

Transitive Groups of Degree 7

No	Group	Order	2-Index	Molien Series
1	"C7 = 7"	7	$1 + t + 3t^2 + 5t^3 + 5t^4 + 3t^5 + t^6 + t^7$	$1 + t + 4t^2 + 12t^3 + 30t^4 + 66t^5 + 132t^6 + 246t^7 + 429t^8 + 715t^9 + 1144t^{10}$
2	"D7 = 7:2"	14	$1 + t + 3t^2 + 4t^3 + 4t^4 + 3t^5 + t^6 + t^7$	$1 + t + 4t^2 + 8t^3 + 20t^4 + 38t^5 + 76t^6 + 133t^7 + 232t^8 + 375t^9 + 600t^{10}$
3	"F_217 = 7:3"	21	$1 + t + t^2 + 3t^3 + 3t^4 + t^5 + t^6 + t^7$	$1 + t + 2t^2 + 6t^3 + 12t^4 + 24t^5 + 48t^6 + 86t^7 + 147t^8 + 245t^9 + 388t^{10}$
4	"F_427 = 7:6"	42	$1 + t + t^2 + 2t^3 + 2t^4 + t^5 + t^6 + t^7$	$1 + t + 2t^2 + 4t^3 + 8t^4 + 14t^5 + 28t^6 + 47t^7 + 80t^8 + 129t^9 + 204t^{10}$
5	"L7 = L3,2"	168	$1 + t + t^2 + 2t^3 + 2t^4 + t^5 + t^6 + t^7$	$1 + t + 2t^2 + 4t^3 + 7t^4 + 11t^5 + 19t^6 + 29t^7 + 44t^8 + 66t^9 + 96t^{10}$
6	"A7"	2520	$1 + t + t^2 + t^3 + t^4 + t^5 + t^6 + t^7$	$1 + t + 2t^2 + 3t^3 + 5t^4 + 7t^5 + 11t^6 + 15t^7 + 21t^8 + 28t^9 + 38t^{10}$
7	"S7"	5040	$1 + t + t^2 + t^3 + t^4 + t^5 + t^6 + t^7$	$1 + t + 2t^2 + 3t^3 + 5t^4 + 7t^5 + 11t^6 + 15t^7 + 21t^8 + 28t^9 + 38t^{10}$