Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order at most 10

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Abstract

The chromatic polynomial $P(G, \lambda)$ gives the number of proper colourings of a graph in at most λ colours. A graph G is *clique-separable* if it can be obtained by identifying an r-clique in a graph H_1 with an r-clique in a graph H_2. In this case the chromatic polynomial of G is $P(G, \lambda) = P(H_1, \lambda)P(H_2, \lambda)/P(K_r, \lambda)$. This paper tabulates the Galois groups of all chromatic polynomials of degree at most 10 (excluding chromatic polynomials of clique-separable graphs). We explicitly list the chromatic polynomials of graphs of order at most 8 with their Galois group. In addition, a summary of the Galois groups of chromatic polynomials of order $5 \leq n \leq 10$ is given. This includes the number of chromatic polynomials and the number of graphs with each Galois group for a given n.

1 Introduction

The chromatic polynomial $P(G, \lambda)$ gives the number of proper colourings of a graph G in at most λ colours. We are interested in investigating the chromatic polynomial using algebraic means. We wish to study the relationship between a graph and the Galois group of its chromatic polynomial.

A graph G is said to be *strongly non-clique-separable* if it is neither clique-separable nor chromatically equivalent to any clique-separable graph. In this document we tabulate the Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order at most 10. We give all chromatic polynomials of graphs of order at most 8 with their Galois group. For chromatic polynomials of graphs of orders 9 and 10 we give a list of the Galois groups and the number of times they occur without listing the individual chromatic polynomials. Any chromatic polynomial is solvable if and only if its chromatic factors are solvable. Thus, this list of chromatic polynomials and their associated Galois groups enables

us to determine all chromatic polynomials of degree at most 10 that are solvable.

Pari [1] was used to compute the Galois groups of all the irreducible non-linear factors of the chromatic polynomials. The tables in this paper give a list of the Galois groups of all irreducible non-linear factors of a given chromatic polynomial. The notation used is that given in Appendix A of [2]. In the case where the chromatic polynomial has a single irreducible non-linear factor, the Galois group of this factor is the Galois group of the entire polynomial. When the chromatic polynomial has more than one irreducible non-linear factor, we use Magma [9] to compute its Galois group as Pari is not able to compute Galois groups of reducible polynomials. In this case we give the order and the generators of the groups found by Magma. In other cases there is no entry given in the Generators column of the tables.

A list of all graphs having a given chromatic polynomial is included in Tables 1, 2, 3, 5, 7-9, 11-41 for orders 3 to 8. This list consists of a list of graph numbers corresponding to the numbering in B. McKay's collection of simple connected graphs [7]. Tables 4, 6, 10, 42, 43-44 and 45-47 give a summary of all Galois groups of chromatic polynomials of strongly non-clique-separable graphs of orders $5 \leq n \leq 10$.

2 Chromatic polynomials of strongly non-clique-separable graphs of order at most 3

The chromatic polynomials of strongly non-clique-separable graphs of order at most 3 are given in Table 1.

Chromatic polynomial	Graph	Galois group
λ	K_1	trivial group
$\lambda(\lambda-1)$	K_2	trivial group
$\lambda(\lambda-1)(\lambda-2)$	K_3	trivial group

Table 1: Chromatic polynomials of strongly non-clique-separable graphs of order at most 3 and their Galois groups.

These chromatic polynomials all have the trivial Galois group. Any chromatic polynomial that factorises into linear factors in $\mathbb{Z}[\lambda]$ has the trivial Galois group. The class of chordal graphs is a class of graphs that have only integer roots [8]. These graphs are not the only graphs with only integer roots. There exist graphs that have only integer roots with chordless cycles of length 4, 5, 6, 7, 8, 9, 10, 11 and 13 [4, 5, 6]. D'Atonna, Mereghetti and Zamparini [3] showed that there are 224 non-chordal graphs of at most 9 vertices that have no complex chromatic roots: 206 of these graphs have only integer chromatic roots.

3 Chromatic polynomials of strongly non-clique-separable graphs of order 4

There are only two chromatic polynomials of strongly non-clique-separable graphs of order 4: the chromatic polynomial of the complete graph K_4

and the chromatic polynomial of the cycle of order 4 (see Table 2). The Galois group of the first is the trivial group and the Galois group of the second is the symmetric group S_2.

Chromatic polynomial	Number of graphs	Galois group	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)$	1	trivial group	K_4
$\lambda(\lambda-1)(\lambda^2-3\lambda+3)$	1	S_2	Cycle on 4 vertices

Table 2: Chromatic polynomials of strongly non-clique-separable graphs of order 4 and their Galois groups.

4 Chromatic polynomials of strongly non-clique-separable graphs of order 5

There are five chromatic polynomials of strongly non-clique-separable of order 5: three with Galois group S_2, one with Galois group S_3 and one, the chromatic polynomial of K_5, with the trivial Galois group (see Table 3). These each correspond to a chromatically unique graph.

Chromatic polynomial	Number of graphs	Galois group	List of graphs	Graph
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)$	1	trivial group	21	K_5
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-2\lambda+2)$	1	S_2	14	C_5
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)$	1	S_2	18	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)$	1	S_2	19	W_4
$\lambda(\lambda-1)(\lambda^3-5\lambda^2+10\lambda-7)$	1	S_3	7	$K_{2,3}$

Table 3: Chromatic polynomials of strongly non-clique-separable graphs of order 5 and their Galois groups.

Galois group	# of chromatic polynomials	# of graphs
Trivial group	1	1
S_2	3	3
S_3	1	1

Table 4: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 5.

5 Chromatic polynomials of strongly non-clique-separable graphs of order ≥ 6

Chromatic polynomial	Number of graphs	Galois group	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)$	1	trivial group	112	K_6
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-3\lambda+4)$	1	S_2	96	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+6)$	1	S_2	68	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+8)$	2	S_2	71 87	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+8)$	1	S_2	105	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-6\lambda+10)$	1	S_2	108	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-7\lambda+13)$	1	S_2	110	$C_4 \oplus K_2$
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-4\lambda^2+7\lambda-5)$	1	S_3	38	$\Theta_{2,2,3}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-5\lambda^2+9\lambda-7)$	1	S_3	95	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-6\lambda^2+13\lambda-11)$	1	S_3	97	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-6\lambda^2+14\lambda-11)$	1	S_3	44	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-6\lambda^2+14\lambda-13)$	1	S_3	99	Triangular prism
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-7\lambda^2+18\lambda-17)$	1	S_3	101	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-7\lambda^2+19\lambda-19)$	1	S_3	73	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-8\lambda^2+23\lambda-23)$	2	S_3	74 107	
$\lambda(\lambda-1)(\lambda-2)(\lambda^3-9\lambda^2+29\lambda-32)$	1	S_3	109	
$\lambda(\lambda-1)(\lambda^4-5\lambda^3+10\lambda^2-10\lambda+5)$	1	$C(4)=4$	47	C_6
$\lambda(\lambda-1)(\lambda^4-7\lambda^3+21\lambda^2-29\lambda+15)$	1	S_4	13	$K_{2,4}$
$\lambda(\lambda-1)(\lambda^4-7\lambda^3+21\lambda^2-30\lambda+17)$	1	S_4	66	
$\lambda(\lambda-1)(\lambda^4-8\lambda^3+28\lambda^2-47\lambda+31)$	1	S_4	72	$K_{3,3}$

Table 5: Chromatic polynomials of strongly non-clique-separable graphs of order 6 and their Galois groups.

Galois group	# of chromatic polynomials	# of graphs
Trivial group	1	1
S_2	6	7
S_3	9	10
$C(4)=4$	1	1
S_4	3	3

Table 6: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 6.

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda-6)$	1	trivial group		853	K_7
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-2\lambda+3)$	1	S_2		446	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-3\lambda+5)$	1	S_2		477	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+7)$	1	S_2		204	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+9)$	1	S_2		541	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^2-6\lambda+11)$	2	S_2		584 764	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-3\lambda+4)$	1	S_2		771	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-4\lambda+6)$	1	S_2		774	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-5\lambda+9)$	2	S_2		707 828	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-6\lambda+11)$	2	S_2		709 834	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-6\lambda+12)$	3	S_2		714 801 835	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-7\lambda+14)$	3	S_2		715 802 846	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-7\lambda+15)$	1	S_2		838	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^2-6\lambda+11)$	1	S_2		844	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^2-7\lambda+14)$	1	S_2		843	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^2-8\lambda+17)$	1	S_2		848	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^2-9\lambda+21)$	1	S_2		851	$C_4 \oplus K_3$
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-4\lambda^2+8\lambda-6)$	1	S_3		104	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+10\lambda-9)$	1	S_3		451	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+11\lambda-9)$	1	S_3		149	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+14\lambda-14)$	1	S_3		523	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+15\lambda-13)$	1	S_3		178	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+15\lambda-15)$	1	S_3		494	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-7\lambda^2+19\lambda-17)$	2	S_3		180 290	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-7\lambda^2+19\lambda-20)$	1	S_3		647	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-7\lambda^2+20\lambda-21)$	1	S_3		208	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^3-8\lambda^2+24\lambda-25)$	3	S_3		211 391 500	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-10\lambda^2+35\lambda-43)$	1	S_3		836	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-10\lambda^2+36\lambda-46)$	2	S_3		724 839	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-11\lambda^2+42\lambda-55)$	2	S_3		726 840	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-11\lambda^2+43\lambda-58)$	1	S_3		849	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-12\lambda^2+50\lambda-71)$	1	S_3		850	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-6\lambda^2+12\lambda-10)$	1	S_3		767	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-6\lambda^2+15\lambda-15)$	1	S_3		649	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+17\lambda-16)$	1	S_3		772	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+18\lambda-15)$	1	S_3		415	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+19\lambda-20)$	3	S_3		656 825 826	

Table 7: Chromatic polynomials of strongly non-clique-separable graphs of order 7 and their Galois groups.

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+22\lambda-22)$	2	S_3		775 820	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+23\lambda-25)$	1	S_3		817	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-26)$	3	S_3		660 797 821	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+25\lambda-28)$	1	S_3		586	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+25\lambda-29)$	1	S_3		833	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+28\lambda-29)$	1	S_3		712	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+28\lambda-31)$	1	S_3		822	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+29\lambda-34)$	2	S_3		813 829	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-35)$	1	S_3		823	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-37)$	1	S_3		722	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+40\lambda^2-75\lambda+55)$	4	$C(4)=4$		579 613 640 819	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-21\lambda+11)$	1	$C(4)=4$		77	$\Theta_{2,2,2,3}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+31\lambda^2-49\lambda+31)$	1	$C(4)=4$		596	W_6
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-80\lambda+61)$	1	$E(4)=2[\times]2$		581	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-29\lambda+19)$	1	$E(4)=2[\times]2$		601	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-44\lambda+29)$	1	$E(4)=2[\times]2$		631	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+40\lambda^2-74\lambda+53)$	2	$D(4)$		669 699	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+40\lambda^2-76\lambda+58)$	1	$D(4)$		655	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-80\lambda+62)$	2	$D(4)$		701 706	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-85\lambda+69)$	1	$D(4)$		717	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-11\lambda^3+48\lambda^2-95\lambda+71)$	1	$D(4)$		671	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-13\lambda^3+67\lambda^2-158\lambda+142)$	1	$D(4)$		725	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-5\lambda^3+11\lambda^2-13\lambda+7)$	1	$D(4)$		265	$\Theta_{2,3,3}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-22\lambda+13)$	1	$D(4)$		450	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+19\lambda^2-25\lambda+15)$	1	$D(4)$		592	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-31\lambda+19)$	1	$D(4)$		453	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+25\lambda^2-38\lambda+25)$	1	$D(4)$		602	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+32\lambda^2-54\lambda+37)$	3	$D(4)$		550 607 768	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-57\lambda+39)$	3	$D(4)$		564 609 693	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-61\lambda+43)$	1	$D(4)$		698	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-81\lambda+64)$	1	S_4		827	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-84\lambda+65)$	1	S_4		213	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-10\lambda^3+43\lambda^2-89\lambda+73)$	1	S_4		718	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-11\lambda^3+48\lambda^2-96\lambda+73)$	3	S_4		214 585 642	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-11\lambda^3+48\lambda^2-97\lambda+76)$	3	S_4		658 702 704	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-11\lambda^3+49\lambda^2-103\lambda+85)$	1	S_4		708	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-11\lambda^3+50\lambda^2-108\lambda+92)$	2	S_4		719 721	

Table 8: Chromatic polynomials of strongly non-clique-separable graphs of order 7 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-12\lambda^3+57\lambda^2-124\lambda+103)$	1	S_4		713	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-12\lambda^3+58\lambda^2-131\lambda+115)$	2	S_4		720 723	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-6\lambda^3+14\lambda^2-16\lambda+9)$	1	S_4		591	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-6\lambda^3+15\lambda^2-19\lambda+11)$	1	S_4		590	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-28\lambda+17)$	3	S_4		365 589 594	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-29\lambda+17)$	1	S_4		316	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-32\lambda+21)$	1	S_4		604	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-35\lambda+24)$	1	S_4		548	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+25\lambda^2-37\lambda+23)$	2	S_4		544 595	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-41\lambda+25)$	1	S_4		545	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-41\lambda+27)$	2	S_4		597 629	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-42\lambda+29)$	2	S_4		549 605	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-41\lambda+23)$	1	S_4		85	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-43\lambda+27)$	2	S_4		387 561	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+31)$	1	S_4		563	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-46\lambda+33)$	1	S_4		626	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-49\lambda+36)$	1	S_4		551	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-56\lambda+37)$	1	S_4		697	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-58\lambda+41)$	3	S_4		633 652 784	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-59\lambda+43)$	2	S_4		552 648	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-59\lambda+44)$	1	S_4		773	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-63\lambda+47)$	1	S_4		578	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-63\lambda+48)$	1	S_4		654	
$\lambda(\lambda-1)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-66\lambda+50)$	1	S_4		700	
$\lambda(\lambda-1)(\lambda^5-10\lambda^4+45\lambda^3-108\lambda^2+135\lambda-69)$	1	S_5		206	
$\lambda(\lambda-1)(\lambda^5-11\lambda^4+55\lambda^3-147\lambda^2+204\lambda-115)$	1	S_5		212	$K_{3,4}$
$\lambda(\lambda-1)(\lambda^5-7\lambda^4+21\lambda^3-34\lambda^2+31\lambda-13)$	1	S_5		131	$\Theta_{2,2,4}$
$\lambda(\lambda-1)(\lambda^5-9\lambda^4+36\lambda^3-74\lambda^2+76\lambda-31)$	1	S_5		19	$K_{2,5}$
$\lambda(\lambda-1)(\lambda^5-9\lambda^4+36\lambda^3-76\lambda^2+83\lambda-37)$	1	S_5		176	
$\lambda(\lambda-1)(\lambda^5-9\lambda^4+36\lambda^3-77\lambda^2+87\lambda-41)$	1	S_5		190	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^2-\lambda+1)$	1	S_2, S_2	Order 2: $(1,2)(3,4)$	422	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^2-3\lambda+4)$	1	S_2, S_2	Order 4: $(1,2);(3,4)$	363	
$\lambda(\lambda-1)(\lambda^2-4\lambda+5)(\lambda^3-4\lambda^2+7\lambda-5)$	1	S_2, S_3	Order =12: $(1,2);(3,4,5);(3,4)$	593	

Table 9: Chromatic polynomials of strongly non-clique-separable graphs of order 7 and their Galois groups (continued).

