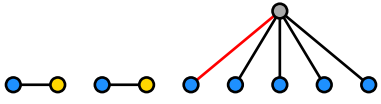
---------- excess: 4 (g,n): (1, 13), (3, 10), (5, 7), (7, 4), (9, 1) graphs: 491 ----------

--------- edges: 10-n graphs: 10 ---------

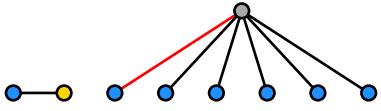
--- A3 case graphs: 10 ---

V_{1^n} ID: 534 n: 4 1

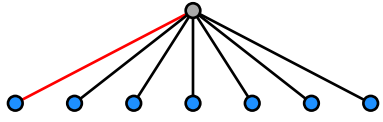
V_{1^n} ID: 470 n: 4 1



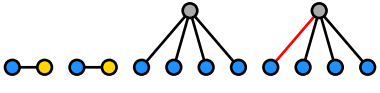
V_{1^n} ID: 274 n: 4 1



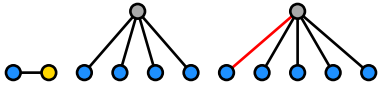
V_{1^n} ID: 129 n: 4 1



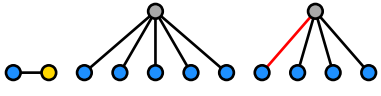
V_{1^n} ID: 535 n: 1



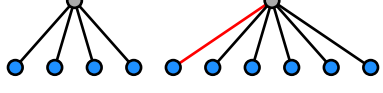
V_{1^n} ID: 478 n: 1



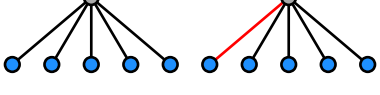
V_{1^n} ID: 395 n: 1



V_{1^n} ID: 304 n: 1

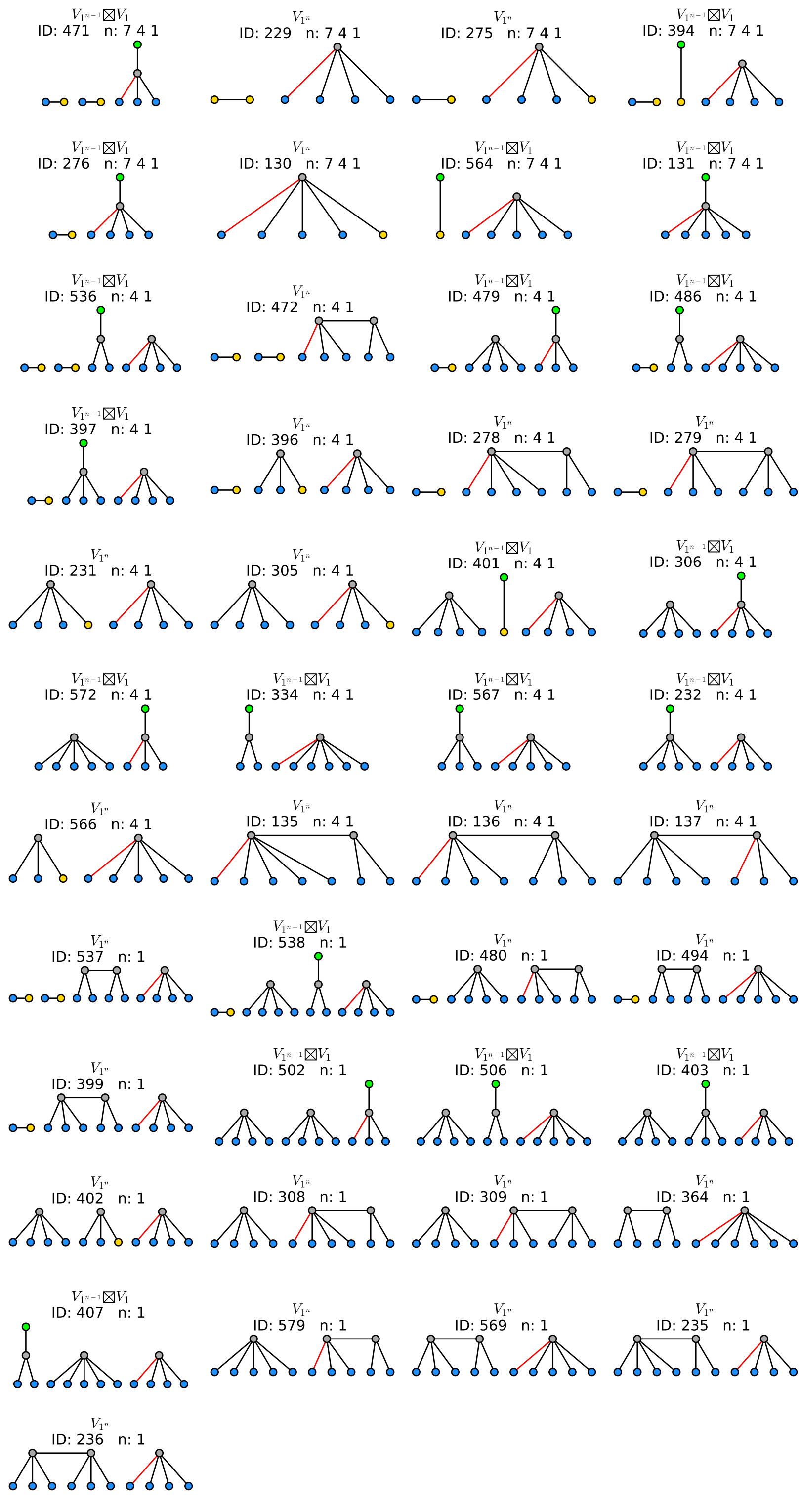


V_{1^n} ID: 565 n: 1

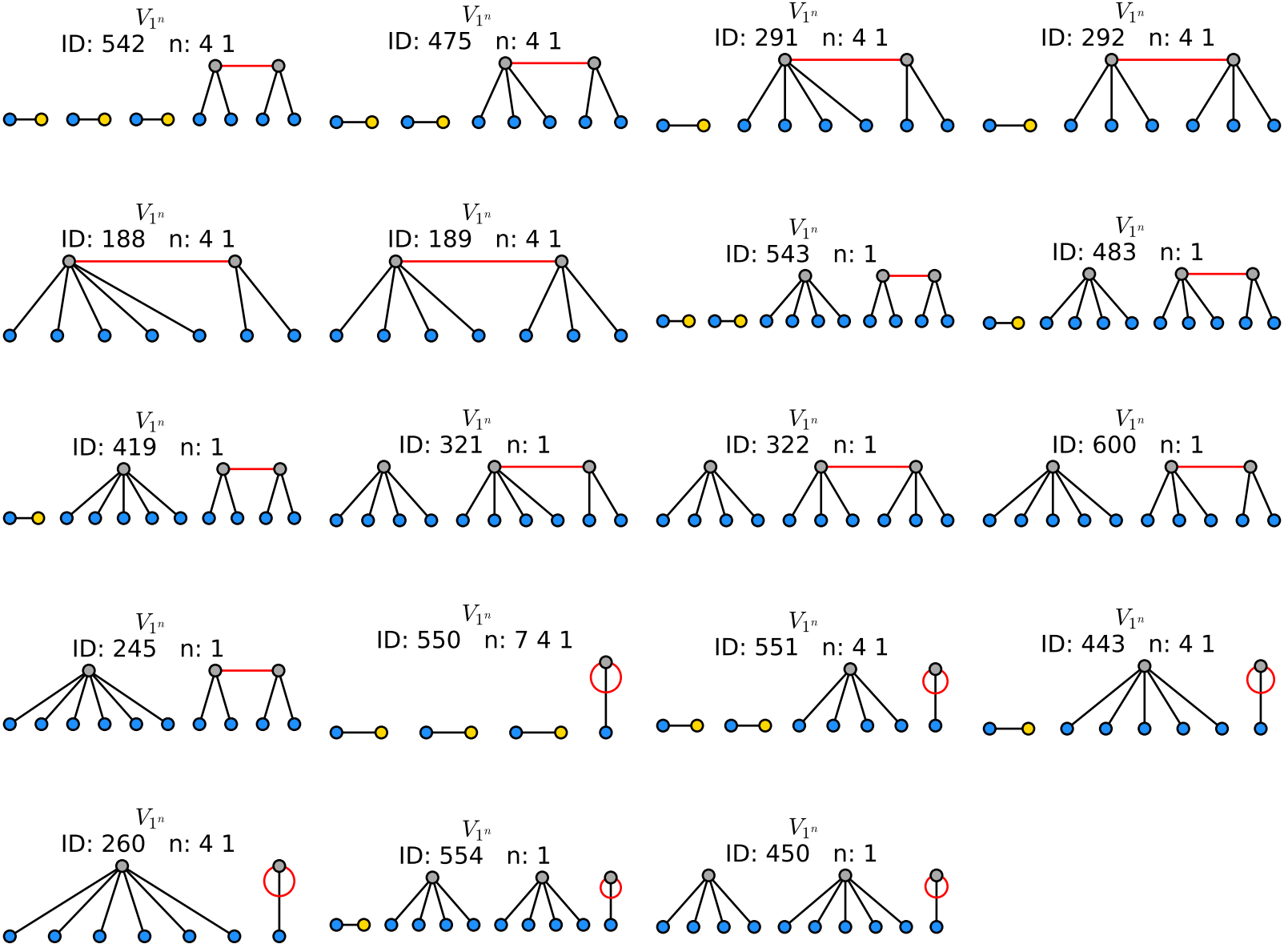


V_{1^n} ID: 230 n: 1

--------- edges: 11-n graphs: 64 ---------
--- A3 case graphs: 45 ---

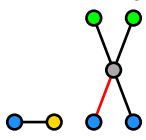


--- B,Birr cases without weight 11 relations graphs: 19 ---

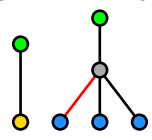


--------- edges: 12-n graphs: 165 ---------
--- A3 case graphs: 66 ---

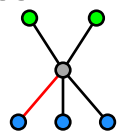
$V_{1^{n-2}} \boxtimes V_2$
ID: 277 n: 10 7 4



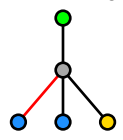
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 571 n: 10 7 4



