4 + 4t^5 + 3t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 6t^3 + 15t^4 + 31t^5 + 69t^6 + 135t^7 + 264t^8 + 481t^9 + 856t^{10}$

11	"E9:6=1/2[3^2:2]S3"	54	$1 + t + 2t^2 + 4t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 7t^3 + 15t^4 + 31t^5 + 71t^6 + 135t^7 + 264t^8 + 484t^9 + 856t^{10}$
12	"[3^2]S3"	54	$1 + t + 2t^2 + 5t^3 + 5t^4 + 5t^5 + 5t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 9t^3 + 18t^4 + 39t^5 + 84t^6 + 159t^7 + 299t^8 + 543t^9 + 937t^{10}$
13	"E9:D_6=[3^2:2]3=[1/2S3^2]3"	54	$1 + t + 2t^2 + 5t^3 + 5t^4 + 5t^5 + 5t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 9t^3 + 18t^4 + 39t^5 + 84t^6 + 159t^7 + 299t^8 + 543t^9 + 937t^{10}$
14	"M9=E9:Q_8"	72	$1 + t + t^2 + 2t^3 + 4t^4 + 4t^5 + 2t^6 + t^7 + t^8 + t^9$	$1 + t + 2t^2 + 4t^3 + 11t^4 + 22t^5 + 49t^6 + 96t^7 + 192t^8 + 352t^9 + 628t^{10}$
15	"E9:8"	72	$1 + t + t^2 + 2t^3 + 3t^4 + 3t^5 + 2t^6 + t^7 + t^8 + t^9$	$1 + t + 2t^2 + 4t^3 + 10t^4 + 21t^5 + 48t^6 + 95t^7 + 190t^8 + 350t^9 + 626t^{10}$
16	"E9:D_8"	72	$1 + t + 2t^2 + 4t^3 + 5t^4 + 5t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 7t^3 + 16t^4 + 32t^5 + 68t^6 + 126t^7 + 238t^8 + 422t^9 +$

				$730t^{10}$
17	"[3^3]3=3wr3"	81	$1 + t + 2t^2 + 4t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 9t^3 + 19t^4 + 41t^5 + 85t^6 + 159t^7 + 290t^8 + 512t^9 + 860t^{10}$
18	"E9:D_12=[3^2:2]S3=[1/2S3^2]S3"	108	$1 + t + 2t^2 + 4t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 7t^3 + 14t^4 + 27t^5 + 56t^6 + 99t^7 + 181t^8 + 315t^9 + 533t^{10}$
19	"E9:2D_8"	144	$1 + t + t^2 + 2t^3 + 3t^4 + 3t^5 + 2t^6 + t^7 + t^8 + t^9$	$1 + t + 2t^2 + 4t^3 + 9t^4 + 17t^5 + 35t^6 + 64t^7 + 121t^8 + 213t^9 + 367t^{10}$
20	"[3^3]S3=3wrS3"	162	$1 + t + 2t^2 + 3t^3 + 3t^4 + 3t^5 + 3t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 7t^3 + 14t^4 + 27t^5 + 54t^6 + 95t^7 + 169t^8 + 289t^9 + 477t^{10}$
21	"1/2[3^3:2]S3"	162	$1 + t + 2t^2 + 3t^3 + 3t^4 + 3t^5 + 3t^6 + 2t^7 + t^8 + t^9$	$1 + t + 3t^2 + 6t^3 + 13t^4 + 24t^5 + 50t^6 + 87t^7 + 159t^8 + 270t^9 + 454t^{10}$
22	"[3^3:2]3"	162	$1 + t + 2t^2 + 4t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 +$	$1 + t + 3t^2 + 8t^3 + 16t^4 + 32t^5 + 63t^6 + 111t^7 +$

			$t^8 + t^9$	$194t^8 + 329t^9 + 535t^{10}$
23	"E9:2A_4"	216	$1 + t + t^2 + 2t^3 + 2t^4 + 2t^5 + 2t^6 + t^7 + t^8 + t^9$	$1 + t + 2t^2 + 4t^3 + 7t^4 + 12t^5 + 25t^6 + 42t^7 + 78t^8 + 138t^9 + 234t^{10}$