Galois group	Generators	# of chromatic polynomials	# of graphs
Trivial group		1	1
S_2		16	23
S_3		30	41
$C(4) = 4$		3	6
$E(4) = 2[\times]2$		3	3
$D(4)$		14	20
S_4		31	46
S_5		6	6
S_2, S_2	Order 2: $(1,2)(3,4)$	1	1
S_2, S_2	Order 4: $(1,2)$; $(3,4)$	1	1
S_2, S_3	Order 12: $(1,2)$; $(3,4,5)$; $(3,4)$	1	1

Table 10: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 7.

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda-6)(\lambda-7)$	1	S_1		11117	K_8
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+8)$	1	S_2		1892	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+10)$	2	S_2		1284 1898	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+11)$	1	S_2		494	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^2-6\lambda+13)$	4	S_2		496 1286 1900 4686	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+10)$	1	S_2		2405	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-3\lambda+5)$	1	S_2		8469	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-4\lambda+7)$	4	S_2		6151 6508 6564 8495	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-5\lambda+10)$	2	S_2		4283 8951	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^2-6\lambda+13)$	2	S_2		4292 5842	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^2-6\lambda+12)$	1	S_2		7797	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-3)(\lambda^2-4\lambda+7)$	2	S_2		8328 9820	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-3)(\lambda^2-5\lambda+10)$	7	S_2		7258 8981 9443 9451 9893 10112 10660	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-3)(\lambda^2-5\lambda+11)$	1	S_2		9418	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-3)(\lambda^2-6\lambda+13)$	3	S_2		9440 9973 10915	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-4)(\lambda^2-4\lambda+7)$	1	S_2		10366	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-4)(\lambda^2-5\lambda+10)$	1	S_2		10878	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-4)(\lambda^2-6\lambda+13)$	1	S_2		9324	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-4)(\lambda^2-7\lambda+16)$	2	S_2		9331 10817	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda-4)(\lambda^2-8\lambda+18)$	4	S_2		9332 10359 10818 10971	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-6\lambda+12)$	1	S_2		10446	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-7\lambda+15)$	3	S_2		10448 11003 11065	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-7\lambda+16)$	2	S_2		10458 10977	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-8\lambda+18)$	2	S_2		10452 11082	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-8\lambda+19)$	4	S_2		10459 10979 11010 11087	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-9\lambda+22)$	3	S_2		10460 10981 11011	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-9\lambda+23)$	2	S_2		11092 11110	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-4)(\lambda^2-9\lambda+24)$	1	S_2		11109	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-10\lambda+26)$	1	S_2		11108	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-11\lambda+31)$	1	S_2		11115	$C_4 \oplus K_4$
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-7\lambda+11)$	1	S_2		11104	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-7\lambda+15)$	1	S_2		11101	

Table 11: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups .

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-8\lambda+18)$	1	S_2		11102	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda-5)(\lambda^2-9\lambda+22)$	1	S_2		11100	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-4\lambda^2+8\lambda-7)$	1	S_3		1729	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+10\lambda-10)$	1	S_3		5015	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+11\lambda-11)$	2	S_3		2157 2905	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+12\lambda-10)$	1	S_3		407	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-5\lambda^2+12\lambda-11)$	1	S_3		1862	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+15\lambda-16)$	3	S_3		2158 2985 5269	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+15\lambda-17)$	1	S_3		2857	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+16\lambda-15)$	1	S_3		461	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-6\lambda^2+16\lambda-17)$	1	S_3		2123	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-7\lambda^2+20\lambda-22)$	2	S_3		1444 2290	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-2)(\lambda^3-7\lambda^2+21\lambda-23)$	1	S_3		522	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-5\lambda^2+10\lambda-10)$	1	S_3		8464	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-6\lambda^2+13\lambda-13)$	1	S_3		8482	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-6\lambda^2+15\lambda-16)$	2	S_3		6507 8311	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-6\lambda^2+16\lambda-17)$	1	S_3		3483	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+17\lambda-17)$	1	S_3		10502	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+18\lambda-19)$	2	S_3		8488 8501	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+18\lambda-20)$	2	S_3		6546 10593	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+19\lambda-22)$	1	S_3		6647	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-19)$	1	S_3		2082	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-22)$	2	S_3		3493 5821	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-23)$	3	S_3		3858 6565 8503	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+23\lambda-26)$	2	S_3		10594 6648	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-23)$	2	S_3		2084 4894	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-28)$	2	S_3		7242 8506	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-29)$	1	S_3		7787	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-8\lambda^2+26\lambda-30)$	1	S_3		2409	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+29\lambda-35)$	2	S_3		10776 7810	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-34)$	5	S_3		2478 3502 5643 5829 7749	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-38)$	1	S_3		9441	

Table 12: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+35\lambda-41)$	2	S_3		10296 10404	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+36\lambda-42)$	1	S_3		9129	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+36\lambda-43)$	1	S_3		10282	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+36\lambda-44)$	10	S_3		4321 4567 6243 7572 7573 7839 9062 9092 10667 10724	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+36\lambda-47)$	4	S_3		9458 10195 10831 10922	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+37\lambda-49)$	4	S_3		4565 9466 9561 9979	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+37\lambda-50)$	5	S_3		9461 10812 10835 11039 11047	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+37\lambda-51)$	1	S_3		10918	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+38\lambda-52)$	3	S_3		4570 7575 9064	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-10\lambda^2+38\lambda-54)$	1	S_3		11046	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-6\lambda^2+14\lambda-14)$	3	S_3		10564 10578 8321	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-6\lambda^2+15\lambda-16)$	2	S_3		6651 8313	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+18\lambda-19)$	1	S_3		9758	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+18\lambda-20)$	1	S_3		10592	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+19\lambda-22)$	1	S_3		9170	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-21)$	2	S_3		4530 8988	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-22)$	8	S_3		6656 7212 7527 7811 9020 9194 9722 10642	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+20\lambda-23)$	2	S_3		9173 9821	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-7\lambda^2+21\lambda-24)$	2	S_3		4429 7807	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+23\lambda-26)$	2	S_3		10603 10730	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-25)$	2	S_3		4434 9097	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-28)$	9	S_3		8374 9172 9363 9822 9896 10367 10604 10781 10823	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-29)$	2	S_3		9183 10893	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+24\lambda-30)$	1	S_3		10187	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+25\lambda-27)$	2	S_3		9309 9436	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+25\lambda-31)$	3	S_3		9897 9898 10825	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+26\lambda-31)$	2	S_3		4313 9415	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-8\lambda^2+26\lambda-32)$	1	S_3		4438	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+29\lambda-35)$	2	S_3		9185 10824	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-34)$	2	S_3		9127 9312	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-38)$	6	S_3		9400 9899 10365 10784 10828 10951	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+30\lambda-39)$	1	S_3		10188	

Table 13: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+31\lambda-38)$	4	S_3		4442 7266 7546 8945	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+31\lambda-40)$	6	S_3		7568 9057 9419 9556 10233 10871	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+31\lambda-41)$	3	S_3		9457 10917 11017	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+31\lambda-42)$	2	S_3		10875 11014	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+32\lambda-40)$	2	S_3		4320 6242	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-3)(\lambda^3-9\lambda^2+32\lambda-43)$	1	S_3		4563	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+33\lambda-37)$	1	S_3		11043	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+34\lambda-37)$	1	S_3		9329	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+34\lambda-38)$	1	S_3		10345	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+34\lambda-41)$	1	S_3		10846	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+35\lambda-41)$	3	S_3		7841 9328 10815	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+35\lambda-45)$	1	S_3		11041	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+36\lambda-47)$	7	S_3		10226 10355 10883 10885 11022 11026 11063	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+37\lambda-49)$	2	S_3		10886 11049	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+37\lambda-50)$	3	S_3		10251 10965 11059	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-10\lambda^2+38\lambda-53)$	1	S_3		9611	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+40\lambda-46)$	1	S_3		10360	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+41\lambda-53)$	2	S_3		10864 11045	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+42\lambda-57)$	2	S_3		10993 11025	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+43\lambda-59)$	5	S_3		10253 10362 10967 11002 11051	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+43\lambda-61)$	2	S_3		10478 11004	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+44\lambda-62)$	4	S_3		9613 10257 10973 11084	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+44\lambda-63)$	2	S_3		11005 11079	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-11\lambda^2+45\lambda-65)$	1	S_3		11054	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+49\lambda-67)$	2	S_3		10363 11105	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+49\lambda-69)$	1	S_3		11052	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+50\lambda-73)$	2	S_3		11006 11067	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+51\lambda-75)$	2	S_3		11009 11055	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+51\lambda-77)$	2	S_3		10480 11094	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-12\lambda^2+52\lambda-79)$	1	S_3		11091	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-13\lambda^2+58\lambda-89)$	1	S_3		11088	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-13\lambda^2+59\lambda-93)$	2	S_3		10485 11096	

Table 14: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-14\lambda^2+67\lambda-109)$	2	S_3		10489 11097	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-14\lambda^2+68\lambda-113)$	1	S_3		11112	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-15\lambda^2+77\lambda-134)$	1	S_3		11114	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-7\lambda^2+15\lambda-13)$	1	S_3		10726	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-7\lambda^2+17\lambda-17)$	1	S_3		10728	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+21\lambda-21)$	1	S_3		10729	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+22\lambda-19)$	1	S_3		7761	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+22\lambda-23)$	1	S_3		10838	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+23\lambda-26)$	1	S_3		10840	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+24\lambda-25)$	1	S_3		9149	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+24\lambda-28)$	1	S_3		10375	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-8\lambda^2+25\lambda-29)$	1	S_3		9104	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+27\lambda-29)$	2	S_3		10734 10844	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+28\lambda-33)$	1	S_3		10843	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+29\lambda-31)$	1	S_3		9154	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+29\lambda-35)$	3	S_3		10390 10858 10860	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+30\lambda-35)$	2	S_3		9322 10769	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+30\lambda-38)$	1	S_3		10224	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+31\lambda-37)$	1	S_3		7840	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda-4)(\lambda^3-9\lambda^2+31\lambda-40)$	1	S_3		10882	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-48\lambda+34)$	2	$C(4)=4$		2153 8677	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-132\lambda+119)$	3	$C(4)=4$		9861 10151 10424	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+64\lambda^2-142\lambda+121)$	1	$C(4)=4$		9677	$C_6 \oplus K_2$
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+76\lambda^2-189\lambda+181)$	6	$C(4)=4$		9567 9914 10170 10868 11040 11044	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+17\lambda^2-24\lambda+13)$	1	E4		203	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+38\lambda^2-68\lambda+52)$	1	E4		10681	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-94\lambda+76)$	5	E4		9366 9669 9753 10371 10687	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-126\lambda+109)$	9	E4		9299 9772 9840 9956 10069 10079 10102 10120 10141	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-132\lambda+118)$	13	E4		9301 9310 9456 9521 9546 9849 9863 9909 10159 10288 10427 10920 10957	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-138\lambda+127)$	2	E4		10229 10914	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-196\lambda+193)$	4	E4		9592 10183 10930 11027	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+79\lambda^2-210\lambda+218)$	1	E4		11083	