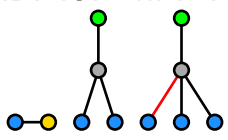
$V_{1^{n-2}} \boxtimes V_2$
ID: 133 n: 10 7 4



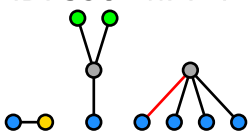
$V_{1^{n-1}} \boxtimes V_1$
ID: 132 n: 10 7 4 1



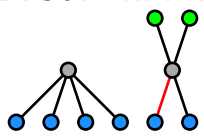
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 487 n: 7 4



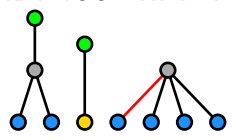
$V_{1^{n-2}} \boxtimes V_2$
ID: 398 n: 7 4



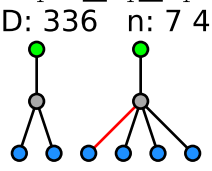
$V_{1^{n-2}} \boxtimes V_2$
ID: 307 n: 7 4



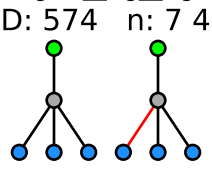
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 406 n: 7 4



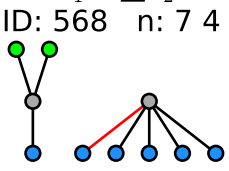
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 336 n: 7 4



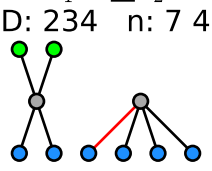
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 574 n: 7 4



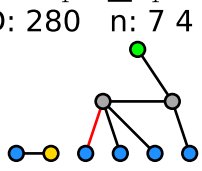
$V_{1^{n-2}} \boxtimes V_2$
ID: 568 n: 7 4



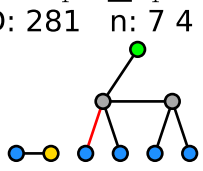
$V_{1^{n-2}} \boxtimes V_2$
ID: 234 n: 7 4



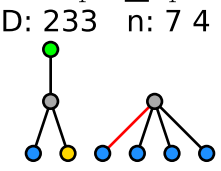
$V_{1^{n-1}} \boxtimes V_1$
ID: 280 n: 7 4 1



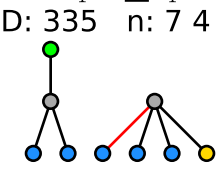
$V_{1^{n-1}} \boxtimes V_1$
ID: 281 n: 7 4 1



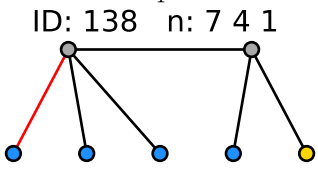
$V_{1^{n-1}} \boxtimes V_1$
ID: 233 n: 7 4 1



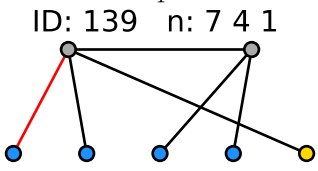
$V_{1^{n-1}} \boxtimes V_1$
ID: 335 n: 7 4 1



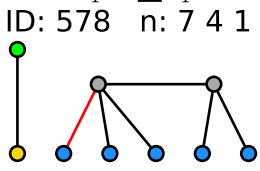
V_{1^n}
ID: 138 n: 7 4 1



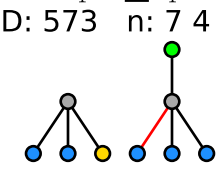
V_{1^n}
ID: 139 n: 7 4 1



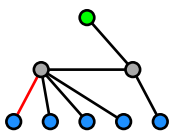
$V_{1^{n-1}} \boxtimes V_1$
ID: 578 n: 7 4 1



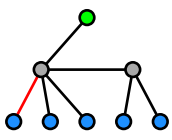
$V_{1^{n-1}} \boxtimes V_1$
ID: 573 n: 7 4 1



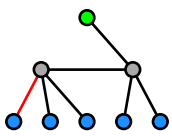
$V_{1^{n-1}} \boxtimes V_1$
ID: 140 n: 7 4 1



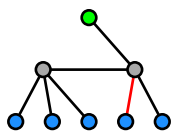
$V_{1^{n-1}} \boxtimes V_1$
ID: 141 n: 7 4 1



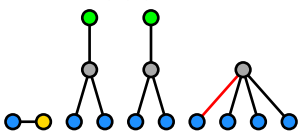
$V_{1^{n-1}} \boxtimes V_1$
ID: 142 n: 7 4 1



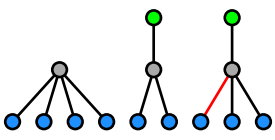
$V_{1^{n-1}} \boxtimes V_1$
ID: 143 n: 7 4 1



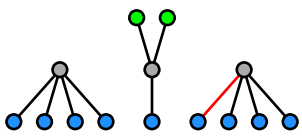
$V_{1^{n-2}} \boxtimes V_2$
ID: 539 n: 4



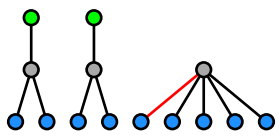
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 507 n: 4



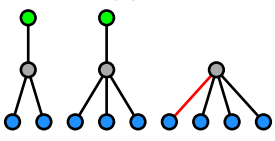
$V_{1^{n-2}} \boxtimes V_2$
ID: 404 n: 4



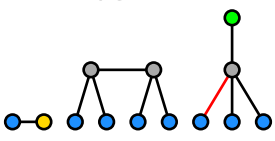
$V_{1^{n-2}} \boxtimes V_2$
ID: 518 n: 4



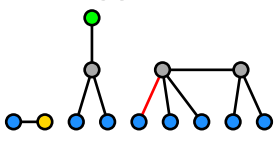
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 409 n: 4



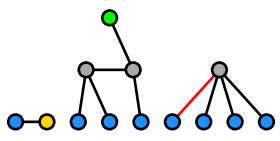
$V_{1^{n-1}} \boxtimes V_1$
ID: 495 n: 4 1



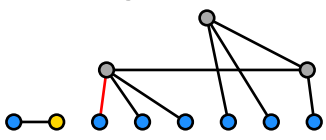
$V_{1^{n-1}} \boxtimes V_1$
ID: 488 n: 4 1



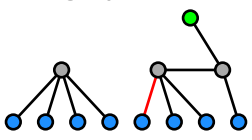
$V_{1^{n-1}} \boxtimes V_1$
ID: 400 n: 4 1



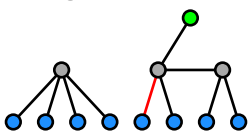
V_{1^n}
ID: 282 n: 4 1



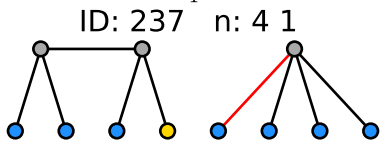
$V_{1^{n-1}} \boxtimes V_1$
ID: 310 n: 4 1



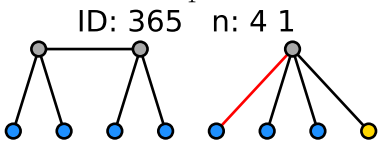
$V_{1^{n-1}} \boxtimes V_1$
ID: 311 n: 4 1



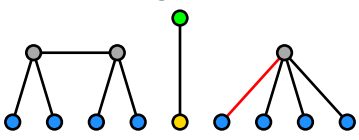
V_{1^n}
ID: 237 n: 4 1



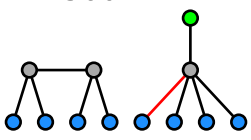
V_{1^n}
ID: 365 n: 4 1



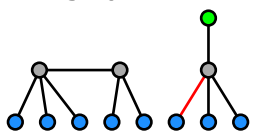
$V_{1^{n-1}} \boxtimes V_1$
ID: 413 n: 4 1



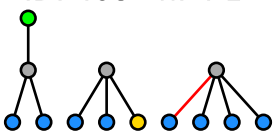
$V_{1^{n-1}} \boxtimes V_1$
ID: 366 n: 4 1



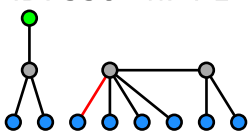
$V_{1^{n-1}} \boxtimes V_1$
ID: 576 n: 4 1



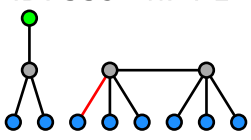
$V_{1^{n-1}} \boxtimes V_1$
ID: 408 n: 4 1



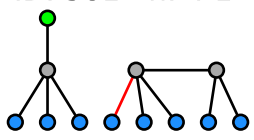
$V_{1^{n-1}} \boxtimes V_1$
ID: 338 n: 4 1



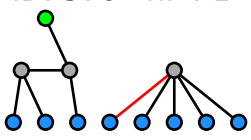
$V_{1^{n-1}} \boxtimes V_1$
ID: 339 n: 4 1



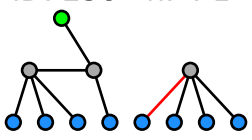
$V_{1^{n-1}} \boxtimes V_1$
ID: 581 n: 4 1



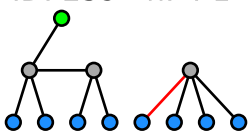
$V_{1^{n-1}} \boxtimes V_1$
ID: 570 n: 4 1



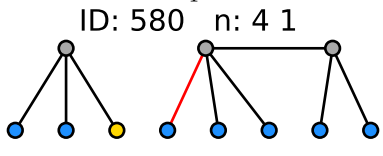
$V_{1^{n-1}} \boxtimes V_1$
ID: 238 n: 4 1



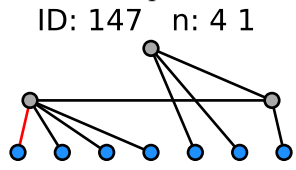
$V_{1^{n-1}} \boxtimes V_1$
ID: 239 n: 4 1



