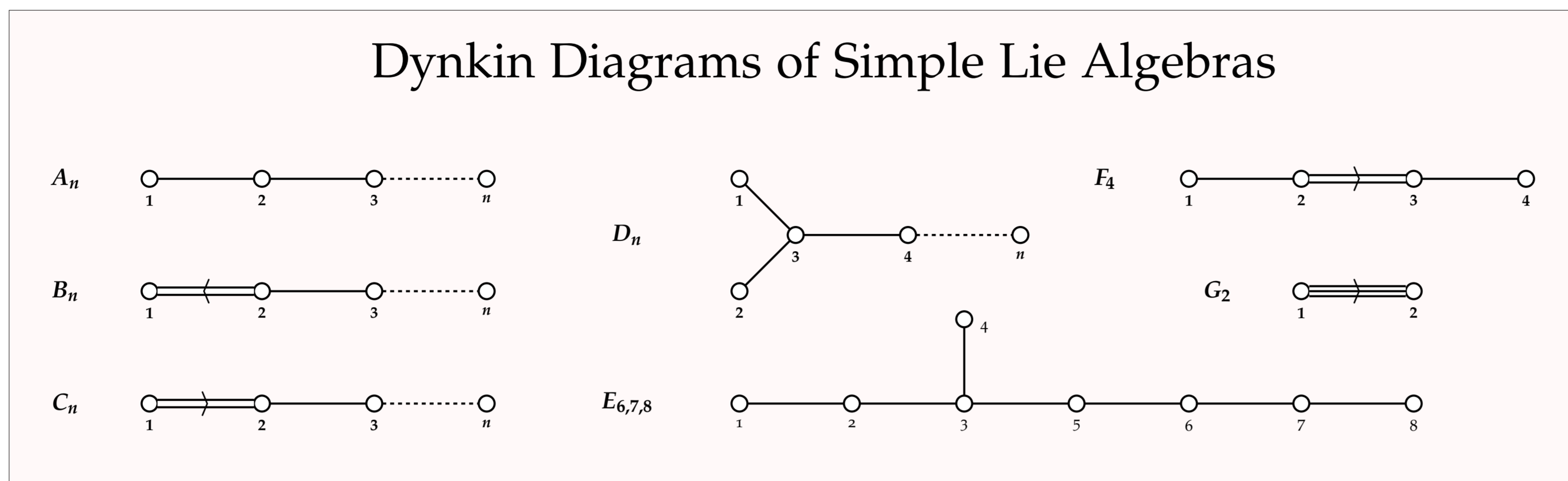


The Periodic Table of Finite Simple Groups

$0, C_1, Z_1$
1
1



$A_1(4), A_1(5)$	$A_2(2)$
A_5	$A_1(7)$
60	168
$A_1(9), B_2(2)'$	${}^2G_2(3)'$
A_6	$A_1(8)$
360	504

${}^2A_3(4)$	$B_2(3)$	$C_3(3)$	$D_4(2)$	${}^2D_4(2^2)$	$G_2(2)'$
$B_2(3)$	$C_3(3)$	$D_4(2)$	${}^2D_4(2^2)$	${}^2A_2(9)$	
25 920	4 585 351 680	174 182 400	197 406 720	6 048	
$B_2(4)$	$C_3(5)$	$D_4(3)$	${}^2D_4(3^2)$	${}^2A_2(16)$	
979 200	228 501 000 000 000	4 952 179 814 400	10 151 968 619 520	62 400	