Table 15: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-82\lambda+67)$	2	$D(4)$		4235 8435	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-85\lambda+67)$	1	$D(4)$		2471	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+15\lambda^2-18\lambda+11)$	1	$D(4)$		2672	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-21\lambda+13)$	2	$D(4)$		3033 7912	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-33\lambda+23)$	3	$D(4)$		2804 3126 5851	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-35\lambda+23)$	1	$D(4)$		2149	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-36\lambda+27)$	1	$D(4)$		3676	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-43\lambda+31)$	2	$D(4)$		5949 8382	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-46\lambda+34)$	7	$D(4)$		3677 5590 6577 6591 6712 8381 8746	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-45\lambda+27)$	1	$D(4)$		373	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+30\lambda^2-56\lambda+46)$	1	$D(4)$		2453	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-60\lambda+46)$	5	$D(4)$		2864 3566 6043 8154 8761	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+36\lambda^2-70\lambda+56)$	2	$D(4)$		4194 7430	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-72\lambda+56)$	1	$D(4)$		7456	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-78\lambda+57)$	1	$D(4)$		7900	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-82\lambda+67)$	12	$D(4)$		7522 8771 9169 9178 9209 9275 9763 9810 9817 9832 9923 9987	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-85\lambda+68)$	3	$D(4)$		6229 7007 8949	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-88\lambda+76)$	1	$D(4)$		10189	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+46\lambda^2-88\lambda+67)$	2	$D(4)$		9645 9673	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-89\lambda+61)$	1	$D(4)$		4052	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-100\lambda+85)$	4	$D(4)$		9828 9835 9888 10043	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-98\lambda+79)$	12	$D(4)$		7329 7523 8363 8370 9204 9475 9688 9706 10017 10040 10135 10370	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-104\lambda+88)$	20	$D(4)$		7257 8957 8982 9099 9167 9182 9413 9473 9697 9892 9925 10027 10048 10067 10091 10101 10130 10132 10140 10778	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-106\lambda+94)$	4	$D(4)$		9889 9996 10850 10894	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-99\lambda+75)$	1	$D(4)$		7902	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-110\lambda+97)$	4	$D(4)$		8959 9417 9438 9845	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+55\lambda^2-116\lambda+97)$	1	$D(4)$		9767	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-120\lambda+98)$	1	$D(4)$		9448	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-123\lambda+109)$	1	$D(4)$		10827	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-128\lambda+116)$	3	$D(4)$		10377 10851 10854	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-132\lambda+116)$	1	$D(4)$		7835	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-138\lambda+128)$	6	$D(4)$		9317 9405 9576 10234 10420 10429	

Table 16: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-138\lambda+129)$	1	$D(4)$		9581	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+60\lambda^2-144\lambda+137)$	1	$D(4)$		9589	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+60\lambda^2-144\lambda+138)$	3	$D(4)$		9583 9604 10419	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+65\lambda^2-149\lambda+133)$	4	$D(4)$		9376 9850 10124 10833	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-154\lambda+139)$	8	$D(4)$		9485 9558 9864 9910 9977 10160 10166 10396	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-157\lambda+149)$	1	$D(4)$		11019	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-160\lambda+148)$	9	$D(4)$		9318 9323 10147 10201 10293 10383 10409 10428 11035	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+69\lambda^2-175\lambda+175)$	1	$D(4)$		4581	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+76\lambda^2-188\lambda+178)$	5	$D(4)$		10244 10319 10353 10406 10417	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+76\lambda^2-190\lambda+185)$	2	$D(4)$		10221 11023	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-194\lambda+187)$	5	$D(4)$		9594 10172 10174 10349 10912	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-196\lambda+194)$	8	$D(4)$		10247 10249 10356 10413 10433 10435 10884 10962	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-198\lambda+201)$	1	$D(4)$		11058	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-203\lambda+205)$	1	$D(4)$		11050	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-203\lambda+206)$	3	$D(4)$		10252 10966 11064	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-203\lambda+207)$	3	$D(4)$		10445 10447 10466	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+79\lambda^2-210\lambda+220)$	3	$D(4)$		10463 10473 10976	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+87\lambda^2-228\lambda+226)$	2	$D(4)$		10324 10361	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-17\lambda^3+112\lambda^2-335\lambda+381)$	2	$D(4)$		10488 11111	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-7\lambda^3+18\lambda^2-22\lambda+13)$	1	$D(4)$		7017	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+26\lambda^2-40\lambda+26)$	1	$D(4)$		5618	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+26\lambda^2-43\lambda+31)$	1	$D(4)$		8389	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+27\lambda^2-46\lambda+34)$	2	$D(4)$		8391 10577	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+31\lambda^2-51\lambda+37)$	1	$D(4)$		9633	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+32\lambda^2-56\lambda+41)$	1	$D(4)$		8317	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+33\lambda^2-60\lambda+46)$	6	$D(4)$		7062 7355 8394 9733 9737 9823	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-86\lambda+71)$	1	A_4		4085	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-68\lambda+55)$	1	A_4		4178	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-86\lambda+71)$	3	A_4		8334 8968 9276	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-202\lambda+203)$	2	A_4		10245 10436	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-204\lambda+210)$	1	A_4		10449	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+35\lambda^2-68\lambda+55)$	3	A_4		6652 8346 9349	

Table 17: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-78\lambda+58)$	3	S_4		3827 4300 6352	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-79\lambda+59)$	5	S_4		2170 2748 3081 3265 5338	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-79\lambda+61)$	2	S_4		4372 4401	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+41\lambda^2-81\lambda+65)$	4	S_4		3857 4078 6346 8349	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-84\lambda+67)$	3	S_4		4296 5639 5825	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+42\lambda^2-86\lambda+70)$	1	S_4		3497	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+43\lambda^2-88\lambda+69)$	1	S_4		526	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+43\lambda^2-89\lambda+75)$	1	S_4		4207	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-10\lambda^3+45\lambda^2-99\lambda+90)$	1	S_4		2473	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-11\lambda^3+49\lambda^2-100\lambda+77)$	6	S_4		1479 2374 2750 3267 529 5340	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-11\lambda^3+49\lambda^2-100\lambda+79)$	1	S_4		4479	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-11\lambda^3+49\lambda^2-102\lambda+83)$	6	S_4		4087 4203 4302 6354 7549 9043	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-11\lambda^3+50\lambda^2-109\lambda+94)$	1	S_4		4289	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-11\lambda^3+51\lambda^2-113\lambda+100)$	2	S_4		4546 5840	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-12\lambda^3+58\lambda^2-129\lambda+110)$	2	S_4		4211 6356	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-5\lambda^3+11\lambda^2-12\lambda+7)$	1	S_4		7906	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-5\lambda^3+11\lambda^2-13\lambda+8)$	1	S_4		4970	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-5\lambda^3+12\lambda^2-15\lambda+8)$	1	S_4		711	$\Theta_{2,2,3,3}$
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-5\lambda^3+12\lambda^2-16\lambda+10)$	1	S_4		2882	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+15\lambda^2-19\lambda+12)$	1	S_4		3046	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+15\lambda^2-20\lambda+13)$	1	S_4		3038	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-22\lambda+14)$	3	S_4		3026 3041 5195	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-23\lambda+15)$	1	S_4		2894	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+16\lambda^2-23\lambda+16)$	1	S_4		5857	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+17\lambda^2-25\lambda+15)$	1	S_4		1854	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+17\lambda^2-25\lambda+16)$	1	S_4		2904	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+17\lambda^2-25\lambda+17)$	1	S_4		7945	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-6\lambda^3+17\lambda^2-25\lambda+18)$	1	S_4		5863	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+19\lambda^2-24\lambda+15)$	1	S_4		3505	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+19\lambda^2-25\lambda+16)$	2	S_4		5352 6410	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-28\lambda+18)$	2	S_4		3512 5017	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-29\lambda+20)$	1	S_4		3513	

Table 18: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+20\lambda^2-30\lambda+21)$	1	S_4		5858	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-30\lambda+19)$	2	S_4		3586 5011	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-31\lambda+21)$	1	S_4		8044	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-32\lambda+19)$	1	S_4		994	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-32\lambda+22)$	5	S_4		3062 3508 3525 3667 7964	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-32\lambda+23)$	2	S_4		3506 3527	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-33\lambda+21)$	1	S_4		2155	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-33\lambda+24)$	2	S_4		2814 5948	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+21\lambda^2-33\lambda+25)$	1	S_4		5860	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-33\lambda+19)$	1	S_4		312	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-34\lambda+22)$	2	S_4		2726 5889	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-34\lambda+23)$	2	S_4		7951 7969	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+22\lambda^2-36\lambda+25)$	1	S_4		2981	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-7\lambda^3+23\lambda^2-36\lambda+25)$	1	S_4		1450	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+25\lambda^2-38\lambda+26)$	1	S_4		6412	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-41\lambda+29)$	2	S_4		3507 4334	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-42\lambda+30)$	3	S_4		2817 3528 8480	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+26\lambda^2-43\lambda+32)$	3	S_4		5861 6288 8467	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+29)$	2	S_4		1356 2183	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+32)$	4	S_4		3306 5982 6693 6710	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+33)$	1	S_4		4332	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-46\lambda+31)$	1	S_4		2052	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-47\lambda+35)$	1	S_4		6031	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+27\lambda^2-47\lambda+36)$	2	S_4		2828 3564	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-47\lambda+32)$	3	S_4		2736 3253 4181	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-47\lambda+33)$	3	S_4		4110 4129 4464	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-49\lambda+35)$	2	S_4		2347 4054	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-49\lambda+37)$	1	S_4		2831	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-50\lambda+37)$	1	S_4		3245	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-50\lambda+38)$	1	S_4		3481	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+28\lambda^2-50\lambda+39)$	2	S_4		2863 4323	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+29\lambda^2-53\lambda+42)$	1	S_4		8752	

Table 19: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-8\lambda^3+29\lambda^2-54\lambda+43)$	1	S_4		2859	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+32\lambda^2-54\lambda+38)$	2	S_4		3529 7016	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+32\lambda^2-55\lambda+40)$	2	S_4		5862 9630	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+33\lambda^2-58\lambda+43)$	1	S_4		4335	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-57\lambda+35)$	2	S_4		375 743	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-60\lambda+42)$	5	S_4		2451 2746 3079 3263 5336	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+43)$	1	S_4		2074	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+45)$	4	S_4		2738 2744 3255 3261	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+46)$	6	S_4		3764 4062 4117 4184 5605 5790	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+47)$	5	S_4		3752 3763 4400 6093 9617	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+49)$	3	S_4		2427 3324 6000	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+50)$	4	S_4		2860 4058 6335 8348	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+51)$	1	S_4		4074	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+52)$	1	S_4		9801	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-65\lambda+52)$	1	S_4		2865	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+34\lambda^2-65\lambda+53)$	1	S_4		6646	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-65\lambda+48)$	1	S_4		4192	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-67\lambda+51)$	1	S_4		2368	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-67\lambda+53)$	1	S_4		3491	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-67\lambda+54)$	1	S_4		4076	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+35\lambda^2-68\lambda+54)$	1	S_4		2775	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^4-9\lambda^3+37\lambda^2-76\lambda+67)$	1	S_4		2419	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+37\lambda^2-61\lambda+42)$	1	S_4		7450	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+38\lambda^2-66\lambda+46)$	1	S_4		7040	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+38\lambda^2-67\lambda+49)$	1	S_4		9643	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-71\lambda+48)$	1	S_4		7809	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-71\lambda+52)$	8	S_4		6156 6746 7049 7248 7452 9627 9639 9663	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-71\lambda+53)$	4	S_4		7309 7317 9681 10033	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-72\lambda+53)$	2	S_4		8300 8319	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-72\lambda+55)$	3	S_4		9641 9744 10034	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-73\lambda+56)$	2	S_4		9241 10597	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+39\lambda^2-73\lambda+58)$	1	S_4		9365	

Table 20: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	G
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-73\lambda+49)$	1	S_4		4050	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-73\lambda+51)$	1	S_4		8915	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-74\lambda+54)$	4	S_4		6213 7223 7498 7552	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-76\lambda+59)$	4	S_4		7501 9625 9651 9680	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-77\lambda+59)$	1	S_4		8992	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-77\lambda+61)$	6	S_4		7322 8310 9656 9752 9755 9824	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-77\lambda+62)$	2	S_4		9751 10685	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-78\lambda+62)$	2	S_4		6653 10600	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-78\lambda+64)$	3	S_4		9826 9829 10030	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+40\lambda^2-79\lambda+65)$	1	S_4		9208	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-79\lambda+59)$	5	S_4		8824 8964 9013 9039 9272	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-79\lambda+60)$	1	S_4		10003	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-81\lambda+65)$	10	S_4		7458 8329 8347 8361 8948 8966 9685 9793 9819 10038	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-81\lambda+66)$	1	S_4		10029	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-82\lambda+68)$	9	S_4		10602 7253 8979 9694 9800 9813 9815 10025 10041	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-82\lambda+69)$	1	S_4		9361	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-83\lambda+68)$	1	S_4		7245	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-83\lambda+70)$	2	S_4		9827 9989	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-83\lambda+71)$	1	S_4		9470	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-84\lambda+71)$	1	S_4		10820	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+41\lambda^2-84\lambda+73)$	2	S_4		9983 10889	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-83\lambda+64)$	2	S_4		7558 9493	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-86\lambda+70)$	2	S_4		3865 6661	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-86\lambda+72)$	5	S_4		7254 9041 9359 9367 9985	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-87\lambda+73)$	2	S_4		8967 9016	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-87\lambda+74)$	6	S_4		8956 9166 9181 9692 9921 9992	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+42\lambda^2-87\lambda+75)$	2	S_4		9386 9469	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+43\lambda^2-91\lambda+78)$	1	S_4		9382	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+43\lambda^2-91\lambda+80)$	1	S_4		9394	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-10\lambda^3+43\lambda^2-92\lambda+81)$	1	S_4		9387	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+46\lambda^2-88\lambda+68)$	2	S_4		7457 10727	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+46\lambda^2-89\lambda+70)$	1	S_4		9762	

