Orbit-length Partitions of Sets and Sequences under G (Taken from L. Soicher and J. McKay, 'Computing Galois groups over the rationals,' *J Number Theory* **20** (1985) 273-281.)

G	2-sets	3-sets	2-sequences
Degree 3			
$+A_3$			3^2
S_3			6
Degree 4			
Z_4	$2, 4$		4^3
$+V_4$	2^3		4^3
D_4	$2, 4$		$4, 8$
$+A_4$	6		12
S_4	6		12
Degree 5			
$+Z_5$	5^2		5^4
$+D_5$	5^2		10^2
F_{20}	10		20
$+A_5$	10		20
S_5	10		20
Degree 6			
Z_6	$3, 6^2$	$2, 6^3$	6^5
S_3	$3^3, 6$	$2, 6^3$	6^5
D_6	$3, 6^2$	$2, 6, 12$	$6, 12^2$
$+A_4$	$3, 12$	$4^2, 6^2$	$6, 12^2$
G_{18}	$6, 9$	$2, 18$	$6^2, 18$
G_{24}	$3, 12$	$6^2, 8$	$6, 12^2$
$+S_4/V_4$	$3, 12$	$4^2, 12$	$6, 24$
S_4/Z_4	$3, 12$	$8, 12$	$6, 24$
G_{36}^1	$6, 9$	$2, 18$	$12, 18$
$+G_{36}^2$	$6, 9$	$2, 18$	$12, 18$
G_48	$3, 12$	$8, 12$	$6, 24$
$+\mathrm{PSL}_2(5)$	15	10^2	30
G_{72}	$6, 9$	$2, 18$	$12, 18$
$\mathrm{PGL}_2(5)$	15	20	30
$+A_6$	15	20	30
S_6	15	20	30
Degree 7			
$+Z_7$	7^3	7^5	7^6
D_7	7^3	$7^3, 14$	14^3
$+F_{21}$	21	$7^2, 21$	21^2
F_{42}	21	$14, 21$	42
$+\mathrm{PSL}_3(2)$	21	$7, 28$	42
$+A_7$	21	35	42
S_7	21	35	42