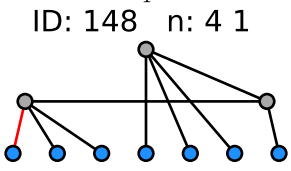
V_{1^n}
ID: 580 n: 4 1



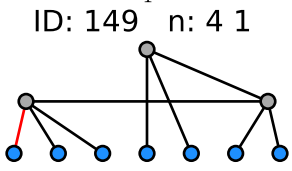
V_{1^n}
ID: 147 n: 4 1



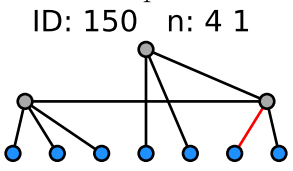
V_{1^n}
ID: 148 n: 4 1



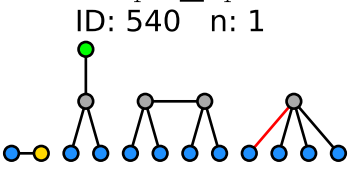
V_{1^n}
ID: 149 n: 4 1



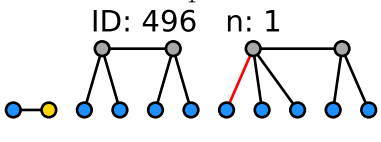
V_{1^n}
ID: 150 n: 4 1



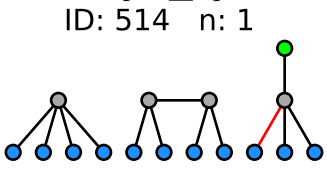
$V_{1^{n-1}} \boxtimes V_1$
ID: 540 n: 1



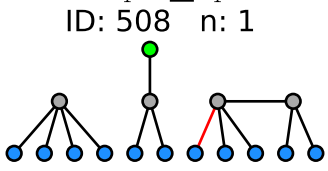
V_{1^n}
ID: 496 n: 1



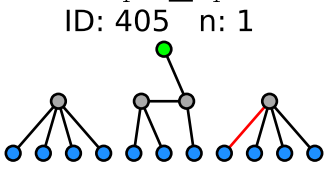
$V_{1^{n-1}} \boxtimes V_1$
ID: 514 n: 1



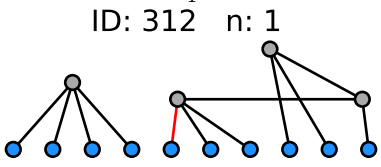
$V_{1^{n-1}} \boxtimes V_1$
ID: 508 n: 1



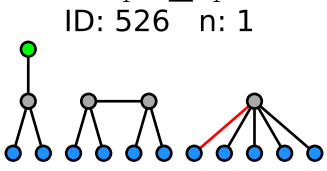
$V_{1^{n-1}} \boxtimes V_1$
ID: 405 n: 1



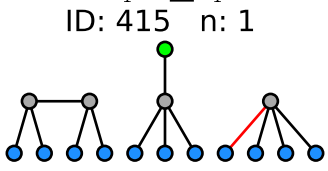
V_{1^n}
ID: 312 n: 1



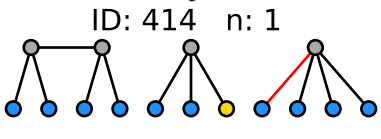
$V_{1^{n-1}} \boxtimes V_1$
ID: 526 n: 1



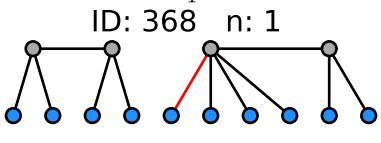
$V_{1^{n-1}} \boxtimes V_1$
ID: 415 n: 1



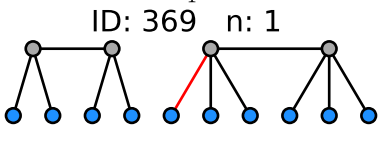
V_{1^n}
ID: 414 n: 1



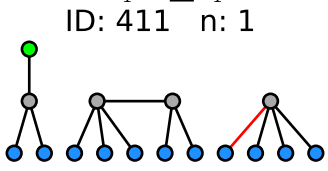
V_{1^n}
ID: 368 n: 1



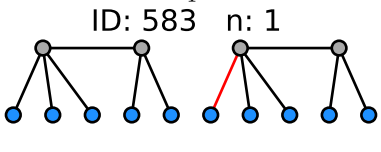
V_{1^n}
ID: 369 n: 1



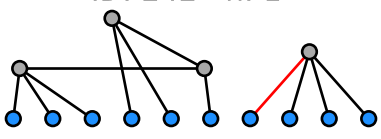
$V_{1^{n-1}} \boxtimes V_1$
ID: 411 n: 1



V_{1^n}
ID: 583 n: 1

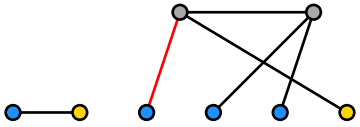


V_{1^n}
ID: 242 n: 1

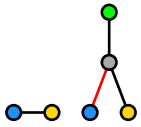


--- A2 case with weight 13 relations relation groups: 4 ---

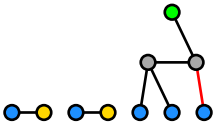
V_{1^n}
ID: 284 n: 7 4 1



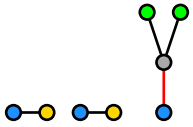
$V_{1^{n-1}} \boxtimes V_1$
ID: 283 n: 10 7 4 1



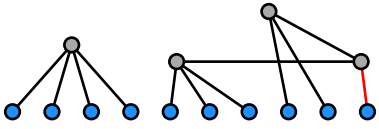
$V_{1^{n-1}} \boxtimes V_1$
ID: 474 n: 7 4 1



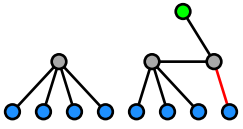
$V_{1^{n-2}} \boxtimes V_2$
ID: 473 n: 10 7 4



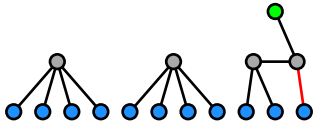
V_{1^n}
ID: 317 n: 1



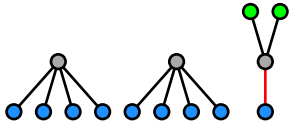
$V_{1^{n-1}} \boxtimes V_1$
ID: 315 n: 4 1



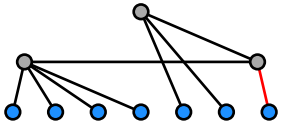
$V_{1^{n-1}} \boxtimes V_1$
ID: 504 n: 1



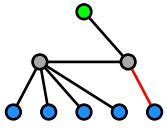
$V_{1^{n-2}} \boxtimes V_2$
ID: 503 n: 4



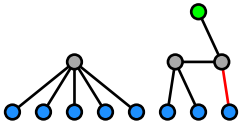
V_{1^n}
ID: 164 n: 4 1



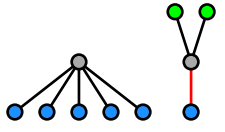
$V_{1^{n-1}} \boxtimes V_1$
ID: 158 n: 7 4 1



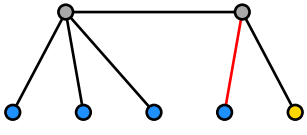
$V_{1^{n-1}} \boxtimes V_1$
ID: 593 n: 4 1



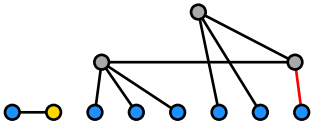
$V_{1^{n-2}} \boxtimes V_2$
ID: 586 n: 7 4



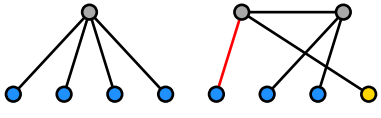
V_{1^n}
ID: 157 n: 7 4 1



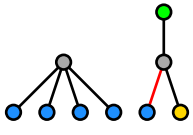
V_{1^n}
ID: 287 n: 4 1



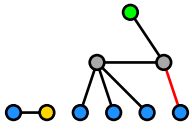
V_{1^n}
ID: 314 n: 4 1



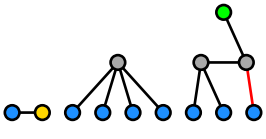
$V_{1^{n-1}} \boxtimes V_1$
ID: 313 n: 7 4 1



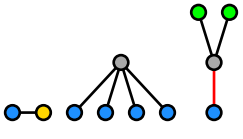
$V_{1^{n-1}} \boxtimes V_1$
ID: 285 n: 7 4 1



$V_{1^{n-1}} \boxtimes V_1$
ID: 482 n: 4 1

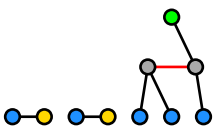


$V_{1^{n-2}} \boxtimes V_2$
ID: 481 n: 7 4

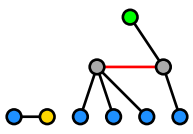


--- B,Birr cases without weight 11 relations graphs: 60 ---

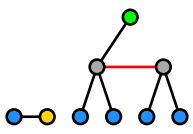
$V_{1^{n-1}} \boxtimes V_1$
ID: 476 n: 7 4 1



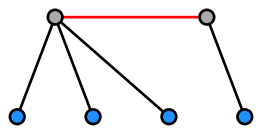
$V_{1^{n-1}} \boxtimes V_1$
ID: 294 n: 7 4 1



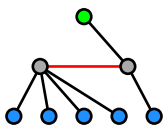
$V_{1^{n-1}} \boxtimes V_1$
ID: 295 n: 7 4 1



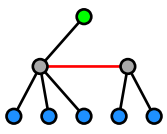
V_{1^n}
ID: 187 n: 7 4 1



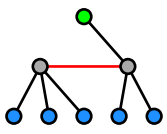
$V_{1^{n-1}} \boxtimes V_1$
ID: 192 n: 7 4 1



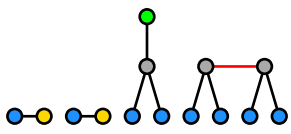
$V_{1^{n-1}} \boxtimes V_1$
ID: 193 n: 7 4 1



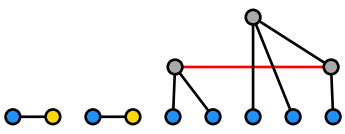
$V_{1^{n-1}} \boxtimes V_1$
ID: 194 n: 7 4 1



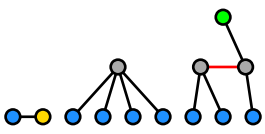
$V_{1^{n-1}} \boxtimes V_1$
ID: 544 n: 4 1



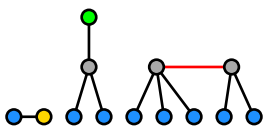
V_{1^n}
ID: 477 n: 4 1



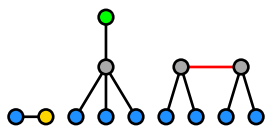
$V_{1^{n-1}} \boxtimes V_1$
ID: 484 n: 4 1