Table 21: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-90\lambda+65)$	1	S_4		10302	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-92\lambda+71)$	2	S_4		7502 10737	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-93\lambda+71)$	2	S_4		8305 8976	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-93\lambda+73)$	8	S_4		7324 9629 9665 9667	
				9671 9683 10036 10680	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-94\lambda+74)$	3	S_4		6657 9177 10601	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-95\lambda+79)$	1	S_4		9765	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+47\lambda^2-96\lambda+82)$	1	S_4		10837	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-100\lambda+83)$	2	S_4		9174 10756	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-100\lambda+86)$	3	S_4		9362 10732 10839	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-101\lambda+88)$	1	S_4		9368	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-96\lambda+74)$	6	S_4		7233 7559 8918 9046 9853 10274	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-98\lambda+77)$	2	S_4		8953 9005	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-99\lambda+80)$	3	S_4		7246 9145 10773	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-99\lambda+82)$	11	S_4		7255 7460 8980 9215 9690 9696	
				9766 9811 9833 10031 10115	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+48\lambda^2-99\lambda+83)$	2	S_4		9695 10042	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-101\lambda+79)$	1	S_4		8661	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-101\lambda+80)$	2	S_4		9336 10305	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-102\lambda+82)$	10	S_4		3868 6664 7004 7010 7200	
				8419 9147 9447 9497 9854	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-102\lambda+83)$	2	S_4		8336 8371	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-103\lambda+83)$	1	S_4		4538	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-103\lambda+86)$	8	S_4		7553 9042 9858 10007	
				10060 10133 10152 10795	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-104\lambda+89)$	4	S_4		9360 9369 9693 10061	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-105\lambda+89)$	1	S_4		7813	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-105\lambda+91)$	7	S_4		9184 9478 9836 9887	
				9994 10134 10136	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-105\lambda+92)$	5	S_4		9472 10368 10373 10847 10852	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-106\lambda+92)$	3	S_4		9100 10774 10821	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+49\lambda^2-106\lambda+95)$	1	S_4		10374	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-107\lambda+88)$	2	S_4		3874 6236	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-108\lambda+91)$	2	S_4		7543 9435	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-109\lambda+94)$	4	S_4		7263 9416 9439 10285	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-109\lambda+95)$	5	S_4		9477 9544 9895 10059 10129	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-109\lambda+96)$	2	S_4		9575 10205	

Table 22: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-110\lambda+98)$	8	S_4		9102 9388 9420 9904 10186 10286 10783 10853	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-110\lambda+99)$	1	S_4		9396	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-111\lambda+100)$	4	S_4		9545 9901 9902 10848	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+50\lambda^2-111\lambda+101)$	1	S_4		10190	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-111\lambda+92)$	1	S_4		2481	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-113\lambda+100)$	1	S_4		9315	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-114\lambda+101)$	2	S_4		9055 9573	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-115\lambda+105)$	3	S_4		9397 9402 9453	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-116\lambda+107)$	1	S_4		10204	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+51\lambda^2-116\lambda+108)$	1	S_4		9422	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-11\lambda^3+52\lambda^2-119\lambda+110)$	1	S_4		9580	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+55\lambda^2-115\lambda+94)$	5	S_4		7461 9374 9675 10118 10731	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-118\lambda+94)$	2	S_4		9108 10306	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-119\lambda+95)$	1	S_4		9009	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-119\lambda+97)$	4	S_4		9507 9855 10158 10277	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-121\lambda+101)$	3	S_4		7814 9335 10780	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-121\lambda+103)$	4	S_4		9698 9842 9847 10045	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-122\lambda+106)$	5	S_4		9370 9837 9844 9848 10841	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-122\lambda+107)$	2	S_4		9372 10121	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+56\lambda^2-123\lambda+110)$	1	S_4		11015	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-122\lambda+97)$	1	S_4		8663	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-123\lambda+100)$	8	S_4		2482 4317 6240 6666 7012 7202 8421 9120	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-124\lambda+101)$	2	S_4		4542 8674	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-125\lambda+104)$	1	S_4		11036	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-125\lambda+106)$	12	S_4		7264 7562 7564 8940 9049 9053 9223 9486 9859 9952 10153 10799	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-127\lambda+110)$	3	S_4		9445 10775 10916	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-127\lambda+112)$	9	S_4		9103 9399 9480 9846 10078 10123 10137 10289 10376	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-127\lambda+113)$	2	S_4		9482 10155	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-128\lambda+115)$	8	S_4		9401 9890 9905 9998 10080 10122 10826 10896	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-129\lambda+118)$	2	S_4		9404 10877	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+57\lambda^2-130\lambda+121)$	1	S_4		10191	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-129\lambda+110)$	1	S_4		8377	

Table 23: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-131\lambda+116)$	5	S_4		9316 9375 9944 10307 10423	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-133\lambda+119)$	1	S_4		10830	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-133\lambda+121)$	8	S_4		9421 9454 9903 10077 10131 10143 10873 10907	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-133\lambda+122)$	7	S_4		9398 9403 10210 10290 10849 11016 11030	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-133\lambda+123)$	1	S_4		10439	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-134\lambda+124)$	8	S_4		9906 9907 10192 10235 10236 10855 10874 10923	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-134\lambda+125)$	1	S_4		10211	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+58\lambda^2-135\lambda+128)$	1	S_4		10880	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-137\lambda+124)$	3	S_4		7569 9058 11038	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-137\lambda+125)$	1	S_4		10314	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-139\lambda+130)$	2	S_4		10196 10230	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-139\lambda+131)$	4	S_4		9424 10212 10924 11020	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-139\lambda+132)$	1	S_4		10440	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-140\lambda+133)$	2	S_4		9425 10231	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+59\lambda^2-140\lambda+134)$	1	S_4		10421	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+60\lambda^2-143\lambda+133)$	1	S_4		9602	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+60\lambda^2-145\lambda+141)$	1	S_4		10240	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-12\lambda^3+62\lambda^2-155\lambda+156)$	1	S_4		9608	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+65\lambda^2-145\lambda+119)$	2	S_4		4568 9061	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-153\lambda+136)$	4	S_4		9306 10308 10316 10403	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-155\lambda+142)$	9	S_4		9564 10082 10127 10144 10145 10215 10291 10845 10908	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-156\lambda+145)$	4	S_4		9406 9908 10834 10903	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+66\lambda^2-156\lambda+146)$	4	S_4		10216 10218 10856 10859	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-159\lambda+145)$	4	S_4		9464 9851 10315 10398	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-161\lambda+151)$	3	S_4		10088 10089 10910	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-161\lambda+152)$	4	S_4		10317 10391 10408 10425	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-162\lambda+154)$	10	S_4		9426 9585 9912 10168 10214 10237 10861 10876 10925 11018	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-162\lambda+155)$	5	S_4		10213 10217 10219 10411 11033	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-163\lambda+157)$	3	S_4		10222 10926 11021	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+67\lambda^2-163\lambda+158)$	1	S_4		10881	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-165\lambda+155)$	1	S_4		9407	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-166\lambda+158)$	2	S_4		9566 10318	

Table 24: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-167\lambda+160)$	5	S_4		9325 9565 9913 10169 10197	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-167\lambda+161)$	6	S_4		9584 9587 10220 10410 10431 11062	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-168\lambda+163)$	2	S_4		10232 11060	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-168\lambda+164)$	6	S_4		10225 10239 10407 10422 10432 10964	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-168\lambda+165)$	1	S_4		10443	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-169\lambda+166)$	3	S_4		9590 11075 11076	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+68\lambda^2-169\lambda+167)$	2	S_4		10241 11057	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+69\lambda^2-173\lambda+170)$	4	S_4		9591 9605 10474 11048	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+69\lambda^2-174\lambda+173)$	1	S_4		11077	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+69\lambda^2-174\lambda+174)$	2	S_4		10444 10472	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-13\lambda^3+70\lambda^2-180\lambda+184)$	2	S_4		9609 10471	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+75\lambda^2-178\lambda+155)$	1	S_4		10321	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-193\lambda+184)$	3	S_4		9330 10322 10400	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-195\lambda+190)$	3	S_4		10243 10863 10928	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+77\lambda^2-197\lambda+197)$	3	S_4		10242 11024 11061	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-200\lambda+197)$	1	S_4		9597	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-201\lambda+200)$	3	S_4		10227 10323 10434	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-202\lambda+202)$	3	S_4		4583 9598 10175	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+78\lambda^2-204\lambda+209)$	1	S_4		11078	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+79\lambda^2-209\lambda+216)$	5	S_4		9610 9612 10450 10464 10476	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-14\lambda^3+80\lambda^2-215\lambda+225)$	1	S_4		10482	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+87\lambda^2-229\lambda+229)$	5	S_4		4585 9599 10176 10255 10970	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+87\lambda^2-230\lambda+233)$	4	S_4		10246 10415 10437 11080	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+88\lambda^2-236\lambda+242)$	3	S_4		10256 10453 10972	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+88\lambda^2-237\lambda+245)$	2	S_4		11053 11072	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+88\lambda^2-238\lambda+249)$	2	S_4		10451 11085	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+89\lambda^2-242\lambda+252)$	1	S_4		9614	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+89\lambda^2-243\lambda+255)$	1	S_4		10454	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+89\lambda^2-244\lambda+258)$	2	S_4		10457 11066	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+89\lambda^2-245\lambda+261)$	1	S_4		11086	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+89\lambda^2-245\lambda+262)$	5	S_4		10468 10477 10479 10481 10978	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-15\lambda^3+90\lambda^2-251\lambda+271)$	1	S_4		10483	

Table 25: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-16\lambda^3+100\lambda^2-285\lambda+310)$	2	S_4		10486 10980	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-16\lambda^3+100\lambda^2-286\lambda+313)$	1	S_4		11090	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-16\lambda^3+100\lambda^2-287\lambda+317)$	3	S_4		10470 10484 11095	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-16\lambda^3+101\lambda^2-293\lambda+326)$	1	S_4		10487	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-16\lambda^3+99\lambda^2-278\lambda+297)$	2	S_4		10455 11089	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-18\lambda^3+125\lambda^2-392\lambda+465)$	1	S_4		11113	$C_4 \oplus C_4$
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-7\lambda^3+19\lambda^2-25\lambda+16)$	1	S_4		7026	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-7\lambda^3+20\lambda^2-28\lambda+18)$	1	S_4		7021	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-7\lambda^3+21\lambda^2-33\lambda+24)$	1	S_4		8379	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+24\lambda^2-34\lambda+22)$	1	S_4		7027	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+25\lambda^2-37\lambda+24)$	2	S_4		6466 6704	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+25\lambda^2-38\lambda+26)$	1	S_4		7029	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+25\lambda^2-39\lambda+24)$	1	S_4		7625	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+26\lambda^2-42\lambda+30)$	2	S_4		6737 9740	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+26\lambda^2-43\lambda+28)$	1	S_4		6645	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+26\lambda^2-43\lambda+32)$	1	S_4		10563	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+29)$	1	S_4		4033	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+27\lambda^2-45\lambda+32)$	2	S_4		6708 9776	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+28\lambda^2-49\lambda+35)$	2	S_4		7878 9788	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+28\lambda^2-50\lambda+38)$	1	S_4		8735	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-8\lambda^3+28\lambda^2-51\lambda+41)$	1	S_4		9778	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+30\lambda^2-46\lambda+31)$	1	S_4		9635	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+31\lambda^2-49\lambda+32)$	1	S_4		6147	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+31\lambda^2-49\lambda+33)$	1	S_4		6487	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+31\lambda^2-50\lambda+34)$	2	S_4		7030 7037	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+32\lambda^2-54\lambda+38)$	7	S_4		6709 6738 7039 7041 7046 9622 9637	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+32\lambda^2-55\lambda+36)$	1	S_4		6533	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+32\lambda^2-55\lambda+40)$	3	S_4		6782 9632 9654	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+32\lambda^2-55\lambda+41)$	2	S_4		7307 9742	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+33\lambda^2-53\lambda+31)$	1	S_4		1558	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+33\lambda^2-57\lambda+37)$	2	S_4		3856 4044	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+33\lambda^2-59\lambda+45)$	1	S_4		9621	

Table 26: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+33\lambda^2-60\lambda+47)$	1	S_4		9749	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-60\lambda+41)$	1	S_4		8821	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-61\lambda+44)$	2	S_4		6748 7186	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+45)$	6	S_4		6949 7894 8285 8343 8352 8628	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-62\lambda+46)$	5	S_4		6148 7283 8266 8357 9789	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+49)$	2	S_4		6649 6983	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+50)$	7	S_4		6981 7172 8314 8777 9792 9818 10598	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+51)$	2	S_4		8309 8345	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-64\lambda+52)$	1	S_4		10591	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-65\lambda+52)$	1	S_4		9816	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+34\lambda^2-65\lambda+53)$	3	S_4		8760 9799 9812	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+35\lambda^2-68\lambda+53)$	1	S_4		3850	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+35\lambda^2-68\lambda+54)$	1	S_4		8403	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^4-9\lambda^3+36\lambda^2-73\lambda+61)$	1	S_4		9381	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-119\lambda^2+151\lambda-83)$	3	$D(5)=5:2$		3537 7033 8088	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-126\lambda^2+167\lambda-95)$	10	$D(5)=5:2$		5870 6050 6720 7113 8069 8094 8388 8686 8744 10565	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-133\lambda^2+183\lambda-107)$	3	$D(5)=5:2$		6035 8213 8312	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-130\lambda^2+169\lambda-91)$	1	$F(5)=5:4$		7888	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+41\lambda^3-87\lambda^2+97\lambda-47)$	1	S_5		7915	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+41\lambda^3-87\lambda^2+99\lambda-51)$	2	S_5		3517 7023	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+41\lambda^3-88\lambda^2+102\lambda-53)$	1	S_5		8036	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+41\lambda^3-88\lambda^2+103\lambda-55)$	1	S_5		7024	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-92\lambda^2+106\lambda-53)$	1	S_5		7271	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-92\lambda^2+107\lambda-55)$	3	S_5		3588 6304 6464	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-93\lambda^2+109\lambda-53)$	1	S_5		3523	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-93\lambda^2+110\lambda-57)$	4	S_5		6694 8029 8046 8048	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-93\lambda^2+110\lambda-58)$	1	S_5		6703	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-94\lambda^2+112\lambda-55)$	1	S_5		2630	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-94\lambda^2+113\lambda-59)$	6	S_5		5849 5865 6699 6725 7963 7997	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-94\lambda^2+114\lambda-61)$	6	S_5		6700 6727 6849 7020 7968 8022	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-94\lambda^2+115\lambda-64)$	1	S_5		7028	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-95\lambda^2+116\lambda-59)$	1	S_5		3562	