C_2
2
C_3
3
C_5
5
C_7
7
C_{11}
11
C_{13}
13
Z_p
C_p
p

A_7	$A_1(11)$	$E_6(2)$	$E_7(2)$	$E_8(2)$	$F_4(2)$	$G_2(3)$	${}^3D_4(2^3)$	${}^2E_6(2^2)$	${}^2B_2(2^3)$	Tits*	${}^2F_4(2)'$	${}^2G_2(3^3)$	$B_3(2)$	$C_4(3)$	$D_5(2)$	${}^2D_5(2^2)$	${}^2A_2(25)$
2 520	660	214 841 575 522 005 575 270 400	7 997 476 042 075 799 759 100 487 262 680 802 918 400	337 804 753 143 634 806 261 799 751 139 021 644 554 379 203 770 766 254 617 395 200	3 311 126 603 366 400	4 245 696	211 341 312	76 532 479 683 774 853 939 200	29 120	17 971 200	10 073 444 472	1 451 520	65 784 756 654 489 600	23 499 295 948 800	25 015 379 558 400	126 000	
$A_3(2)$	$A_1(13)$	$E_6(3)$	$E_7(3)$	$E_8(3)$	$F_4(3)$	$G_2(4)$	${}^3D_4(3^3)$	${}^2E_6(3^2)$	${}^2B_2(2^5)$	${}^2F_4(2^3)$	${}^2G_2(3^5)$	$B_2(5)$	$C_3(7)$	$D_4(5)$	${}^2D_4(4^2)$	${}^2A_3(9)$	
20 160	1 092	7 257 703 347 541 463 210 028 258 395 214 643 200	1 271 375 236 818 136 742 240 479 751 139 021 644 554 379 203 770 766 254 617 395 200	18 888 072 912 953 942 141 009 032 016 974 482 332 141 886 784 946 332 258 322 649 516 324 616 198 331 048 979 713 242 949 942 353 494 448 426 429 940 880 000	5 734 420 792 816 671 844 761 600	251 596 800	20 560 831 566 912	14 636 855 916 969 695 633 965 120 680 532 377 600	32 537 600	264 905 352 699 586 176 614 400	49 825 657 439 340 552	4 680 000	273 457 218 604 953 600	8 911 539 000 000 000 000	67 536 471 195 648 000	3 265 920	
A_9	$A_1(17)$	$E_6(4)$	$E_7(4)$	$E_8(4)$	$F_4(4)$	$G_2(5)$	${}^3D_4(4^3)$	${}^2E_6(4^2)$	${}^2B_2(2^7)$	${}^2F_4(2^5)$	${}^2G_2(3^7)$	$B_2(7)$	$C_3(9)$	$D_5(3)$	${}^2D_4(5^2)$	${}^2A_2(64)$	
181 440	2 448	85 528 710 781 342 640 103 833 619 055 142 765 466 746 880 000	111 133 458 114 948 385 379 597 233 477 884 941 280 644 199 527 155 056 307 251 745 263 501 588 800 000 000	193 702 262 145 075 717 524 029 757 897 174 946 421 327 567 984 234 917 591 506 287 188 224 977 524 275 958 484 770 363 146 326 026 697 987 756 049 523 848 492 217 456 441 474 948 140 800 000 000	19 009 825 523 840 945 451 297 669 120 000	5 859 000 000	67 802 350 642 790 400	85 696 576 147 617 709 485 896 772 387 584 983 695 360 000 000	34 093 383 680	1 318 633 155 799 591 447 702 161 609 782 722 560 000	239 189 910 264 352 349 332 632	138 297 600	54 025 731 402 499 584 000	1 289 512 799 941 305 139 200	17 880 203 250 000 000 000	5 515 776	
A_n	$PSL_{n+1}(q), L_{n+1}(q)$	$E_6(q)$	$E_7(q)$	$E_8(q)$	$F_4(q)$	$G_2(q)$	${}^3D_4(q^3)$	${}^2E_6(q^2)$	${}^2B_2(2^{2n+1})$	${}^2F_4(2^{2n+1})$	${}^2G_2(3^{2n+1})$	$B_n(q)$	$C_n(q)$	$D_n(q)$	${}^2D_n(q^2)$	${}^2A_n(q^2)$	
$\frac{n!}{2}$	$\frac{q^{n+1}-1}{(q-1)} \prod_{i=1}^n (q^{i+1}-1)$	$\frac{q^{63}(q^{12}-1)(q^3-1)(q^2-1)}{(q-1)(q^2-1)(q^3-1)}$	$\frac{q^{63}}{(2,q-1)} \prod_{i=2,8}^6 (q^{2i}-1)$	$\frac{q^{120}(q^{30}-1)(q^{24}-1)}{(q^6-1)(q^8-1)(q^{14}-1)}$	$\frac{q^{24}(q^{12}-1)(q^8-1)}{(q-1)(q^2-1)}$	$q^6(q^6-1)(q^2-1)$	$\frac{q^{12}(q^3+q^2+1)}{(q-1)(q^2-1)}$	$\frac{q^{26}(q^{12}-1)(q^3+1)(q^2-1)}{(q-1)(q^2-1)(q^3+1)}$	$q^2(q^2+1)(q-1)$	$\frac{q^{12}(q^6+1)(q^4-1)}{(q+1)(q-1)}$	$q^3(q^3+1)(q-1)$	$\frac{q^{2n}}{(2,q-1)} \prod_{i=1}^n (q^{2i}-1)$	$\frac{q^{2n}}{(2,q-1)} \prod_{i=1}^n (q^{2i}-1)$	$\frac{q^{n(n-1)}(q^{n-1}-1) \prod_{i=1}^{n-1} (q^{2i}-1)}{(4,q^2-1)}$	$\frac{q^{n(n-1)}(q^{n-1}-1) \prod_{i=1}^{n-1} (q^{2i}-1)}{(4,q^2+1)}$	$\frac{q^{n(n+1)} \prod_{i=2}^{n+1} (q^i - (-1)^i)}{(n+1, q+1)}$	