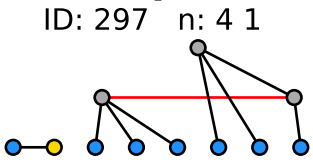
$V_{1^{n-1}} \boxtimes V_1$
ID: 491 n: 4 1



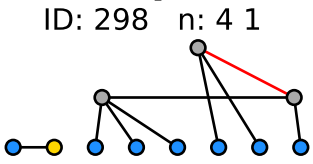
$V_{1^{n-1}} \boxtimes V_1$
ID: 421 n: 4 1



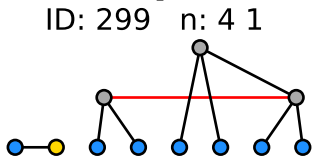
V_{1^n}
ID: 297 n: 4 1



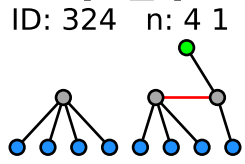
V_{1^n}
ID: 298 n: 4 1



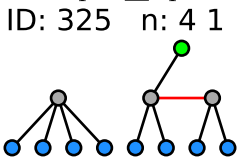
V_{1^n}
ID: 299 n: 4 1



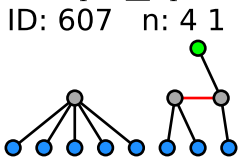
$V_{1^{n-1}} \boxtimes V_1$
ID: 324 n: 4 1



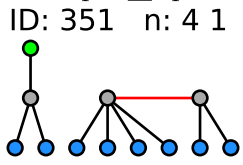
$V_{1^{n-1}} \boxtimes V_1$
ID: 325 n: 4 1



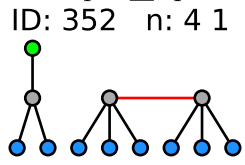
$V_{1^{n-1}} \boxtimes V_1$
ID: 607 n: 4 1



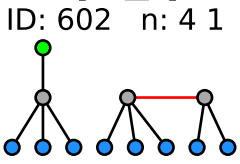
$V_{1^{n-1}} \boxtimes V_1$
ID: 351 n: 4 1



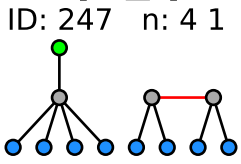
$V_{1^{n-1}} \boxtimes V_1$
ID: 352 n: 4 1



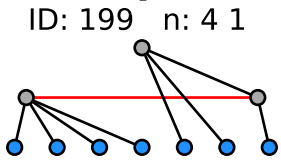
$V_{1^{n-1}} \boxtimes V_1$
ID: 602 n: 4 1



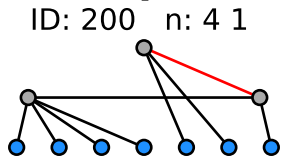
$V_{1^{n-1}} \boxtimes V_1$
ID: 247 n: 4 1



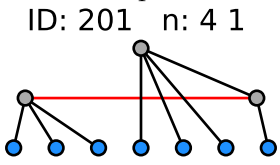
V_{1^n}
ID: 199 n: 4 1



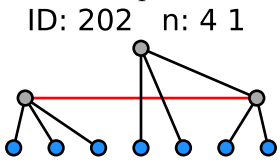
V_{1^n}
ID: 200 n: 4 1



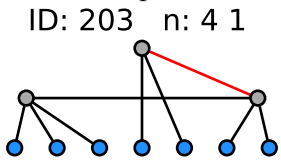
V_{1^n}
ID: 201 n: 4 1



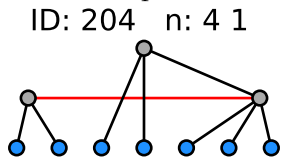
V_{1^n}
ID: 202 n: 4 1



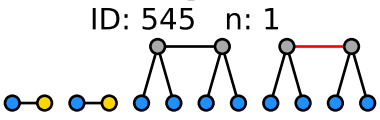
V_{1^n}
ID: 203 n: 4 1



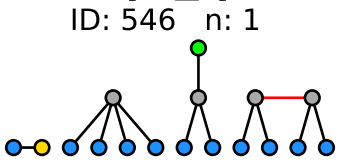
V_{1^n}
ID: 204 n: 4 1



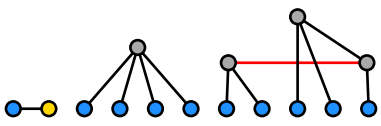
V_{1^n}
ID: 545 n: 1



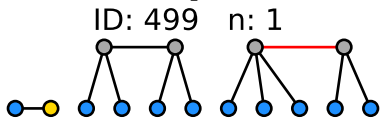
$V_{1^{n-1}} \boxtimes V_1$
ID: 546 n: 1



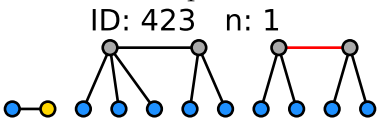
V_{1^n}
ID: 485 n: 1



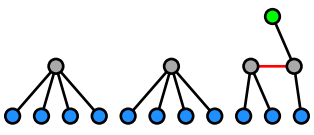
V_{1^n}
ID: 499 n: 1



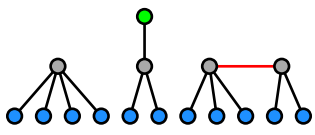
V_{1^n}
ID: 423 n: 1



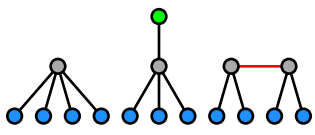
$V_{1^{n-1}} \boxtimes V_1$
ID: 505 n: 1



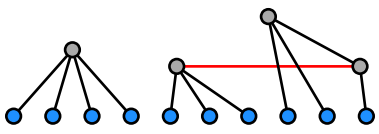
$V_{1^{n-1}} \boxtimes V_1$
ID: 511 n: 1



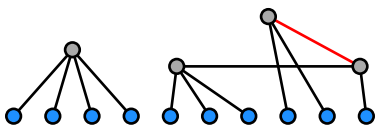
$V_{1^{n-1}} \boxtimes V_1$
ID: 427 n: 1



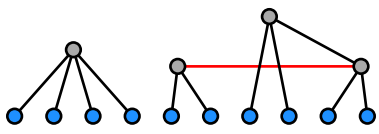
V_{1^n}
ID: 327 n: 1



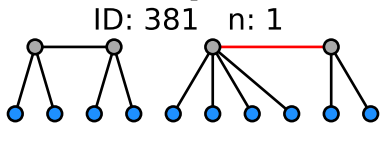
V_{1^n}
ID: 328 n: 1



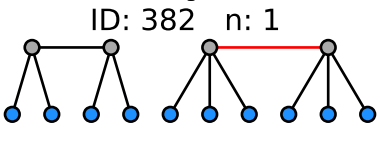
V_{1^n}
ID: 329 n: 1



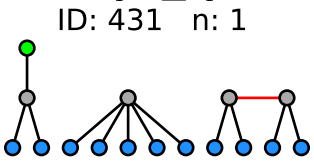
V_{1^n}
ID: 381 n: 1



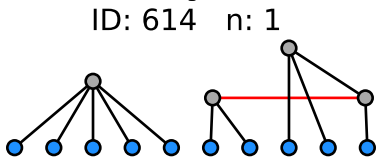
V_{1^n}
ID: 382 n: 1



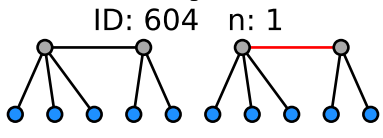
$V_{1^{n-1}} \boxtimes V_1$
ID: 431 n: 1



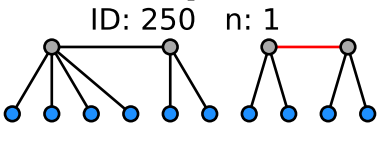
V_{1^n}
ID: 614 n: 1



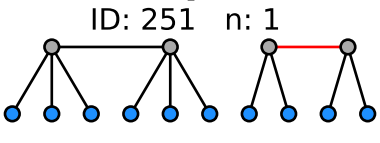
V_{1^n}
ID: 604 n: 1



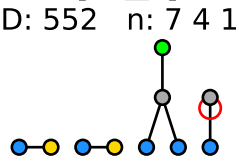
V_{1^n}
ID: 250 n: 1



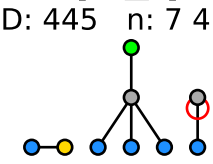
V_{1^n}
ID: 251 n: 1



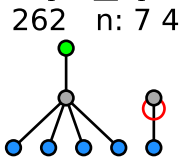
$V_{1^{n-1}} \boxtimes V_1$
ID: 552 n: 7 4 1



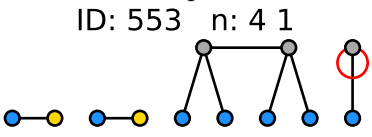
$V_{1^{n-1}} \boxtimes V_1$
ID: 445 n: 7 4 1



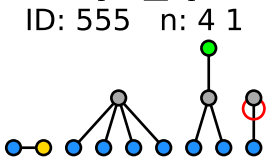
$V_{1^{n-1}} \boxtimes V_1$
ID: 262 n: 7 4 1



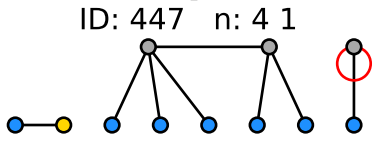
V_{1^n}
ID: 553 n: 4 1



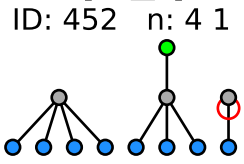
$V_{1^{n-1}} \boxtimes V_1$
ID: 555 n: 4 1



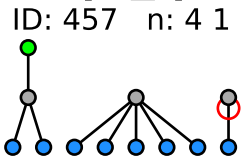
V_{1^n}
ID: 447 n: 4 1



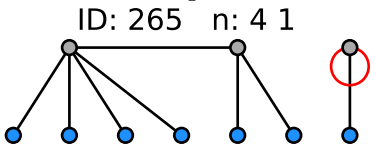
$V_{1^{n-1}} \boxtimes V_1$
ID: 452 n: 4 1