Table 27: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-95\lambda^2+118\lambda-65)$	3	S_5		5867 8075 8384	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+42\lambda^3-95\lambda^2+119\lambda-67)$	2	S_5		6718 8385	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+124\lambda-65)$	1	S_5		8739	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+125\lambda-67)$	2	S_5		7279 8740	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+126\lambda-69)$	5	S_5		5855 6695 6714 8679 8742	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+127\lambda-71)$	3	S_5		3551 6729 6857	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+127\lambda-72)$	1	S_5		6733	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-100\lambda^2+128\lambda-73)$	1	S_5		6735	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-101\lambda^2+128\lambda-67)$	1	S_5		2861	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-101\lambda^2+129\lambda-71)$	2	S_5		5898 8732	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-101\lambda^2+130\lambda-73)$	5	S_5		6032 7959 8387 8729 8733	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-101\lambda^2+131\lambda-75)$	3	S_5		6719 8052 8731	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-98\lambda^2+114\lambda-53)$	1	S_5		1552	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-98\lambda^2+118\lambda-61)$	1	S_5		1452	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-98\lambda^2+118\lambda-62)$	1	S_5		7269	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-98\lambda^2+119\lambda-61)$	1	S_5		4331	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-99\lambda^2+120\lambda-61)$	2	S_5		5892 7275	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-99\lambda^2+121\lambda-61)$	2	S_5		3908 6585	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-99\lambda^2+121\lambda-63)$	4	S_5		5894 7277 7866 7973	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-99\lambda^2+123\lambda-67)$	2	S_5		3510 3531	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+43\lambda^3-99\lambda^2+124\lambda-69)$	1	S_5		7035	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-101\lambda^2+119\lambda-57)$	2	S_5		1282 1896	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-102\lambda^2+122\lambda-59)$	2	S_5		3949 6340	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-103\lambda^2+126\lambda-63)$	1	S_5		2066	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-104\lambda^2+131\lambda-69)$	1	S_5		4324	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-105\lambda^2+133\lambda-69)$	1	S_5		3940	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-105\lambda^2+133\lambda-71)$	1	S_5		7873	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-105\lambda^2+134\lambda-73)$	1	S_5		8680	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-105\lambda^2+136\lambda-77)$	4	S_5		3533 4448 6705 7286	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-106\lambda^2+138\lambda-77)$	1	S_5		6030	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-106\lambda^2+139\lambda-79)$	2	S_5		7270 8748	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-106\lambda^2+140\lambda-81)$	1	S_5		5869	

Table 28: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-106\lambda^2+140\lambda-82)$	1	S_5		6739
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+141\lambda-79)$	1	S_5		6331
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+142\lambda-81)$	1	S_5		8730
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+143\lambda-83)$	1	S_5		8202
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+143\lambda-84)$	1	S_5		6600
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+144\lambda-85)$	1	S_5		6033
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+144\lambda-86)$	1	S_5		7281
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-107\lambda^2+145\lambda-87)$	1	S_5		4328
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-108\lambda^2+148\lambda-90)$	1	S_5		8734
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+44\lambda^3-98\lambda^2+108\lambda-47)$	1	S_5		139
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+45\lambda^3-110\lambda^2+144\lambda-79)$	1	S_5		2165
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+45\lambda^3-110\lambda^2+144\lambda-81)$	1	S_5		7274
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+45\lambda^3-111\lambda^2+148\lambda-83)$	1	S_5		2415
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+45\lambda^3-112\lambda^2+153\lambda-91)$	1	S_5		3766
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+45\lambda^3-113\lambda^2+157\lambda-96)$	1	S_5		8727
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-10\lambda^4+46\lambda^3-118\lambda^2+167\lambda-103)$	1	S_5		2867
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-117\lambda^2+142\lambda-73)$	2	S_5		2412 5322
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-117\lambda^2+143\lambda-76)$	2	S_5		6307 7272
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-117\lambda^2+144\lambda-78)$	1	S_5		9634
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-118\lambda^2+147\lambda-79)$	4	S_5		3520 3532 7025 7031
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-119\lambda^2+152\lambda-86)$	1	S_5		6707
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-119\lambda^2+153\lambda-88)$	1	S_5		9739
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+50\lambda^3-120\lambda^2+156\lambda-89)$	1	S_5		10573
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-124\lambda^2+159\lambda-87)$	5	S_5		3536 3543 8067 8083 8096
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-125\lambda^2+160\lambda-83)$	2	S_5		2862 3656
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-125\lambda^2+162\lambda-89)$	8	S_5		5879 5920 7975 7983 8078 8128 8178 8218
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-125\lambda^2+163\lambda-92)$	2	S_5		6706 6734
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-125\lambda^2+164\lambda-93)$	2	S_5		4336 6736
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-125\lambda^2+164\lambda-94)$	3	S_5		7038 7287 7313
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-126\lambda^2+168\lambda-97)$	6	S_5		6582 6722 8750 9649 9794 10561
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-127\lambda^2+172\lambda-101)$	3	S_5		6583 6723 9735
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+51\lambda^3-127\lambda^2+173\lambda-104)$	1	S_5		9736

Table 29: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Grap
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-127\lambda^2+158\lambda-79)$	1	S_5		3959	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-129\lambda^2+165\lambda-85)$	3	S_5		3951 3957 4042	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-130\lambda^2+169\lambda-89)$	1	S_5		3953	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-130\lambda^2+170\lambda-93)$	4	S_5		5874 7987 8226 8228	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-131\lambda^2+173\lambda-95)$	1	S_5		8350	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-131\lambda^2+174\lambda-97)$	3	S_5		7180 7290 8681	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-131\lambda^2+175\lambda-99)$	8	S_5		3553 3635 3773 6038 7136 7181 8203 8688	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-131\lambda^2+176\lambda-101)$	4	S_5		4333 4458 7273 7306	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-131\lambda^2+178\lambda-106)$	1	S_5		9341	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-132\lambda^2+178\lambda-101)$	3	S_5		6115 7885 8753	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-132\lambda^2+179\lambda-103)$	9	S_5		2417 3545 7985 8208 8320 8338 8749 8754 9787	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-132\lambda^2+179\lambda-104)$	1	S_5		9783	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-132\lambda^2+180\lambda-106)$	1	S_5		6741	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-132\lambda^2+181\lambda-108)$	2	S_5		6743 9342	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-133\lambda^2+184\lambda-109)$	4	S_5		3568 7310 7353 9790	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-133\lambda^2+184\lambda-110)$	1	S_5		7282	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-133\lambda^2+185\lambda-111)$	2	S_5		4329 9652	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-133\lambda^2+186\lambda-114)$	1	S_5		9747	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-134\lambda^2+188\lambda-113)$	1	S_5		6980	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-134\lambda^2+189\lambda-115)$	2	S_5		2868 4342	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-134\lambda^2+189\lambda-116)$	3	S_5		8308 8736 9785	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+52\lambda^3-134\lambda^2+190\lambda-118)$	1	S_5		9797	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-134\lambda^2+174\lambda-91)$	1	S_5		2080	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-135\lambda^2+179\lambda-97)$	1	S_5		2388	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-136\lambda^2+183\lambda-103)$	1	S_5		3780	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-137\lambda^2+187\lambda-107)$	2	S_5		2454 7420	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-138\lambda^2+191\lambda-111)$	1	S_5		8605	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-138\lambda^2+191\lambda-112)$	1	S_5		7276	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-138\lambda^2+193\lambda-115)$	2	S_5		3570 6052	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-138\lambda^2+193\lambda-116)$	3	S_5		7292 7421 9351	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-138\lambda^2+194\lambda-118)$	1	S_5		4339	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-139\lambda^2+195\lambda-115)$	1	S_5		5881	

Table 30: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-139\lambda^2+196\lambda-117)$	2	S_5		3768 9347	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-139\lambda^2+197\lambda-120)$	3	S_5		8324 8756 9775	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-139\lambda^2+198\lambda-122)$	1	S_5		8728	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-140\lambda^2+200\lambda-122)$	1	S_5		9348	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-140\lambda^2+201\lambda-124)$	1	S_5		8344	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+53\lambda^3-140\lambda^2+202\lambda-127)$	2	S_5		9343 9777	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-141\lambda^2+192\lambda-107)$	2	S_5		1475 2370	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-142\lambda^2+196\lambda-111)$	1	S_5		2442	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-143\lambda^2+201\lambda-119)$	2	S_5		3782 4402	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-144\lambda^2+205\lambda-123)$	1	S_5		9350	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-145\lambda^2+210\lambda-129)$	1	S_5		2869	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-145\lambda^2+210\lambda-131)$	1	S_5		8339	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-145\lambda^2+211\lambda-132)$	1	S_5		9774	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-146\lambda^2+214\lambda-134)$	1	S_5		8767	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+54\lambda^3-146\lambda^2+216\lambda-139)$	1	S_5		9344	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-11\lambda^4+55\lambda^3-151\lambda^2+224\lambda-142)$	1	S_5		9355	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+59\lambda^3-147\lambda^2+188\lambda-103)$	1	S_5		6324	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+59\lambda^3-149\lambda^2+195\lambda-107)$	2	S_5		3535 7034	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-156\lambda^2+212\lambda-121)$	2	S_5		4337 9658	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-156\lambda^2+212\lambda-122)$	6	S_5		6770 6781 7288 7299 7314 8264	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-156\lambda^2+213\lambda-124)$	1	S_5		9642	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-157\lambda^2+216\lambda-125)$	9	S_5		10574 3569 4350 6603 6724 7337 8751 8784 9638	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-157\lambda^2+217\lambda-128)$	2	S_5		6744 9636	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-157\lambda^2+218\lambda-131)$	1	S_5		7316	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+60\lambda^3-158\lambda^2+222\lambda-134)$	1	S_5		9640	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-160\lambda^2+213\lambda-113)$	2	S_5		3961 4299	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-161\lambda^2+218\lambda-121)$	1	S_5		7898	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-161\lambda^2+219\lambda-123)$	6	S_5		2455 3820 4297 6211 8240 8252	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-162\lambda^2+220\lambda-119)$	1	S_5		4047	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-162\lambda^2+223\lambda-127)$	2	S_5		6755 7301	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-162\lambda^2+224\lambda-129)$	4	S_5		4404 4476 6759 7295	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-163\lambda^2+227\lambda-131)$	9	S_5		5882 6189 7989 8230 8242 8246 8400 8774 8846	

Table 31: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-164\lambda^2+232\lambda-137)$	10	S_5		3572 3848 6054 6607 6675 6752 7182 7349 8232 8234	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-164\lambda^2+233\lambda-139)$	3	S_5		4330 9659 9805	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-164\lambda^2+234\lambda-142)$	4	S_5		4340 6787 7064 9653	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-164\lambda^2+234\lambda-143)$	2	S_5		9620 9647	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-164\lambda^2+235\lambda-145)$	1	S_5		9352	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-165\lambda^2+237\lambda-143)$	6	S_5		2870 4344 6616 7359 8765 10023	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-165\lambda^2+238\lambda-146)$	10	S_5		7311 7356 7371 8354 8758 8789 9624 9650 9746 9791	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-165\lambda^2+239\lambda-148)$	1	S_5		9803	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-165\lambda^2+239\lambda-149)$	1	S_5		9750	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-165\lambda^2+240\lambda-151)$	1	S_5		9748	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-166\lambda^2+243\lambda-152)$	2	S_5		9655 9986	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+61\lambda^3-166\lambda^2+244\lambda-155)$	2	S_5		9798 9825	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-169\lambda^2+239\lambda-139)$	2	S_5		7432 8851	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-169\lambda^2+241\lambda-143)$	1	S_5		4403	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-170\lambda^2+244\lambda-145)$	4	S_5		3784 3790 3829 8608	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-170\lambda^2+244\lambda-146)$	1	S_5		8358	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-170\lambda^2+245\lambda-148)$	2	S_5		6763 7188	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-171\lambda^2+248\lambda-149)$	4	S_5		2420 3577 6061 8823	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-171\lambda^2+249\lambda-151)$	1	S_5		10021	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-171\lambda^2+251\lambda-156)$	3	S_5		4353 7373 8791	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-171\lambda^2+251\lambda-157)$	1	S_5		8340	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-171\lambda^2+252\lambda-159)$	1	S_5		7321	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-172\lambda^2+253\lambda-155)$	3	S_5		2871 3849 6619	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-172\lambda^2+254\lambda-158)$	5	S_5		6765 7424 8355 8778 8845	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-172\lambda^2+255\lambda-160)$	5	S_5		3860 4352 6654 9808 9830	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-172\lambda^2+256\lambda-163)$	3	S_5		8327 9377 9782	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-173\lambda^2+259\lambda-164)$	1	S_5		8768	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-173\lambda^2+260\lambda-166)$	1	S_5		9990	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-173\lambda^2+260\lambda-167)$	2	S_5		9814 9984	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-173\lambda^2+261\lambda-169)$	1	S_5		9988	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+62\lambda^3-173\lambda^2+261\lambda-170)$	1	S_5		9346	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-175\lambda^2+252\lambda-149)$	1	S_5		4303	

