

Transitive Groups of Degree 10

No	Group	Order	2-Index	Molien Series
1	"C10=5[x]2"	10	$1 + t + 5t^2 + 12t^3 + 22t^4 + 26t^5 + 22t^6 + 12t^7 + 5t^8 + t^9 + t^{10}$	$1 + t + 6t^2 + 22t^3 + 73t^4 + 201t^5 + 504t^6 + 1144t^7 + 2438t^8 + 4862t^9 + 9252t^{10}$
2	"D10=5:2"	10	$1 + t + 7t^2 + 12t^3 + 26t^4 + 26t^5 + 26t^6 + 12t^7 + 7t^8 + t^9 + t^{10}$	$1 + t + 8t^2 + 22t^3 + 79t^4 + 201t^5 + 518t^6 + 1144t^7 + 2466t^8 + 4862t^9 + 9302t^{10}$
3	"D_1010=[D5]2"	20	$1 + t + 5t^2 + 8t^3 + 16t^4 + 16t^5 + 16t^6 + 8t^7 + 5t^8 + t^9 + t^{10}$	$1 + t + 6t^2 + 14t^3 + 47t^4 + 111t^5 + 280t^6 + 600t^7 + 1282t^8 + 2494t^9 + 4752t^{10}$
4	"1/2[F5]2"	20	$1 + t + 4t^2 + 8t^3 + 14t^4 + 16t^5 + 14t^6 + 8t^7 + 4t^8 + t^9 + t^{10}$	$1 + t + 5t^2 + 14t^3 + 44t^4 + 111t^5 + 271t^6 + 600t^7 + 1264t^8 + 2494t^9 + 4717t^{10}$
5	"F5[x]2"	40	$1 + t + 3t^2 + 4t^3 + 9t^4 + 9t^5 + 9t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 26t^4 + 58t^5 + 144t^6 + 304t^7 + 648t^8 + 1254t^9$

				$+2386t^{10}$
6	"[5^2]2"	50	$1 + t + 3t^2 + 4t^3 + 6t^4 + 6t^5 + 6t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 10t^3 + 27t^4 + 61t^5 + 138t^6 + 284t^7 + 578t^8 + 1098t^9 + 2042t^{10}$
7	"A_510"	60	$1 + t + 2t^2 + 5t^3 + 7t^4 + 8t^5 + 7t^6 + 5t^7 + 2t^8 + t^9 + t^{10}$	$1 + t + 3t^2 + 8t^3 + 20t^4 + 46t^5 + 106t^6 + 222t^7 + 454t^8 + 880t^9 + 1642t^{10}$
8	"[2^4]5"	80	$1 + t + 3t^2 + 6t^3 + 9t^4 + 12t^5 + 9t^6 + 6t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 12t^3 + 32t^4 + 77t^5 + 165t^6 + 336t^7 + 650t^8 + 1198t^9 + 2128t^{10}$
9	"[1/2D5^2]2"	100	$1 + t + 3t^2 + 4t^3 + 6t^4 + 6t^5 + 6t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 21t^4 + 41t^5 + 90t^6 + 170t^7 + 338t^8 + 612t^9 + 1122t^{10}$
10	"1/2[D5^2]2"	100	$1 + t + 3t^2 + 4t^3 + 6t^4 + 6t^5 + 6t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 21t^4 + 41t^5 + 88t^6 + 170t^7 + 334t^8 + 612t^9 + 1112t^{10}$
11	"A5[x]2"	120	$1 + t + 3t^2 + 3t^3 + 6t^4 + 6t^5 + 6t^6 + 3t^7 + 3t^8 +$	$1 + t + 4t^2 + 7t^3 + 19t^4 + 35t^5 + 78t^6 + 143t^7 +$

			$t^9 + t^{10}$	$287t^8 + 512t^9 + 944t^{10}$
12	"1/2[S5]2=S_510a"	120	$1 + t + 3t^2 + 3t^3 + 6t^4 + 6t^5 + 6t^6 + 3t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 7t^3 + 19t^4 + 35t^5 + 77t^6 + 143t^7 + 285t^8 + 512t^9 + 939t^{10}$
13	"S_510d"	120	$1 + t + 2t^2 + 4t^3 + 6t^4 + 6t^5 + 6t^6 + 4t^7 + 2t^8 + t^9 + t^{10}$	$1 + t + 3t^2 + 7t^3 + 17t^4 + 35t^5 + 76t^6 + 149t^7 + 291t^8 + 539t^9 + 974t^{10}$
14	"[2^5]5"	160	$1 + t + 3t^2 + 6t^3 + 9t^4 + 11t^5 + 9t^6 + 6t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 12t^3 + 32t^4 + 76t^5 + 164t^6 + 332t^7 + 638t^8 + 1166t^9 + 2052t^{10}$
15	"[2^4]D5"	160	$1 + t + 3t^2 + 4t^3 + 7t^4 + 8t^5 + 7t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 22t^4 + 45t^5 + 97t^6 + 184t^7 + 356t^8 + 634t^9 + 1124t^{10}$
16	"1/2[2^5]D5"	160	$1 + t + 3t^2 + 4t^3 + 7t^4 + 7t^5 + 7t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 22t^4 + 44t^5 + 96t^6 + 180t^7 + 352t^8 + 622t^9 + 1112t^{10}$
17	"[5^2:4]2"	200	$1 + t + 2t^2 + 2t^3 + 4t^4 + 4t^5 + 4$	$1 + t + 3t^2 + 5t^3 + 13t^4 + 23t^5 +$

			$t^6 + 2t^7 + 2t^8 + t^9 + t^{10}$	$49t^6 + 89t^7 + 176t^8 + 313t^9 + 571t^{10}$
18	"[5^2:4]2_2"	200	$1 + t + 2t^2 + 2t^3 + 3t^4 + 4t^5 + 3t^6 + 2t^7 + 2t^8 + t^9 + t^{10}$	$1 + t + 3t^2 + 5t^3 + 12t^4 + 23t^5 + 47t^6 + 89t^7 + 172t^8 + 313t^9 + 564t^{10}$
19	"[5^2:4_2]2"	200	$1 + t + 2t^2 + 2t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 + 2t^8 + t^9 + t^{10}$	$1 + t + 3t^2 + 5t^3 + 13t^4 + 23t^5 + 50t^6 + 89t^7 + 178t^8 + 313t^9 + 576t^{10}$
20	"[5^2:4_2]2_2"	200	$1 + t + 2t^2 + 2t^3 + 4t^4 + 4t^5 + 4t^6 + 2t^7 + 2t^8 + t^9 + t^{10}$	$1 + t + 3t^2 + 5t^3 + 13t^4 + 23t^5 + 48t^6 + 89t^7 + 174t^8 + 313t^9 + 566t^{10}$
21	"[D5^2]2"	200	$1 + t + 3t^2 + 4t^3 + 6t^4 + 6t^5 + 6t^6 + 4t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 8t^3 + 21t^4 + 41t^5 + 87t^6 + 162t^7 + 308t^8 + 540t^9 + 947t^{10}$
22	"S5[x]2"	240	$1 + t + 3t^2 + 3t^3 + 6t^4 + 6t^5 + 6t^6 + 3t^7 + 3t^8 + t^9 + t^{10}$	$1 + t + 4t^2 + 7t^3 + 19t^4 + 35t^5 + 76t^6 + 136t^7 + 263t^8 + 452t^9 + 800t^{10}$