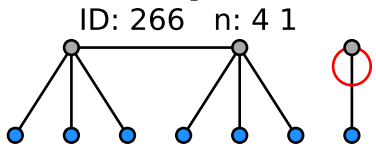
$V_{1^{n-1}} \boxtimes V_1$
ID: 457 n: 4 1



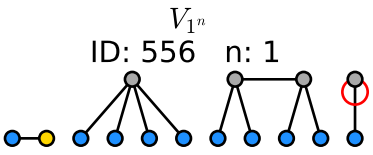
V_{1^n}
ID: 265 n: 4 1



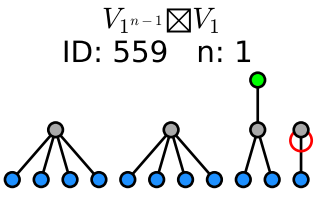
V_{1^n}
ID: 266 n: 4 1



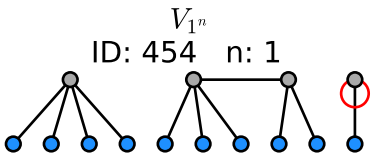
V_{1^n}
ID: 556 n: 1



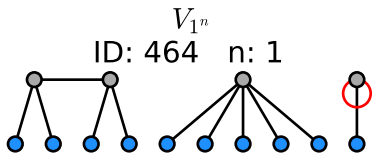
$V_{1^{n-1}} \boxtimes V_1$
ID: 559 n: 1



V_{1^n}
ID: 454 n: 1

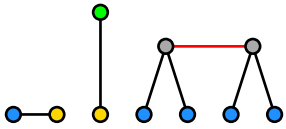


V_{1^n}
ID: 464 n: 1

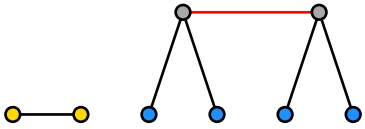


--- B,Birr cases with weight 11 relations relation groups: 5 ---

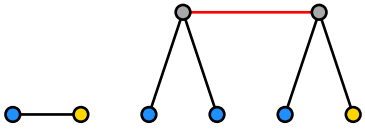
$V_{1^{n-1}} \boxtimes V_1$
ID: 418 n: 7 4 1



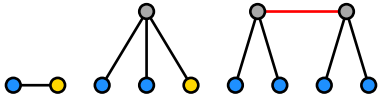
V_{1^n}
ID: 244 n: 7 4 1



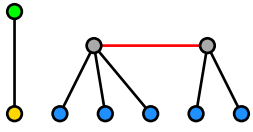
V_{1^n}
ID: 293 n: 7 4 1



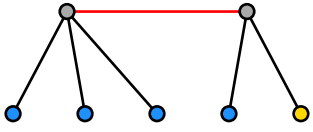
V_{1^n}
ID: 420 n: 4 1



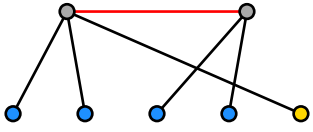
$V_{1^{n-1}} \boxtimes V_1$
ID: 599 n: 7 4 1



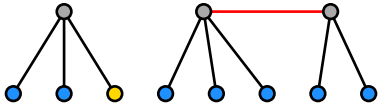
V_{1^n}
ID: 190 n: 7 4 1



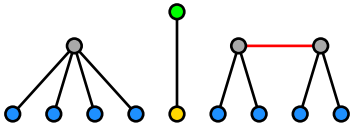
V_{1^n}
ID: 191 n: 7 4 1



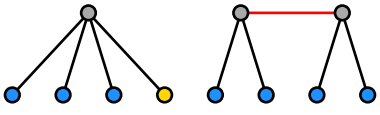
V_{1^n}
ID: 601 n: 4 1



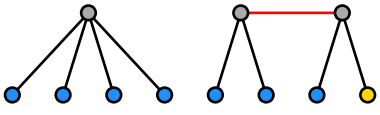
$V_{1^{n-1}} \boxtimes V_1$
ID: 425 n: 4 1



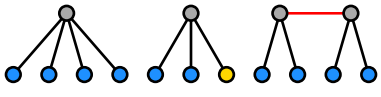
V_{1^n}
ID: 246 n: 4 1



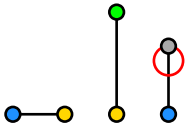
V_{1^n}
ID: 323 n: 4 1



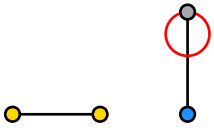
V_{1^n}
ID: 426 n: 1



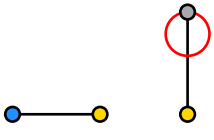
$V_{1^{n-1}} \boxtimes V_1$
ID: 442 n: 10 7 4 1



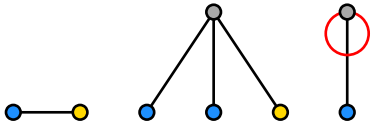
V_{1^n}
ID: 259 n: 10 7 4 1



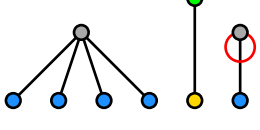
V_{1^n}
ID: 303 n: 10 7 4 1



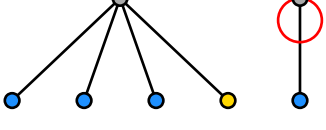
V_{1^n}
ID: 444 n: 7 4 1



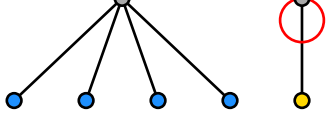
$V_{1^{n-1}} \boxtimes V_1$
ID: 449 n: 7 4 1



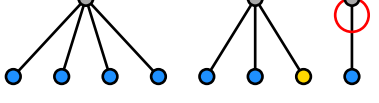
V_{1^n}
ID: 261 n: 7 4 1



V_{1^n}
ID: 333 n: 7 4 1

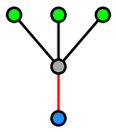


V_{1^n}
ID: 451 n: 4 1

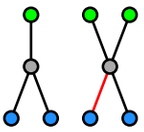


--------- edges: 13-n graphs: 176 ---------
--- A3 case graphs: 34 ---

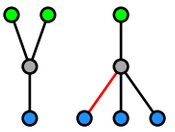
$V_{1^{n-3}} \boxtimes V_3$
ID: 134 n: 13 10 7 4



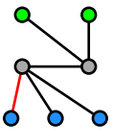
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 337 n: 10 7 4



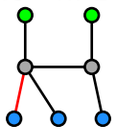
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 575 n: 10 7 4



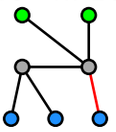
$V_{1^{n-2}} \boxtimes V_2$
ID: 144 n: 10 7 4



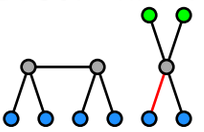
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 145 n: 10 7 4



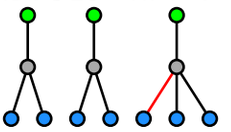
$V_{1^{n-2}} \boxtimes V_2$
ID: 146 n: 10 7 4



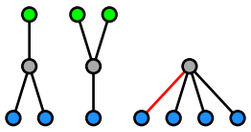
$V_{1^{n-2}} \boxtimes V_2$
ID: 367 n: 7 4



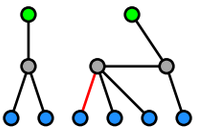
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 519 n: 7 4



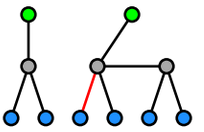
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 410 n: 7 4



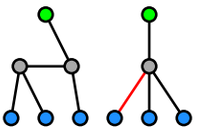
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 340 n: 7 4



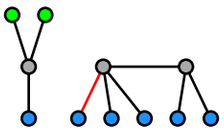
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 341 n: 7 4



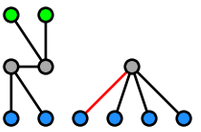
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 577 n: 7 4



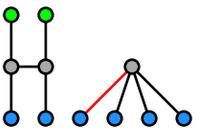
$V_{1^{n-2}} \boxtimes V_2$
ID: 582 n: 7 4



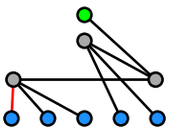
$V_{1^{n-2}} \boxtimes V_2$
ID: 240 n: 7 4



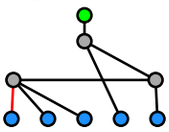
$V_{1^{n-2}} \boxtimes V_2$
ID: 241 n: 7 4



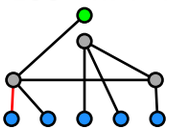
$V_{1^{n-1}} \boxtimes V_1$
ID: 151 n: 7 4 1



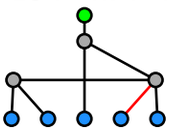
$V_{1^{n-1}} \boxtimes V_1$
ID: 152 n: 7 4 1



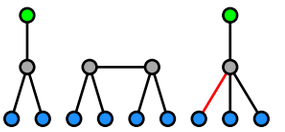
$V_{1^{n-1}} \boxtimes V_1$
ID: 153 n: 7 4 1



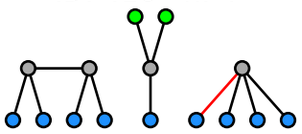
$V_{1^{n-1}} \boxtimes V_1$
ID: 154 n: 7 4 1



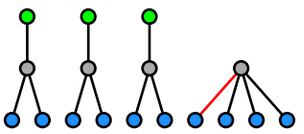
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 527 n: 4



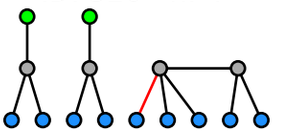
$V_{1^{n-2}} \boxtimes V_2$
ID: 416 n: 4



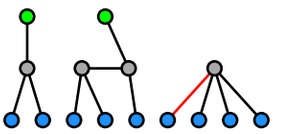
$V_{1^{n-3}} \boxtimes V_3$
ID: 541 n: 4



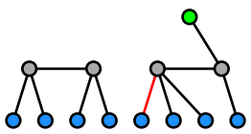
$V_{1^{n-2}} \boxtimes V_2$
ID: 520 n: 4



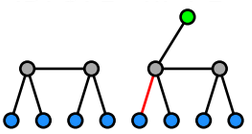
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 412 n: 4



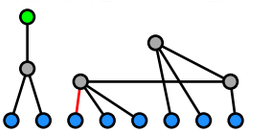
$V_{1^{n-1}} \boxtimes V_1$
ID: 370 n: 4 1