Table 32: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-176\lambda^2+258\lambda-157)$	3	S_5		3796 4295 6140	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-177\lambda^2+260\lambda-157)$	1	S_5		2469	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-177\lambda^2+262\lambda-162)$	3	S_5		7434 7555 8853	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-177\lambda^2+264\lambda-167)$	1	S_5		4408	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-178\lambda^2+265\lambda-163)$	1	S_5		2875	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-178\lambda^2+267\lambda-169)$	1	S_5		8360	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-178\lambda^2+268\lambda-170)$	1	S_5		6157	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+271\lambda-172)$	1	S_5		8843	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+271\lambda-173)$	1	S_5		9356	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+272\lambda-174)$	1	S_5		4398	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+273\lambda-177)$	1	S_5		8770	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+273\lambda-178)$	2	S_5		9357 9389	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-179\lambda^2+275\lambda-182)$	1	S_5		9345	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-180\lambda^2+277\lambda-181)$	1	S_5		9383	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+63\lambda^3-180\lambda^2+279\lambda-186)$	1	S_5		9982	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+64\lambda^3-181\lambda^2+265\lambda-157)$	1	S_5		2407	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+64\lambda^3-182\lambda^2+270\lambda-165)$	2	S_5		4508 7557	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+64\lambda^3-184\lambda^2+281\lambda-181)$	1	S_5		4409	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+64\lambda^3-185\lambda^2+285\lambda-184)$	1	S_5		3863	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+64\lambda^3-186\lambda^2+290\lambda-192)$	1	S_5		9379	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+65\lambda^3-190\lambda^2+293\lambda-188)$	1	S_5		4305	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-12\lambda^4+65\lambda^3-192\lambda^2+304\lambda-204)$	1	S_5		9393	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+70\lambda^3-194\lambda^2+278\lambda-167)$	1	S_5		7455	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-197\lambda^2+273\lambda-149)$	1	S_5		3963	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-200\lambda^2+288\lambda-169)$	6	S_5		3830 4304 4359 7230 7554 8914	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-200\lambda^2+290\lambda-174)$	1	S_5		7500	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-201\lambda^2+292\lambda-173)$	6	S_5		2470 3579 3792 6063 8244 8254	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-201\lambda^2+293\lambda-176)$	2	S_5		8916 9036	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-201\lambda^2+294\lambda-178)$	1	S_5		9672	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-202\lambda^2+297\lambda-179)$	8	S_5		2876 3811 4357 4433 6620 7210 8963 10641	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-203\lambda^2+303\lambda-188)$	14	S_5		38 62 4355 7251 7375 8356 8793 8977 9628 9664 9666 9670 9684 10016 10039	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-203\lambda^2+304\lambda-191)$	6	S_5		7323 8342 9354 9474 9686 10037	

Table 33: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+71\lambda^3-204\lambda^2+309\lambda-197)$	3	S_5		9668 9809 9831	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-208\lambda^2+309\lambda-187)$	1	S_5		9034	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-209\lambda^2+313\lambda-191)$	3	S_5		2878 3798 6142	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-209\lambda^2+314\lambda-193)$	2	S_5		4432 9004	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-210\lambda^2+319\lambda-200)$	7	S_5		7436 7440 7534 8855 9012 9271 9496	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-210\lambda^2+320\lambda-202)$	4	S_5		4399 7214 7488 10063	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-210\lambda^2+321\lambda-205)$	2	S_5		10001 4410	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-211\lambda^2+324\lambda-206)$	5	S_5		3864 4428 7382 7823 8954	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-211\lambda^2+325\lambda-209)$	6	S_5		7328 9164 9274 9283 10006 10020	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-211\lambda^2+326\lambda-212)$	1	S_5		9689	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-211\lambda^2+327\lambda-214)$	2	S_5		9378 9691	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-212\lambda^2+330\lambda-215)$	3	S_5		8772 9991 10026	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-212\lambda^2+331\lambda-218)$	3	S_5		9171 9180 9834	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-212\lambda^2+332\lambda-221)$	2	S_5		9358 9390	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+72\lambda^3-213\lambda^2+336\lambda-224)$	1	S_5		9993	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-216\lambda^2+329\lambda-203)$	1	S_5		2475	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-216\lambda^2+331\lambda-207)$	3	S_5		4510 4513 4536	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-217\lambda^2+336\lambda-214)$	2	S_5		4306 4311	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-217\lambda^2+338\lambda-219)$	3	S_5		4547 7444 9033	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-218\lambda^2+340\lambda-218)$	1	S_5		3871	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-218\lambda^2+342\lambda-223)$	4	S_5		4411 4415 7536 9029	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-218\lambda^2+343\lambda-226)$	1	S_5		8373	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-219\lambda^2+346\lambda-227)$	1	S_5		8865	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-219\lambda^2+347\lambda-230)$	2	S_5		9037 9513	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-219\lambda^2+348\lambda-232)$	3	S_5		4435 7256 9384	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-219\lambda^2+349\lambda-235)$	1	S_5		9380	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-219\lambda^2+350\lambda-237)$	1	S_5		9471	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-220\lambda^2+352\lambda-236)$	1	S_5		10058	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-220\lambda^2+353\lambda-239)$	2	S_5		9391 9476	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-220\lambda^2+354\lambda-241)$	1	S_5		9995	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+73\lambda^3-221\lambda^2+358\lambda-245)$	1	S_5		10203	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+74\lambda^3-222\lambda^2+341\lambda-211)$	1	S_5		531	

Table 34: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+74\lambda^3-224\lambda^2+354\lambda-230)$	2	S_5		4545 6234	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+74\lambda^3-226\lambda^2+365\lambda-246)$	1	S_5		4436	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+74\lambda^3-227\lambda^2+370\lambda-253)$	2	S_5		8958 9511	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+74\lambda^3-227\lambda^2+370\lambda-254)$	1	S_5		9395	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+75\lambda^3-232\lambda^2+377\lambda-253)$	1	S_5		4312	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+75\lambda^3-232\lambda^2+378\lambda-257)$	1	S_5		4552	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+75\lambda^3-235\lambda^2+393\lambda-277)$	1	S_5		9571	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+76\lambda^3-237\lambda^2+384\lambda-253)$	1	S_5		2480	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-13\lambda^4+76\lambda^3-240\lambda^2+401\lambda-280)$	1	S_5		4554	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+82\lambda^3-246\lambda^2+373\lambda-227)$	6	S_5		2479 2880 3800 532 6144 8256	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+82\lambda^3-246\lambda^2+374\lambda-229)$	2	S_5		4483 10303	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+82\lambda^3-248\lambda^2+384\lambda-242)$	12	S_5		3872 4307 4309 4364 7384 7442 7556 7824 8863 9045 9856 10797	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+82\lambda^3-249\lambda^2+390\lambda-251)$	9	S_5		4412 4416 9284 9674 10008 10053 10064 10100 10138	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+82\lambda^3-250\lambda^2+397\lambda-263)$	1	S_5		10119	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-255\lambda^2+400\lambda-253)$	3	S_5		4516 4550 9311	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-256\lambda^2+404\lambda-257)$	1	S_5		4560	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-257\lambda^2+411\lambda-269)$	3	S_5		4418 7446 8870	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-257\lambda^2+412\lambda-272)$	4	S_5		9038 9313 9483 9857	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-257\lambda^2+414\lambda-277)$	1	S_5		10154	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-258\lambda^2+417\lambda-278)$	5	S_5		4437 9449 9879 10068 10139	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-258\lambda^2+418\lambda-281)$	1	S_5		10149	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-259\lambda^2+423\lambda-287)$	1	S_5		9900	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+83\lambda^3-260\lambda^2+429\lambda-296)$	1	S_5		9997	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-265\lambda^2+432\lambda-287)$	1	S_5		4314	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-265\lambda^2+434\lambda-292)$	4	S_5		4548 9308 9569 9574	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-265\lambda^2+435\lambda-295)$	2	S_5		4553 9577	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-265\lambda^2+437\lambda-300)$	1	S_5		9481	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-266\lambda^2+438\lambda-296)$	1	S_5		4559	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-266\lambda^2+439\lambda-299)$	3	S_5		9519 9578 9862	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-266\lambda^2+441\lambda-304)$	1	S_5		9860	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-267\lambda^2+445\lambda-308)$	3	S_5		9414 9455 10142	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-267\lambda^2+446\lambda-311)$	1	S_5		9570	

Table 35: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-267\lambda^2+447\lambda-313)$	1	S_5		10207	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-268\lambda^2+450\lambda-314)$	1	S_5		10076	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+84\lambda^3-268\lambda^2+451\lambda-317)$	1	S_5		10208	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+85\lambda^3-274\lambda^2+462\lambda-322)$	4	S_5		4555 4561 7567 9568	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+85\lambda^3-276\lambda^2+473\lambda-338)$	1	S_5		9423	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+86\lambda^3-280\lambda^2+473\lambda-326)$	2	S_5		4573 6241	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+86\lambda^3-282\lambda^2+485\lambda-345)$	1	S_5		4574	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+86\lambda^3-283\lambda^2+490\lambda-353)$	1	S_5		9582	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-14\lambda^4+88\lambda^3-298\lambda^2+532\lambda-395)$	1	S_5		4577	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+94\lambda^3-300\lambda^2+481\lambda-307)$	1	S_5		4518	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+94\lambda^3-301\lambda^2+487\lambda-316)$	1	S_5		10280	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+94\lambda^3-302\lambda^2+492\lambda-323)$	4	S_5		4319 4420 7448 8872	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+94\lambda^3-303\lambda^2+498\lambda-332)$	5	S_5		4440 9491 9676 10304 10402	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+94\lambda^3-304\lambda^2+504\lambda-341)$	2	S_5		10074 10157	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+95\lambda^3-313\lambda^2+531\lambda-368)$	6	S_5		4556 4562 9314 9525 9579 10426	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+95\lambda^3-313\lambda^2+532\lambda-371)$	1	S_5		9484	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+95\lambda^3-314\lambda^2+537\lambda-377)$	1	S_5		10081	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+95\lambda^3-315\lambda^2+544\lambda-389)$	1	S_5		10209	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+96\lambda^3-322\lambda^2+558\lambda-395)$	1	S_5		4564	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+96\lambda^3-322\lambda^2+561\lambda-403)$	1	S_5		10441	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+96\lambda^3-323\lambda^2+565\lambda-407)$	3	S_5		9572 9911 10430	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+96\lambda^3-324\lambda^2+571\lambda-416)$	1	S_5		10238	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+97\lambda^3-330\lambda^2+581\lambda-418)$	3	S_5		4575 9601 9603	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-15\lambda^4+97\lambda^3-332\lambda^2+593\lambda-437)$	1	S_5		9606	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+107\lambda^3-367\lambda^2+639\lambda-449)$	2	S_5		4569 9527	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+107\lambda^3-368\lambda^2+645\lambda-458)$	2	S_5		10083 10405	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+108\lambda^3-379\lambda^2+685\lambda-506)$	2	S_5		10412 10442	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+109\lambda^3-387\lambda^2+708\lambda-529)$	1	S_5		10465	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+109\lambda^3-388\lambda^2+712\lambda-533)$	4	S_5		10475 4579 4582 9607	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-16\lambda^4+109\lambda^3-389\lambda^2+719\lambda-545)$	1	S_5		10462	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-17\lambda^4+121\lambda^3-442\lambda^2+820\lambda-614)$	1	S_5		4584	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-17\lambda^4+121\lambda^3-443\lambda^2+826\lambda-623)$	1	S_5		10414	

Table 36: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-17\lambda^4+122\lambda^3-454\lambda^2+866\lambda-671)$	1	S_5		10467	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-18\lambda^4+136\lambda^3-529\lambda^2+1047\lambda-836)$	1	S_5		10469	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-6\lambda^4+16\lambda^3-23\lambda^2+19\lambda-8)$	1	S_5		1656	$\Theta_{2,2,5}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-7\lambda^4+20\lambda^3-30\lambda^2+25\lambda-11)$	1	S_5		7905	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-7\lambda^4+22\lambda^3-38\lambda^2+37\lambda-17)$	1	S_5		7909	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-7\lambda^4+22\lambda^3-39\lambda^2+38\lambda-17)$	1	S_5		4964	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-7\lambda^4+22\lambda^3-39\lambda^2+39\lambda-17)$	1	S_5		913	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-7\lambda^4+22\lambda^3-39\lambda^2+40\lambda-19)$	1	S_5		3025	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+26\lambda^3-44\lambda^2+41\lambda-19)$	1	S_5		7908	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-48\lambda^2+47\lambda-21)$	1	S_5		1166	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-49\lambda^2+49\lambda-23)$	2	S_5		7907 7910	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-49\lambda^2+50\lambda-23)$	2	S_5		1323 6264	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-50\lambda^2+51\lambda-23)$	1	S_5		4658	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-50\lambda^2+52\lambda-25)$	1	S_5		4976	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+27\lambda^3-50\lambda^2+53\lambda-27)$	1	S_5		8016	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+28\lambda^3-54\lambda^2+58\lambda-27)$	2	S_5		1934 2501	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+28\lambda^3-54\lambda^2+58\lambda-29)$	1	S_5		8015	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+28\lambda^3-54\lambda^2+59\lambda-29)$	1	S_5		2097	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+28\lambda^3-55\lambda^2+61\lambda-31)$	1	S_5		7955	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-56\lambda^2+56\lambda-23)$	1	S_5		131	$\Theta_{2,2,2,2,3}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-56\lambda^2+58\lambda-26)$	1	S_5		1703	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-57\lambda^2+61\lambda-29)$	1	S_5		1371	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-58\lambda^2+63\lambda-29)$	2	S_5		1860 2507	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-58\lambda^2+64\lambda-31)$	1	S_5		2110	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-59\lambda^2+67\lambda-33)$	1	S_5		2214	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-8\lambda^4+29\lambda^3-60\lambda^2+70\lambda-37)$	1	S_5		5847	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+33\lambda^3-63\lambda^2+65\lambda-31)$	1	S_5		7911	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+33\lambda^3-63\lambda^2+66\lambda-33)$	1	S_5		8034	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-68\lambda^2+74\lambda-37)$	2	S_5		8026 8027	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-68\lambda^2+75\lambda-39)$	1	S_5		3516	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-69\lambda^2+76\lambda-37)$	2	S_5		4984 5852	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-69\lambda^2+77\lambda-37)$	1	S_5		3522	

