

Transitive Groups of Degree 9

No	Group	Order	DimCA	CAZ	DimGA	GrAZ	Cycle_Index
1	C9=9	9	9	T	9	T	$\frac{1}{9}x_1^9 + \frac{2}{9}x_3^3 + \frac{2}{3}x_9$
2	E9=3[x]3	9	9	T	9	T	$\frac{1}{9}x_1^9 + \frac{8}{9}x_3^3$
3	D9=9:2	18	5	T	17	F	$\frac{1}{18}x_1^9 + \frac{1}{2}x_1x_2^4 + \frac{1}{9}x_3^3 + \frac{1}{3}x_9$
4	S3[x]3	18	6	T	15	F	$\frac{1}{18}x_1^9 + \frac{1}{6}x_1^3x_2^3 + \frac{4}{9}x_3^3 + \frac{1}{3}x_3x_6$
5	S3[1/2]S3=3^2:2	18	5	T	17	F	$\frac{1}{18}x_1^9 + \frac{1}{2}x_1x_2^4 + \frac{4}{9}x_3^3$
6	1/3[3^3]3	27	5	T	21	F	$\frac{1}{27}x_1^9 + \frac{2}{9}x_1^3x_3^2 + \frac{2}{27}x_3^3 + \frac{2}{3}x_9$
7	E9:3=[3^2]3	27	5	T	21	F	$\frac{1}{27}x_1^9 + \frac{2}{9}x_1^3x_3^2 + \frac{20}{27}x_3^3$
8	S3[x]S3=E9:D_4	36	4	T	25	F	$\frac{1}{36}x_1^9 + \frac{1}{6}x_1^3x_2^3 + \frac{1}{4}x_1x_2^4 + \frac{2}{9}x_3^3 + \frac{1}{3}x_3x_6$
9	E9:4	36	3	T	33	F	$\frac{1}{36}x_1^9 + \frac{1}{4}x_1x_2^4 + \frac{1}{2}x_1x_4^2 + \frac{2}{9}x_3^3$
10	[3^2]S3_6	54	3	T	41	F	$\frac{1}{54}x_1^9 + \frac{1}{9}x_1^3x_3^2 +$

							$\frac{1}{6}x_1x_2^4 + \frac{1}{3}x_1x_2x_6 + \frac{1}{27}x_3^3 + \frac{1}{3}x_9$
11	E9:6=1/2[3^2:2]S3	54	3	T	41	F	$\frac{1}{54}x_1^9 + \frac{1}{9}x_1^3x_3^2 + \frac{1}{6}x_1x_2^4 + \frac{1}{3}x_1x_2x_6 + \frac{10}{27}x_3^3$
12	[3^2]S3	54	4	T	23	F	$\frac{1}{54}x_1^9 + \frac{1}{6}x_1^3x_2^3 + \frac{1}{9}x_1^3x_3^2 + \frac{10}{27}x_3^3 + \frac{1}{3}x_3x_6$
13	E9:D_6=[3^2:2]3=[1/2S3^2]3	54	4	T	39	F	$\frac{1}{54}x_1^9 + \frac{1}{6}x_1^3x_2^3 + \frac{1}{9}x_1^3x_3^2 + \frac{10}{27}x_3^3 + \frac{1}{3}x_3x_6$
14	M9=E9:Q_8	72	2	T	65	F	$\frac{1}{72}x_1^9 + \frac{1}{8}x_1x_2^4 + \frac{3}{4}x_1x_4^2 + \frac{1}{9}x_3^3$
15	E9:8	72	2	T	65	F	$\frac{1}{72}x_1^9 + \frac{1}{8}x_1x_2^4 + \frac{1}{4}x_1x_4^2 + \frac{1}{9}x_3^3 + \frac{1}{2}x_1x_8$
16	E9:D_8	72	3	T	33	F	$\frac{1}{72}x_1^9 + \frac{1}{6}x_1^3x_2^3 + \frac{1}{8}x_1x_2^4 + \frac{1}{4}x_1x_4^2 + \frac{1}{9}x_3^3 + \frac{1}{3}x_3x_6$
17	[3^3]3=3wr3	81	5	T	21	F	$\frac{1}{81}x_1^9 + \frac{2}{27}x_1^6x_3 + \frac{4}{27}x_1^3x_3^2 + \frac{26}{81}x_3^3 + \frac{4}{9}x_9$

18	E9:D_12= [3^2:2]S3= [1/2S3^2]S3	108	3	T	41	F	$\frac{1}{108}x_1^9 + \frac{1}{6}x_1^3x_2^3$ $+ \frac{1}{18}x_1^3x_3^2 + \frac{1}{12}$ $x_1x_2^4 + \frac{1}{6}x_1x_2x_6$ $+ \frac{5}{27}x_3^3 + \frac{1}{3}x_3x_6$
19	E9:2D_8	144	2	T	65	F	$\frac{1}{144}x_1^9 + \frac{1}{12}x_1^3$ $x_2^3 + \frac{1}{16}x_1x_2^4 + \frac{3}{8}$ $x_1x_4^2 + \frac{1}{18}x_3^3 + \frac{1}{4}$ $x_1x_8 + \frac{1}{6}x_3x_6$
20	[3^3]S3=3wrS3	162	4	T	23	F	$\frac{1}{162}x_1^9 + \frac{1}{27}x_1^6x_3$ $+ \frac{1}{18}x_1^3x_2^3 + \frac{2}{27}$ $x_1^3x_3^2 + \frac{1}{9}x_1^3x_6 +$ $\frac{1}{9}x_2^3x_3 + \frac{13}{81}x_3^3 +$ $\frac{2}{9}x_3x_6 + \frac{2}{9}x_9$
21	1/2[3^3:2]S3	162	3	T	41	F	$\frac{1}{162}x_1^9 + \frac{1}{27}x_1^6x_3$ $+ \frac{2}{27}x_1^3x_2^3 + \frac{1}{6}x_1$ $x_2^4 + \frac{1}{3}x_1x_2x_6 +$ $\frac{13}{81}x_3^3 + \frac{2}{9}x_9$
22	[3^3:2]3	162	4	T	39	F	$\frac{1}{162}x_1^9 + \frac{1}{27}x_1^6x_3$ $+ \frac{1}{6}x_1^3x_2^3 + \frac{2}{27}x_1^3$ $x_3^2 + \frac{13}{81}x_3^3 + \frac{1}{3}x_3$ $x_6 + \frac{2}{9}x_9$
23	E9:2A_4	216	2	T	65	F	$\frac{1}{216}x_1^9 + \frac{1}{9}x_1^3x_2^2$

							$+\frac{1}{24}x_1x_2^4 + \frac{1}{3}x_1$ $x_2x_6 + \frac{1}{4}x_1x_4^2 +$ $\frac{7}{27}x_3^3$
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