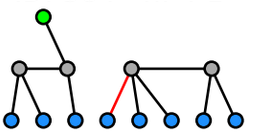
$V_{1^{n-1}} \boxtimes V_1$
ID: 371 n: 4 1



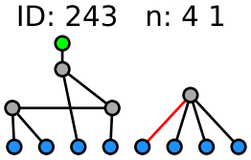
$V_{1^{n-1}} \boxtimes V_1$
ID: 342 n: 4 1



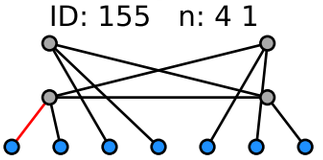
$V_{1^{n-1}} \boxtimes V_1$
ID: 584 n: 4 1



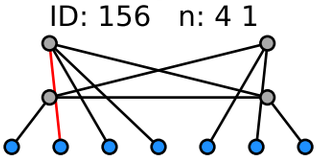
$V_{1^{n-1}} \boxtimes V_1$
ID: 243 n: 4 1



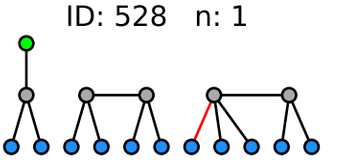
V_{1^n}
ID: 155 n: 4 1



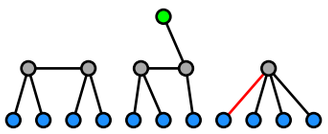
V_{1^n}
ID: 156 n: 4 1



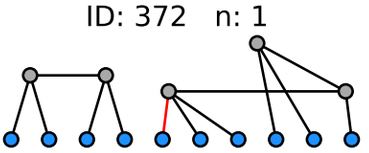
$V_{1^{n-1}} \boxtimes V_1$
ID: 528 n: 1



$V_{1^{n-1}} \boxtimes V_1$
ID: 417 n: 1

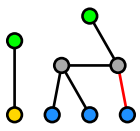


V_{1^n}
ID: 372 n: 1

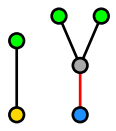


--- A2 case with weight 13 relations relation groups: 8 ---

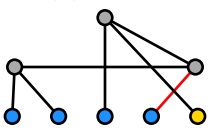
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 592 n: 10 7 4



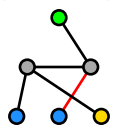
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 585 n: 13 10 7 4



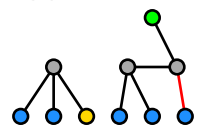
V_{1^n}
ID: 166 n: 7 4 1



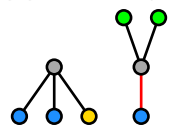
$V_{1^{n-1}} \boxtimes V_1$
ID: 160 n: 10 7 4 1



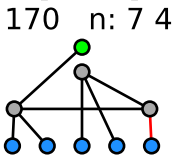
$V_{1^{n-1}} \boxtimes V_1$
ID: 594 n: 7 4 1



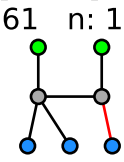
$V_{1^{n-2}} \boxtimes V_2$
ID: 587 n: 10 7 4



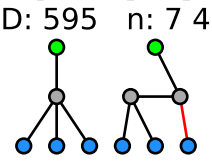
$V_{1^{n-1}} \boxtimes V_1$
ID: 170 n: 7 4 1



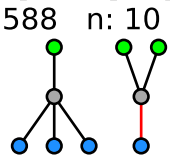
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 161 n: 10 7 4



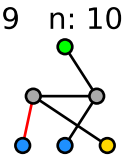
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 595 n: 7 4



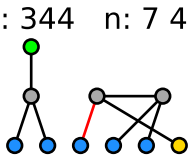
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 588 n: 10 7 4



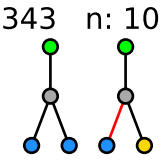
$V_{1^{n-1}} \boxtimes V_1$
ID: 159 n: 10 7 4 1



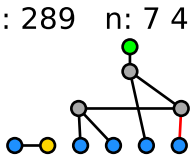
$V_{1^{n-1}} \boxtimes V_1$
ID: 344 n: 7 4 1



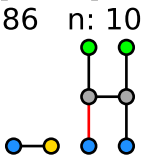
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 343 n: 10 7 4



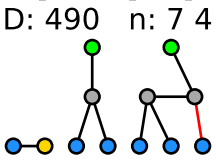
$V_{1^{n-1}} \boxtimes V_1$
ID: 289 n: 7 4 1



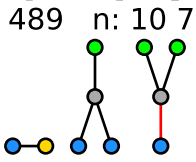
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 286 n: 10 7 4



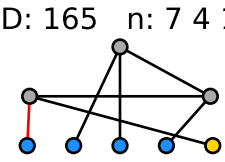
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 490 n: 7 4



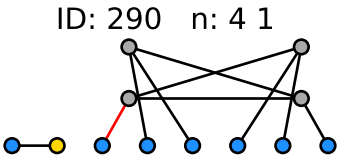
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 489 n: 10 7 4



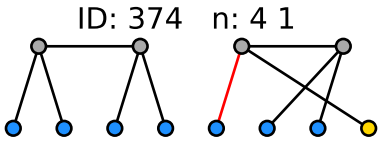
V_{1^n}
ID: 165 n: 7 4 1



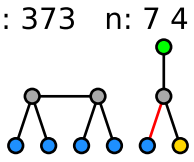
V_{1^n}
ID: 290 n: 4 1



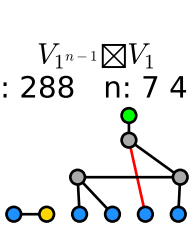
V_{1^n}
ID: 374 n: 4 1



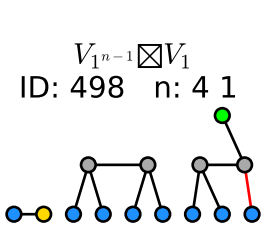
$V_{1^{n-1}} \boxtimes V_1$
ID: 373 n: 7 4 1



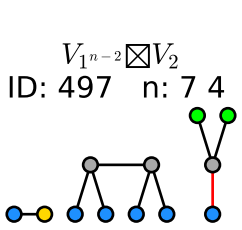
$V_{1^{n-1}} \boxtimes V_1$
ID: 288 n: 7 4 1



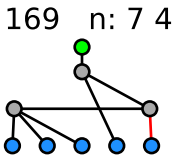
$V_{1^{n-1}} \boxtimes V_1$
ID: 498 n: 4 1



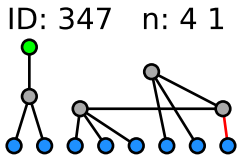
$V_{1^{n-2}} \boxtimes V_2$
ID: 497 n: 7 4



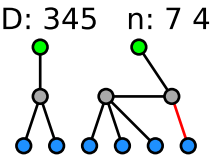
$V_{1^{n-1}} \boxtimes V_1$
ID: 169 n: 7 4 1



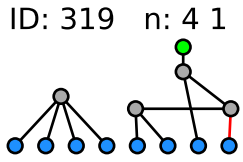
$V_{1^{n-1}} \boxtimes V_1$
ID: 347 n: 4 1



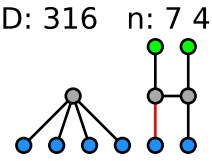
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 345 n: 7 4



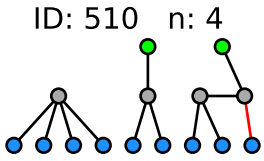
$V_{1^{n-1}} \boxtimes V_1$
ID: 319 n: 4 1



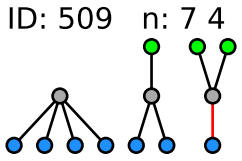
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 316 n: 7 4



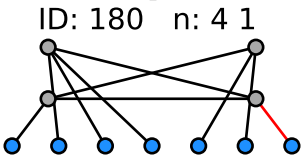
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 510 n: 4



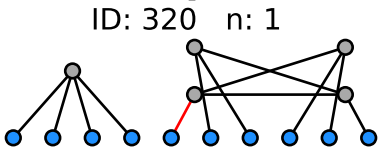
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 509 n: 7 4



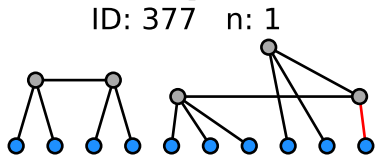
V_{1^n}
ID: 180 n: 4 1



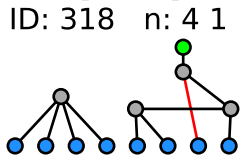
V_{1^n}
ID: 320 n: 1



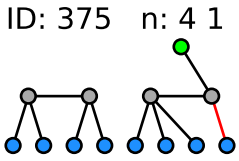
V_{1^n}
ID: 377 n: 1



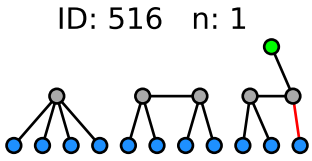
$V_{1^{n-1}} \boxtimes V_1$
ID: 318 n: 4 1



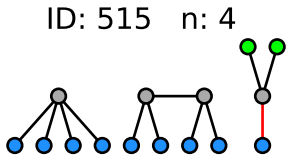
$V_{1^{n-1}} \boxtimes V_1$
ID: 375 n: 4 1



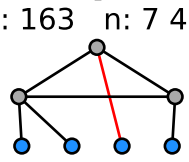
$V_{1^{n-1}} \boxtimes V_1$
ID: 516 n: 1



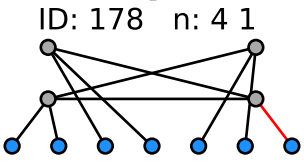
$V_{1^{n-2}} \boxtimes V_2$
ID: 515 n: 4



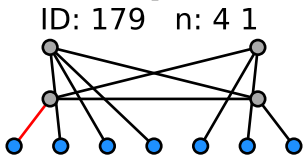
V_{1^n}
ID: 163 n: 7 4 1



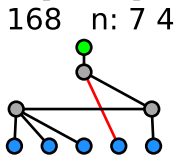
V_{1^n}
ID: 178 n: 4 1



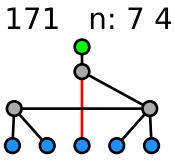
V_{1^n}
ID: 179 n: 4 1



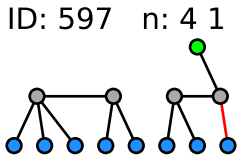
$V_{1^{n-1}} \boxtimes V_1$
ID: 168 n: 7 4 1