- Alternating Groups
- Classical Chevalley Groups
- Chevalley Groups
- Classical Steinberg Groups
- Steinberg Groups
- Suzuki Groups
- Ree Groups and Tits Group*
- Sporadic/Pariah Groups
- Cyclic Groups

Alternates [†]
Symbol
Order [‡]

M_{11}	M_{12}	M_{22}	M_{23}	M_{24}	$J(1), J(11)$	HJ	HJM	J_4	HS	McL	He	Ru
7 920	95 040	443 520	10 200 960	244 823 040	175 560	604 800	50 232 960	86 775 571 046 077 562 880	44 352 000	898 128 000	4 030 387 200	145 926 144 000

*The Tits group ${}^2F_4(2)'$ is not a group of Lie type, but is the (index 2) commutator subgroup of ${}^2F_4(2)$. It is usually given honorary Lie type status.

†For sporadic groups and families, alternate names in the upper left are other names by which they may be known. For specific non-sporadic groups these are used to indicate isomorphisms. All such isomorphisms appear on the table except the family $B_n(2^m) \cong C_n(2^m)$.

‡Finite simple groups are determined by their order with the following exceptions:
 $B_n(q)$ and $C_n(q)$ for q odd, $n > 2$;
 $A_8 \cong A_3(2)$ and $A_2(4)$ of order 20160.

Sz	$O'NS, O-S$	$\cdot 3, C_3$	$\cdot 2, C_2$	$\cdot 1, C_1$	F_5, D	LyS	F_3, E	$M(22)$	$M(23)$	$F_3, M(24)'$	F_2	F_1, M_1
Suz	$O'N$	Co_3	Co_2	Co_1	HN	Ly	Th	Fi_{22}	Fi_{23}	Fi'_{24}	B	M
448 345 497 600	460 815 505 920	495 766 656 000	42 305 421 312 000	4 157 776 806 543 360 000	273 030 912 000 000	51 765 179 004 000 000	90 745 943 887 872 000	64 561 751 654 400	4 089 470 473 293 004 800	1 255 205 709 190 661 721 292 800	4 154 781 481 226 426 191 177 580 544 000 000	808 017 424 794 512 875 886 439 904 961 710 737 005 754 368 000 000 000