Table 37: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-69\lambda^2+77\lambda-39)$	3	S_5		5853 8023 8032	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-69\lambda^2+78\lambda-41)$	1	S_5		8020	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+34\lambda^3-70\lambda^2+81\lambda-43)$	2	S_5		5864 7995	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-73\lambda^2+82\lambda-39)$	2	S_5		3511 3521	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-73\lambda^2+82\lambda-41)$	1	S_5		7949	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-73\lambda^2+83\lambda-41)$	2	S_5		1427 3504	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-73\lambda^2+83\lambda-43)$	1	S_5		3509	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-74\lambda^2+82\lambda-37)$	1	S_5		1539	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-74\lambda^2+84\lambda-41)$	1	S_5		6259	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-74\lambda^2+85\lambda-41)$	2	S_5		2509 2728	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-74\lambda^2+85\lambda-43)$	5	S_5		5296 7947 7960 7966 7991	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+87\lambda-43)$	1	S_5		5263	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+88\lambda-45)$	1	S_5		5891	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+89\lambda-45)$	1	S_5		3899	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+89\lambda-47)$	2	S_5		5848 7958	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+90\lambda-49)$	1	S_5		7957	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+35\lambda^3-75\lambda^2+91\lambda-51)$	1	S_5		6717	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-78\lambda^2+90\lambda-43)$	1	S_5		2795	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-79\lambda^2+94\lambda-47)$	1	S_5		2050	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-79\lambda^2+95\lambda-49)$	1	S_5		2264	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-79\lambda^2+96\lambda-53)$	1	S_5		3518	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-80\lambda^2+97\lambda-51)$	1	S_5		5885	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-80\lambda^2+98\lambda-53)$	1	S_5		7946	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+36\lambda^3-81\lambda^2+102\lambda-57)$	1	S_5		5897	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+37\lambda^3-83\lambda^2+101\lambda-53)$	1	S_5		2151	
$\lambda(\lambda-1)(\lambda-2)(\lambda^5-9\lambda^4+37\lambda^3-85\lambda^2+106\lambda-55)$	1	S_5		3936	
$\lambda(\lambda-1)(\lambda^6-7\lambda^5+21\lambda^4-35\lambda^3+35\lambda^2-21\lambda+7)$	1	$C(6)=6=3[\times]2$		2915	
$\lambda(\lambda-1)(\lambda^6-9\lambda^5+36\lambda^4-81\lambda^3+109\lambda^2-84\lambda+29)$	1	$2S_4(6)=[2^3]S(3)=2\wr S(3)$		288	$\Theta_{2,2,2,4}$
$\lambda(\lambda-1)(\lambda^6-10\lambda^5+45\lambda^4-115\lambda^3+176\lambda^2-152\lambda+57)$	1	S_6		439	
$\lambda(\lambda-1)(\lambda^6-10\lambda^5+45\lambda^4-115\lambda^3+176\lambda^2-153\lambda+59)$	1	S_6		3055	
$\lambda(\lambda-1)(\lambda^6-10\lambda^5+45\lambda^4-115\lambda^3+177\lambda^2-158\lambda+65)$	1	S_6		3515	

Table 38: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda^6-10\lambda^5+45\lambda^4-116\lambda^3+182\lambda^2-165\lambda+67)$	1	S_6		3524	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-150\lambda^3+230\lambda^2-187\lambda+63)$	1	S_6		26	$K_{2,6}$
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-153\lambda^3+245\lambda^2-212\lambda+77)$	1	S_6		371	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-154\lambda^3+250\lambda^2-220\lambda+81)$	1	S_6		3947	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-155\lambda^3+256\lambda^2-232\lambda+89)$	1	S_6		454	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-155\lambda^3+256\lambda^2-233\lambda+91)$	2	S_6		2734 4107	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-156\lambda^3+262\lambda^2-244\lambda+97)$	1	S_6		500	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-156\lambda^3+262\lambda^2-245\lambda+99)$	1	S_6		3706	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-157\lambda^3+269\lambda^2-262\lambda+113)$	1	S_6		3530	
$\lambda(\lambda-1)(\lambda^6-11\lambda^5+55\lambda^4-159\lambda^3+282\lambda^2-290\lambda+133)$	1	S_6		4327	Q_3
$\lambda(\lambda-1)(\lambda^6-12\lambda^5+66\lambda^4-205\lambda^3+372\lambda^2-368\lambda+153)$	1	S_6		507	
$\lambda(\lambda-1)(\lambda^6-12\lambda^5+66\lambda^4-206\lambda^3+379\lambda^2-386\lambda+169)$	1	S_6		4472	
$\lambda(\lambda-1)(\lambda^6-12\lambda^5+66\lambda^4-208\lambda^3+393\lambda^2-419\lambda+195)$	1	S_6		4338	
$\lambda(\lambda-1)(\lambda^6-13\lambda^5+78\lambda^4-264\lambda^3+519\lambda^2-552\lambda+245)$	1	S_6		524	
$\lambda(\lambda-1)(\lambda^6-13\lambda^5+78\lambda^4-265\lambda^3+526\lambda^2-570\lambda+261)$	1	S_6		4506	
$\lambda(\lambda-1)(\lambda^6-13\lambda^5+78\lambda^4-267\lambda^3+541\lambda^2-608\lambda+293)$	1	S_6		4407	
$\lambda(\lambda-1)(\lambda^6-14\lambda^5+91\lambda^4-334\lambda^3+711\lambda^2-817\lambda+391)$	1	S_6		530	$K_{3,5}$
$\lambda(\lambda-1)(\lambda^6-14\lambda^5+91\lambda^4-337\lambda^3+734\lambda^2-878\lambda+445)$	1	S_6		4551	
$\lambda(\lambda-1)(\lambda^6-15\lambda^5+105\lambda^4-419\lambda^3+981\lambda^2-1255\lambda+675)$	1	S_6		4576	$K_{4,4}$
$\lambda(\lambda-1)(\lambda^6-8\lambda^5+28\lambda^4-56\lambda^3+70\lambda^2-53\lambda+19)$	1	S_6		4634	$\Theta_{3,3,3}$
$\lambda(\lambda-1)(\lambda^6-9\lambda^5+36\lambda^4-81\lambda^3+109\lambda^2-85\lambda+31)$	1	S_6		2668	
$\lambda(\lambda-1)(\lambda^6-9\lambda^5+36\lambda^4-82\lambda^3+114\lambda^2-92\lambda+33)$	2	S_6		2497 383	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^2-4\lambda+8)$	1	S_2, S_2	Order = 2: (1, 2)(3, 4)	7289	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^2-4\lambda+7)$	3	S_2, S_2	Order = 2: (1, 2)(3, 4)	4326 5678 9657	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-4\lambda+7)$	1	S_2, S_2	Order = 2: (1, 2)(3, 4)	9648	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^2-2\lambda+3)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	4974	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^2-2\lambda+3)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	7956	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^2-3\lambda+5)$	2	S_2, S_2	Order = 4: (1, 2); (3, 4)	3304 5845	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^2-3\lambda+6)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	2827	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^2-4\lambda+7)$	3	S_2, S_2	Order = 4: (1, 2); (3, 4)	3710 4452 7132	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^2-3\lambda+5)$	2	S_2, S_2	Order = 4: (1, 2); (3, 4)	4325 6715	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^2-4\lambda+8)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	9804	

Table 39: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^2-5\lambda+10)$	2	S_2, S_2	Order = 4: (1, 2); (3, 4)	4237 6181	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^2-5\lambda+11)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	4281	
$\lambda(\lambda-1)(\lambda-2)(\lambda-2)(\lambda^2-5\lambda+9)(\lambda^2-4\lambda+5)$	2	S_2, S_2	Order = 4: (1, 2); (3, 4)	4132 4466	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-3\lambda+4)$	2	S_2, S_2	Order = 4: (1, 2); (3, 4)	7022 7036	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-4\lambda+6)$	8	S_2, S_2	Order = 4: (1, 2); (3, 4)	6742 6760 6772 6960 7053 7100 7178 9623	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-4\lambda+8)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	9779	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-5\lambda+10)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	10046	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-5\lambda+7)(\lambda^2-5\lambda+11)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	10057	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-6\lambda+10)(\lambda^2-5\lambda+9)$	1	S_2, S_2	Order = 4: (1, 2); (3, 4)	9371	
$\lambda(\lambda-1)(\lambda-2)(\lambda-3)(\lambda^2-6\lambda+11)(\lambda^2-5\lambda+7)$	4	S_2, S_2	Order = 4: (1, 2); (3, 4)	7459 10117 10150 10272	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+12\lambda-14)$	1	S_2, S_3	Order = 6: (3, 5, 4); (1, 2)(3, 4)	8726	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^3-3\lambda^2+4\lambda-3)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	1073	$\Theta_{2,3,4}$
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^3-4\lambda^2+6\lambda-5)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	7904	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^3-5\lambda^2+10\lambda-9)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4982	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-3\lambda+3)(\lambda^3-5\lambda^2+11\lambda-9)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	1248	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-4\lambda^2+6\lambda-5)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	8017	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+10\lambda-9)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	8021	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+11\lambda-11)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	5866	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+11\lambda-12)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6580	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+11\lambda-9)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	2113	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-5\lambda^2+12\lambda-11)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	2345	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-6\lambda^2+15\lambda-13)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	1438 2281	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-6\lambda^2+15\lambda-15)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	3765	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-7\lambda^2+19\lambda-20)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	7176 7278	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+5)(\lambda^3-7\lambda^2+20\lambda-21)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4474 7184	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-4\lambda+6)(\lambda^3-8\lambda^2+23\lambda-23)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	7308	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-5\lambda^2+10\lambda-9)$	3	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	3519 6696 7032	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-5\lambda^2+11\lambda-11)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6581 6721	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+14\lambda-14)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6740 9741	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+15\lambda-15)$	4	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	3767 6602 9738 9780	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+15\lambda-16)$	6	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	8392 9619 9646 9732 9745 9784	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+16\lambda-17)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	9802	

Table 40: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Chromatic polynomial	Number of graphs	Galois group	Generators	List of graphs	Graphs
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+16\lambda-18)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	9781	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-6\lambda^2+17\lambda-19)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4397	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+19\lambda-20)$	7	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6762 7293 7297 7318 7319 7398 8322	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+20\lambda-21)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4375 4405	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+20\lambda-22)$	7	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6996 6998 7303 7422 8411 9353 9364	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+20\lambda-23)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	8341 9786	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+21\lambda-23)$	3	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	3812 4500 6203	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+21\lambda-24)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	3861	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+21\lambda-25)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	10055	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-7\lambda^2+21\lambda-26)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	9385	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+24\lambda-25)$	4	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4376 4406 10004 10062	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+24\lambda-26)$	6	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	6766 7304 7423 7469 7521 10012	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+25\lambda-28)$	6	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4298 7198 7551 7819 9035 9040	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+26\lambda-29)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4549	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+26\lambda-32)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	10056	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-8\lambda^2+27\lambda-34)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	7560 9047	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-9\lambda^2+30\lambda-34)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	10156	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+7)(\lambda^3-9\lambda^2+30\lambda-35)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	7330 9506	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-5\lambda+8)(\lambda^3-8\lambda^2+23\lambda-23)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	10035	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-7\lambda^2+18\lambda-17)$	3	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4341 9644 9660	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-7\lambda^2+19\lambda-20)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	9764	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-8\lambda^2+24\lambda-26)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	10044	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-8\lambda^2+25\lambda-29)$	3	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	9392 9479 10206	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-9\lambda^2+31\lambda-38)$	1	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	11031	
$\lambda(\lambda-1)(\lambda-2)(\lambda^2-6\lambda+10)(\lambda^3-9\lambda^2+34\lambda-46)$	2	S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	4578 4580	
$\lambda(\lambda-1)(\lambda^2-4\lambda+5)(\lambda^4-5\lambda^3+11\lambda^2-13\lambda+7)$	1	S_2, $D(4)$	Order = 16: (3, 4); (5, 7)(6, 8); (7, 8)	3045	
$\lambda(\lambda-1)(\lambda^2-4\lambda+5)(\lambda^4-8\lambda^3+29\lambda^2-48\lambda+29)$	1	S_2, S_4	Order = 48: (1, 2); (3, 4, 5, 6); (3, 4)	492	
$\lambda(\lambda-1)(\lambda^2-4\lambda+5)(\lambda^4-8\lambda^3+29\lambda^2-49\lambda+31)$	1	S_2, S_4	Order = 48: (1, 2); (3, 4, 5, 6); (3, 4)	4190	

Table 41: Chromatic polynomials of strongly non-clique-separable graphs of order 8 and their Galois groups (continued).