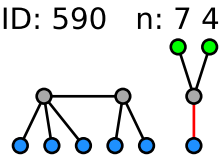
$V_{1^{n-1}} \boxtimes V_1$
ID: 171 n: 7 4 1



$V_{1^{n-1}} \boxtimes V_1$
ID: 597 n: 4 1

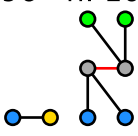


$V_{1^{n-2}} \boxtimes V_2$
ID: 590 n: 7 4

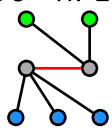


--- B,Birr cases without weight 11 relations graphs: 74 ---

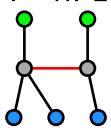
$V_{1^{n-2}} \boxtimes V_2$
ID: 296 n: 10 7 4



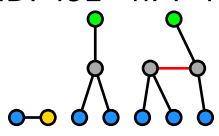
$V_{1^{n-2}} \boxtimes V_2$
ID: 196 n: 10 7 4



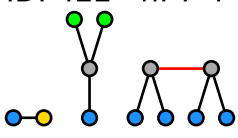
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 197 n: 10 7 4



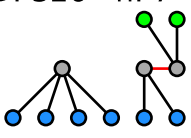
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 492 n: 7 4



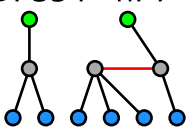
$V_{1^{n-2}} \boxtimes V_2$
ID: 422 n: 7 4



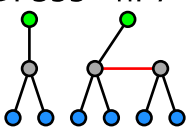
$V_{1^{n-2}} \boxtimes V_2$
ID: 326 n: 7 4



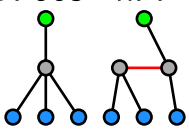
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 354 n: 7 4



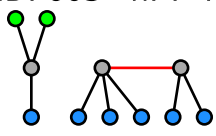
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 355 n: 7 4



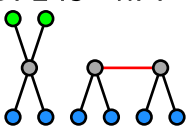
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 609 n: 7 4



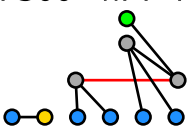
$V_{1^{n-2}} \boxtimes V_2$
ID: 603 n: 7 4



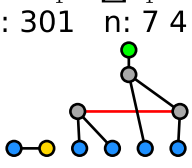
$V_{1^{n-2}} \boxtimes V_2$
ID: 249 n: 7 4



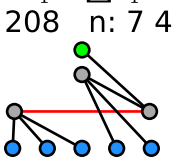
$V_{1^{n-1}} \boxtimes V_1$
ID: 300 n: 7 4 1



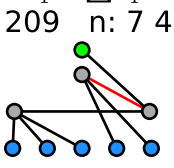
$V_{1^{n-1}} \boxtimes V_1$
ID: 301 n: 7 4 1



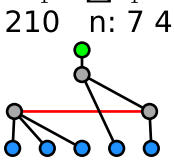
$V_{1^{n-1}} \boxtimes V_1$
ID: 208 n: 7 4 1



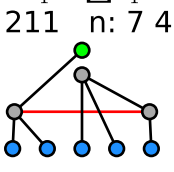
$V_{1^{n-1}} \boxtimes V_1$
ID: 209 n: 7 4 1



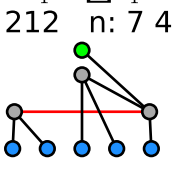
$V_{1^{n-1}} \boxtimes V_1$
ID: 210 n: 7 4 1



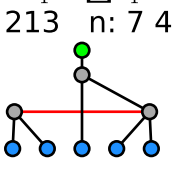
$V_{1^{n-1}} \boxtimes V_1$
ID: 211 n: 7 4 1



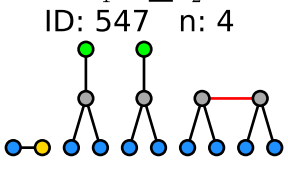
$V_{1^{n-1}} \boxtimes V_1$
ID: 212 n: 7 4 1



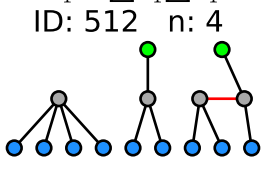
$V_{1^{n-1}} \boxtimes V_1$
ID: 213 n: 7 4 1



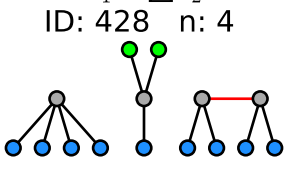
$V_{1^{n-2}} \boxtimes V_2$
ID: 547 n: 4



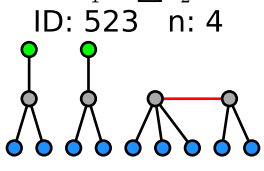
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 512 n: 4



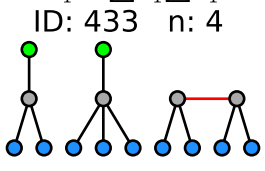
$V_{1^{n-2}} \boxtimes V_2$
ID: 428 n: 4



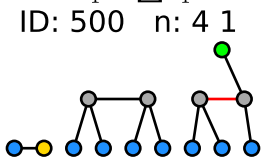
$V_{1^{n-2}} \boxtimes V_2$
ID: 523 n: 4



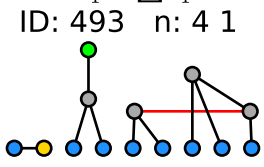
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 433 n: 4



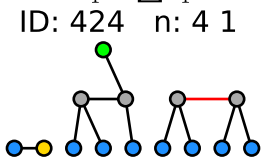
$V_{1^{n-1}} \boxtimes V_1$
ID: 500 n: 4 1



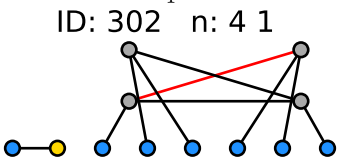
$V_{1^{n-1}} \boxtimes V_1$
ID: 493 n: 4 1



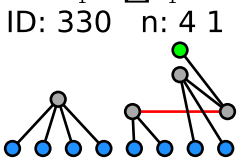
$V_{1^{n-1}} \boxtimes V_1$
ID: 424 n: 4 1



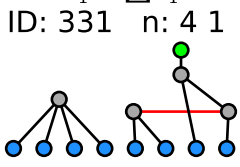
V_{1^n}
ID: 302 n: 4 1



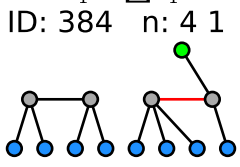
$V_{1^{n-1}} \boxtimes V_1$
ID: 330 n: 4 1



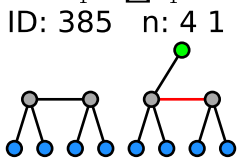
$V_{1^{n-1}} \boxtimes V_1$
ID: 331 n: 4 1



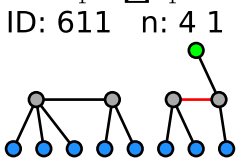
$V_{1^{n-1}} \boxtimes V_1$
ID: 384 n: 4 1



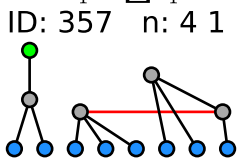
$V_{1^{n-1}} \boxtimes V_1$
ID: 385 n: 4 1



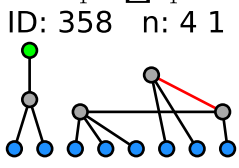
$V_{1^{n-1}} \boxtimes V_1$
ID: 611 n: 4 1



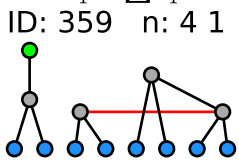
$V_{1^{n-1}} \boxtimes V_1$
ID: 357 n: 4 1



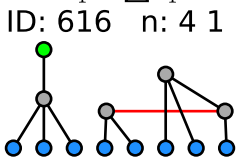
$V_{1^{n-1}} \boxtimes V_1$
ID: 358 n: 4 1



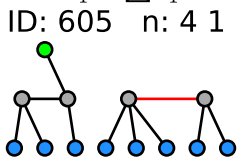
$V_{1^{n-1}} \boxtimes V_1$
ID: 359 n: 4 1



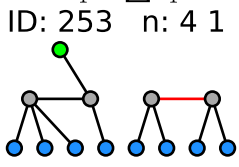
$V_{1^{n-1}} \boxtimes V_1$
ID: 616 n: 4 1



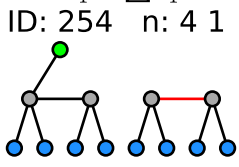
$V_{1^{n-1}} \boxtimes V_1$
ID: 605 n: 4 1



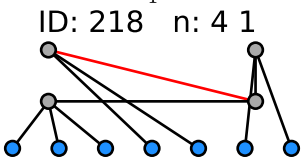
$V_{1^{n-1}} \boxtimes V_1$
ID: 253 n: 4 1



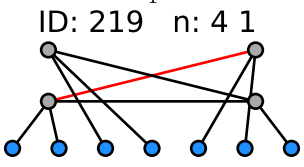
$V_{1^{n-1}} \boxtimes V_1$
ID: 254 n: 4 1



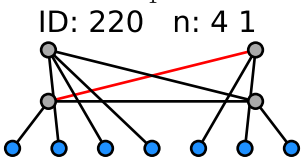
V_{1^n}
ID: 218 n: 4 1



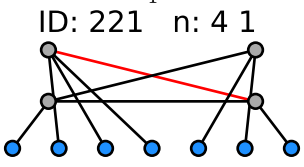
V_{1^n}
ID: 219 n: 4 1



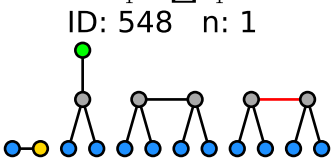
V_{1^n}
ID: 220 n: 4 1



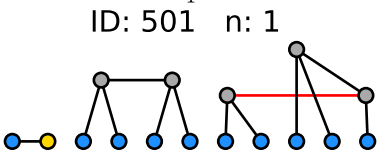
V_{1^n}
ID: 221 n: 4 1



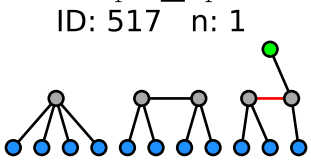
$V_{1^{n-1}} \boxtimes V_1$
ID: 548 n: 1