Galois group	Generators	# of chromatic polynomials	# of graphs
Trivial group		1	1
S_2		33	65
S_3		114	233
$C(4) = 4$		4	12
$E(4) = 2[\times]2$		8	36
$D(4)$		58	184
A_4		6	11
S_4		302	755
$D(5) = 5 : 2$		3	16
$F(5) = 5 : 4$		1	1
S_5		360	740
$C(6) = 6 = 3[\times]2$		1	1
$2S_4(6) = [2^3]S(3) = 2 \wr S(3)$		1	1
S_6		25	27
S_2, S_2	Order = 2: (1, 2)(3, 4)	3	5
S_2, S_2	Order = 4: (1, 2); (3, 4)	17	34
S_2, S_3	Order = 6: (3, 5, 4); (1, 2)(3, 4)	1	1
S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	46	97
S_2, $D(4)$	Order = 16: (3, 4); (5, 7)(6, 8); (7, 8)	1	1
S_2, S_4	Order = 48: (1, 2); (3, 4, 5, 6); (3, 4)	2	2

Table 42: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 8.

Galois group	Generators	# of chromatic polynomials	# of graphs
Trivial Group		1	1
S_2		78	296
S_3		373	1069
$C(4) = 4$		10	49
$E(4) = 2[\times]2$		38	210
$D(4)$		319	1709
A_4		25	156
S_4		2152	10527
$D_5 = 5 : 2$		22	122
$F_5 = 5 : 4$		7	51
A_5		15	81
S_5		6385	29924
$C(6) = 6 = 3[\times]2$		3	19
$D_6(6) = [3]2$		2	7
$D(6) = S(3)[\times]2$		14	77
$F_{18}(6) = [3^2]2 = 3 \wr 2$		9	86
$2A_4(6) = [2^3]3 = 2 \wr 3$		2	7
$S_4(6d) = [2^2]S(3)$		2	2
$S_4(6c) = \frac{1}{2}[2^3]S(3)$		3	6
$2S_4(6) = [2^3]S(3) = 2 \wr S(3)$		114	591
$L(6) = PSL(2,5) = A_5(6)$		2	6
$F_{36}(6) : 2 = [S(3)^2]2 = S(3) \wr 2$		174	830
$L(6) : 2 = PGL(2,5) = S_5(6)$		1	3
S_6		5197	15895
S_7		90	108

Table 43: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 9.

Galois group	Generators	# of chromatic polynomials	# of graphs
S_2, S_2	Order = 2: (1, 2)	4	10
S_2, S_2	Order = 2: (1, 2)(3, 4)	8	126
S_2, S_2	Order = 4: (1, 2); (3, 4)	71	604
S_2, S_3	Order = 6: (3, 5, 4); (1, 2)(3, 4)	7	44
S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	347	2157
S_2, $C(4) = 4$	Order = 8: (1, 2); (3, 4, 5, 6)	3	27
S_2, $E(4) = 2[\times]2$	Order = 4: (1, 2)(3, 4)(5, 6); (3, 5)(4, 6)	5	34
S_2, $E(4) = 2[\times]2$	Order = 8: (1, 2); (3, 4)(5, 6); (3, 5)(4, 6)	5	25
S_2, $D(4)$	Order = 8: (1, 2)(3, 4)(5, 6); (4, 5)	12	59
S_2, $D(4)$	Order = 8: (3, 4, 5, 6); (1, 2)(4, 5)	3	15
S_2, $D(4)$	Order = 8: (3, 5)(4, 6)	1	4
S_2, $D(4)$	Order = 16: (1, 2); (3, 4)(5, 6); (3, 5)	38	212
S_2, A_4	Order = 24: (1, 2); (3, 4)(5, 6); (3, 4, 5)	2	16
S_2, S_4	Order = 48: (1, 2); (3, 4, 5, 6); (3, 4)	218	951
S_2, S_5	Order = 240: (1, 2); (3, 4, 5, 6, 7); (3, 4)	2	2
S_3, S_3	Order = 6: (1, 2, 3); (1, 2)	2	2
S_3, S_3	Order = 36: (1, 2, 3); (1, 2); (4, 5, 6); (4, 5)	31	81
S_3, $C(4) = 4$	Order = 24: (1, 2, 3); (1, 2); (4, 5, 6, 7)	1	1
S_3, $D(4)$	Order = 48: (1, 2, 3); (1, 2); (4, 5)(6, 7); (5, 7)	1	1
S_3, S_4	Order 144: (1, 2, 3); (1, 2); (4, 5, 6, 7); (4, 5)	3	3

Table 44: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 9 (continued).

Galois group	Generators	# of chromatic polynomials	# of graphs
Trivial Group		1	1
S_2		136	712
S_3		1309	6607
$C(4) = 4$		27	372
$E(4) = 2[\times]2$		113	1257
$D(4)$		1218	13076
A_4		75	932
S_4		12519	107635
$D(5) = 5 : 2$		129	1103
$F(5) = 5 : 4$		60	771
A_5		108	1273
S_5		79331	685931
$C(6) = 6 = 3[\times]2$		16	571
$D_6(6) = [3]2$		17	250
$D(6) = S(3)[\times]2$		143	2808
$A_4(6) = [2^2]3$		8	121
$F_{18}(6) = [3^2]2 = 3 \wr 2$		50	1171
$2A_4(6) = [2^3]3 = 2 \wr 3$		13	141
$S_4(6d) = [2^2]S(3)$		59	1041
$S_4(6c) = \frac{1}{2}[2^3]S(3)$		21	621
$F_{18}(6) : 2 = [\frac{1}{2}S(3)^2]2$		30	414
$F_{36}(6) = \frac{1}{2}[S(3)^2]2$		6	22
$2S_4(6) = [2^3]S(3) = 2 \wr S(3)$		1384	26642
$L(6) = PSL(2,5) = A_5(6)$		34	665
$F_{36}(6) : 2 = [S(3)^2]2 = S(3) \wr 2$		2683	40345
$L(6) : 2 = PGL(2,5) = S_5(6)$		57	662
A_6		26	211
S_6		257203	2395512
$D(7) = 7 : 2$		1	21
$F_{42}(7) = 7 : 6$		1	32
S_7		138773	606609
$E(8) : D_6 = S(4)[\times]2$		1	1
$[2^4]S(4)$		3	5
$[S(4)^2]2$		4	6
S_8		554	697

Table 45: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 10.

Galois group	Generators	# of chromatic polynomials	# of graphs
S_2, S_2	Order = 2: (1, 2)	7	41
S_2, S_2	Order = 2: (1, 2)(3, 4)	32	525
S_2, S_2	Order = 4: (1, 2); (3, 4)	368	4969
S_2, S_3	Order = 6: (3, 5, 4); (1, 2)(3, 4)	84	1042
S_2, S_3	Order =12: (1, 2); (3, 4, 5); (3, 4)	2274	24878
S_2, $C(4) = 4$	Order = 8: (1, 2); (3, 4, 5, 6)	53	922
S_2, $E(4) = 2[\times]2$	Order = 4: (1, 2)(3, 5)(4, 6); (1, 2)(3, 4)(5, 6)	36	1048
S_2, $E(4) = 2[\times]2$	Order = 8: (1, 2); (3, 4)(5, 6); (3, 5)(4, 6)	88	950
S_2, $D(4)$	Order = 8: (1, 2)(3, 4)(5, 6); (4, 6)	86	1698
S_2, $D(4)$	Order = 8: (3, 4)(5, 6); (1, 2)(4, 6)	18	294
S_2, $D(4)$	Order = 8: (3, 5, 4, 6); (1, 2)(5, 6)	34	836
S_2, $D(4)$	Order = 16: (1, 2); (3, 4)(5, 6); (3, 6)	607	9189
S_2, A_4	Order = 24: (1, 2); (3, 4)(5, 6); (3, 4, 5)	49	514
S_2, S_4	Order = 24: (1, 2)(3, 4); (1, 2)(4, 5); (1, 2)(5, 6)	13	52
S_2, S_4	Order = 48: (1, 2); (3, 4, 5, 6); (3, 4)	4681	65110
S_2, $D(5) = 5:2$	Order = 20: (1, 2); (3, 4)(5, 6); (3, 5, 6, 4, 7)	30	350
S_2, $F(5) = 5:4$	Order = 40: (1, 2); (3, 5, 7, 6); (3, 7)(5, 6); (3, 7, 6, 4, 5)	3	20
S_2, A_5	Order = 120: (1, 2); (5, 6, 7); (3, 4, 5)	5	22
S_2, S_5	Order = 240: (1, 2); (3, 4, 5, 6, 7); (3, 4)	3283	18664
S_2, $C_6 = 6 = 3[\times]2$	Order = 6: (1, 2)(3, 5, 7, 6, 8, 4)	1	1
S_2, $D_6(6) = [3]2$	Order = 6 : (1, 2)(3, 4)(5, 7)(6, 8); (1, 2)(3, 5)(4, 8)(6, 7)	1	1
S_2, $F_{36}(6) : 2 = [S(3)^2]2 = S(3) \wr 2$	Order = 144: (1, 2); (3, 4)(5, 6)(7, 8); (3, 5, 7); (3, 5)	1	2
S_2, $2S_4(6) = [2^3]S(3) = 2 \wr S(3)$	Order = 96: (1, 2); (3, 6, 4)(5, 7, 8); (3, 4)(5, 7); (4, 5)	1	1
S_2, S_6	Order = 1440: (1, 2); (3, 4, 5, 6, 7, 8); (3, 4)	21	26
S_2, S_2, S_2	Order = 2: (1, 2)(3, 4)	1	3
S_2, S_2, S_2	Order = 4: (1, 2); (3, 4)	13	91
S_2, S_2, S_2	Order = 4: (1, 2)(5, 6); (3, 4)	4	4
S_2, S_2, S_2	Order = 8: (1, 2); (3, 4); (5, 6)	14	30
S_2, S_2, S_3	Order = 6: (3, 5, 4); (1, 2)(3, 4)	2	2
S_2, S_2, S_3	Order = 12: (1, 2); (3, 4, 5); (3, 4)	37	161
S_2, S_2, S_3	Order = 12: (1, 2)(3, 4); (5, 7); (5, 6)	10	46
S_2, S_2, S_3	Order = 12: (1, 2); (3, 4)(5, 6); (5, 7, 6)	1	3
S_2, S_2, S_3	Order = 24: (1, 2); (3, 4); (5, 6, 7); (5, 6)	98	486

Table 46: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 10 (continued).

Galois group	Generators	# of chromatic polynomials	# of graphs
S_3, S_3	Order = 6: (1, 2, 3); (1, 2)	4	33
S_3, S_3	Order = 6: (2, 3)(5, 6) and (1, 3, 2)(4, 6, 5)	12	76
S_3, S_3	Order = 36: (1, 2, 3); (1, 2); (4, 5, 6); (4, 5)	839	6119
S_3, $C(4) = 4$	Order = 24: (1, 2, 3); (1, 2); (4, 5, 6, 7)	39	423
S_3, $E(4) = 2[\times 2]$	Order =12: (1, 2, 3); (2, 3)(4, 6)(5, 7); (2, 3)(4, 5)(6, 7)	3	4
S_3, $E(4) = 2[\times]2$	Order = 24: (1, 2, 3); (1, 2); (4, 5)(6, 7); (4, 6)(5, 7)	46	232
S_3, $D(4)$	Order = 24: (2, 3)(4, 5)(6, 7); (1, 2, 3); (5, 7)	4	7
S_3, $D(4)$	Order = 24: (4, 6, 5, 7); (1, 2)(6, 7); (2, 3)(6, 7)	2	8
S_3, $D(4)$	Order = 48: (1, 2, 3); (1, 2); (4, 6)(5, 7); (6, 7)	295	2508
S_3, A_4	Order = 72: (1, 2, 3); (1, 2); (4, 5)(6, 7); (4, 5, 6)	21	248
S_3, S_4	Order = 144: (1, 2, 3); (1, 2); (4, 5, 6, 7); (4, 5)	1080	7267
S_3, S_5	Order = 720: (1, 2, 3); (1, 2); (4, 5, 6, 7, 8); (4, 5)	1	1
S_4, $E(4) = 2[\times]2$	Order = 96: (1, 2, 3, 4); (1, 2); (5, 6)(7, 8); (5, 7)(6, 8)	1	1

Table 47: Galois groups of chromatic polynomials of strongly non-clique-separable graphs of order 10 (continued).

References

[1] PARI/GP, version `2.3.0`. 2006. Available from http://pari.math.u-bordeaux.fr/.

[2] J.H. Conway, A. Hulpke, and J. McKay. On transitive permutation groups. *LMS J. Comput. Math.*, 1:1–8, 1998.

[3] O.M. D'Antonia, C. Mereghetti, and F. Zamparini. The 224 non-chordal graphs on less than 10 vertices whose chromatic polynomials have no complex roots. *Discrete Math.*, 226:387–396, 2001.

[4] F.M. Dong and K.M. Koh. Non-chordal graphs having integral-root chromatic polynomials. *Bulletin of the ICA*, 22:67–77, 1998.

[5] F.M. Dong, K.L. Teo, K.M. Koh, and M.D. Hendy. Non-chordal graphs having integral-root chromatic polynomials II. *Discrete Math.*, 245:247–253, 2002.

[6] S. Hernández and F. Luca. Integer roots, chromatic polynomials of non-chordal graphs and the Prouhet-Tarry-Escott problem. *Graphs and Combinatorics*, 21:319–323, 2005.

[7] B. McKay. Simple graphs (connected). Available from http://cs.anu.edu.au/people/bdm/data/graphs.html.

[8] R.C. Read and W.T. Tutte. Chromatic polynomials. In L.W. Beineke and R.J. Wilson, editors, *Selected Topics in Graph Theory*, volume 3, pages 15–42. Academic Press, London, 1988.

[9] B. Wieb, J. Cannon, and C. Playoust. The Magma algebra system. I. The user language. *J. Symbolic Comput.*, 24:235–265, 1997.