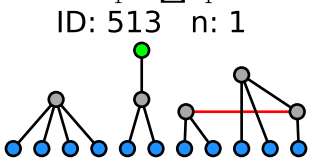
V_{1^n}
ID: 501 n: 1



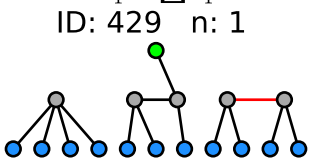
$V_{1^{n-1}} \boxtimes V_1$
ID: 517 n: 1



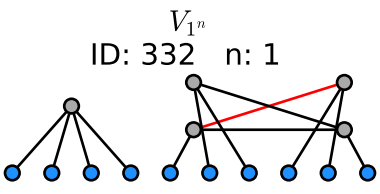
$V_{1^{n-1}} \boxtimes V_1$
ID: 513 n: 1



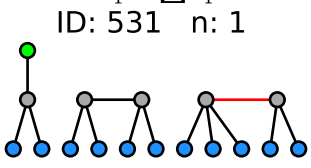
$V_{1^{n-1}} \boxtimes V_1$
ID: 429 n: 1



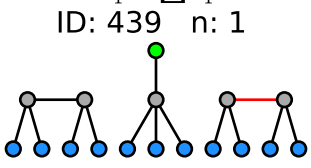
V_{1^n}
ID: 332 n: 1



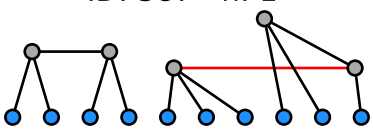
$V_{1^{n-1}} \boxtimes V_1$
ID: 531 n: 1



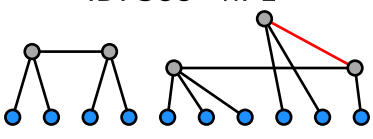
$V_{1^{n-1}} \boxtimes V_1$
ID: 439 n: 1



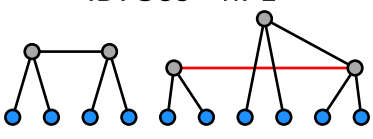
V_{1^n}
ID: 387 n: 1



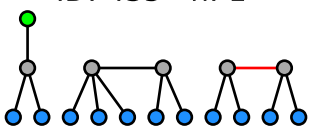
V_{1^n}
ID: 388 n: 1



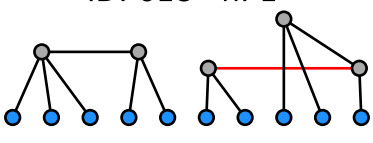
V_{1^n}
ID: 389 n: 1



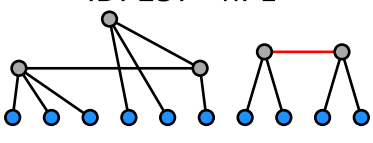
$V_{1^{n-1}} \boxtimes V_1$
ID: 435 n: 1



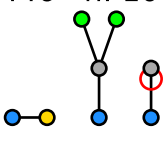
V_{1^n}
ID: 618 n: 1



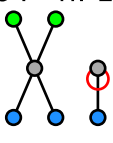
V_{1^n}
ID: 257 n: 1



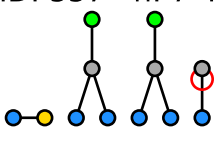
$V_{1^{n-2}} \boxtimes V_2$
ID: 446 n: 10 7 4



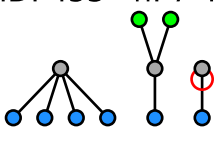
$V_{1^{n-2}} \boxtimes V_2$
ID: 264 n: 10 7 4



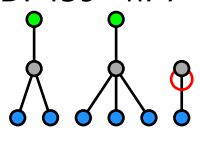
$V_{1^{n-2}} \boxtimes V_2$
ID: 557 n: 7 4



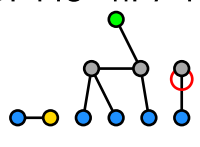
$V_{1^{n-2}} \boxtimes V_2$
ID: 453 n: 7 4



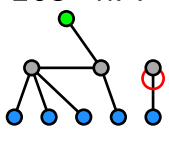
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 459 n: 7 4



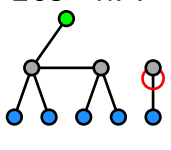
$V_{1^{n-1}} \boxtimes V_1$
ID: 448 n: 7 4 1



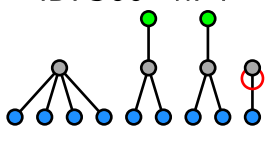
$V_{1^{n-1}} \boxtimes V_1$
ID: 268 n: 7 4 1



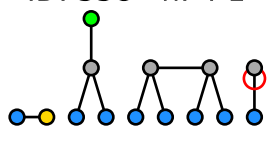
$V_{1^{n-1}} \boxtimes V_1$
ID: 269 n: 7 4 1



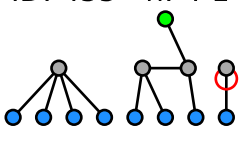
$V_{1^{n-2}} \boxtimes V_2$
ID: 560 n: 4



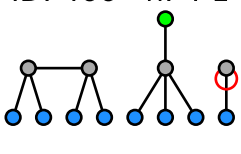
$V_{1^{n-1}} \boxtimes V_1$
ID: 558 n: 4 1



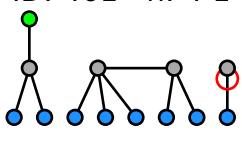
$V_{1^{n-1}} \boxtimes V_1$
ID: 455 n: 4 1



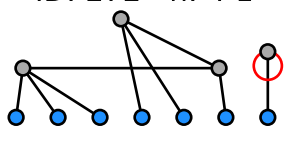
$V_{1^{n-1}} \boxtimes V_1$
ID: 466 n: 4 1



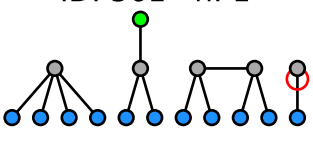
$V_{1^{n-1}} \boxtimes V_1$
ID: 461 n: 4 1



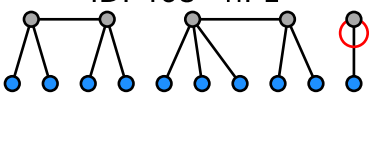
V_{1^n}
ID: 272 n: 4 1



$V_{1^{n-1}} \boxtimes V_1$
ID: 561 n: 1

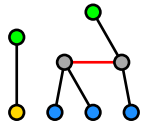


V_{1^n}
ID: 468 n: 1

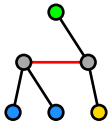


--- B,Birr cases with weight 11 relations relation groups: 6 ---

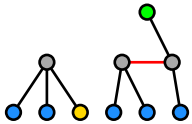
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 606 n: 10 7 4



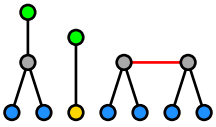
$V_{1^{n-1}} \boxtimes V_1$
ID: 195 n: 10 7 4 1



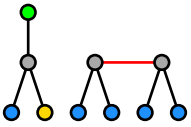
$V_{1^{n-1}} \boxtimes V_1$
ID: 608 n: 7 4 1



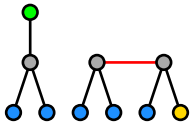
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 430 n: 7 4



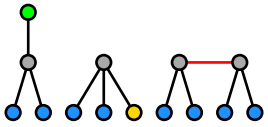
$V_{1^{n-1}} \boxtimes V_1$
ID: 248 n: 7 4 1



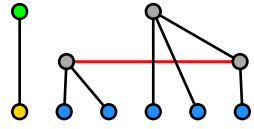
$V_{1^{n-1}} \boxtimes V_1$
ID: 353 n: 7 4 1



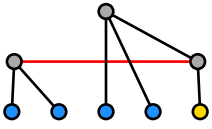
$V_{1^{n-1}} \boxtimes V_1$
ID: 432 n: 4 1



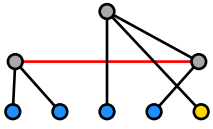
$V_{1^{n-1}} \boxtimes V_1$
ID: 613 n: 7 4 1



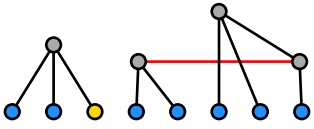
V_{1^n}
ID: 205 n: 7 4 1



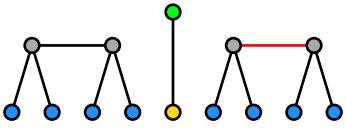
V_{1^n}
ID: 206 n: 7 4 1



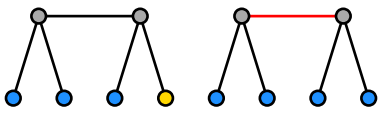
V_{1^n}
ID: 615 n: 4 1



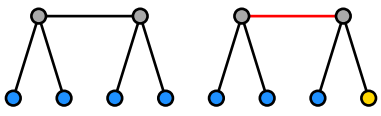
$V_{1^{n-1}} \boxtimes V_1$
ID: 437 n: 4 1



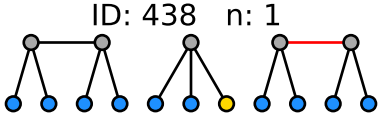
V_{1^n}
ID: 252 n: 4 1



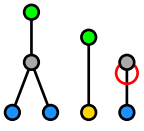
V_{1^n}
ID: 383 n: 4 1



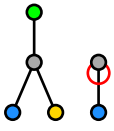
V_{1^n}
ID: 438 n: 1



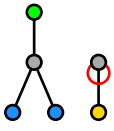
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 456 n: 10 7 4



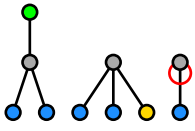
$V_{1^{n-1}} \boxtimes V_1$
ID: 263 n: 10 7 4 1



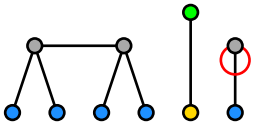
$V_{1^{n-1}} \boxtimes V_1$
ID: 363 n: 10 7 4 1



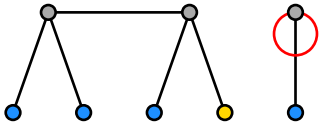
$V_{1^{n-1}} \boxtimes V_1$
ID: 458 n: 7 4 1



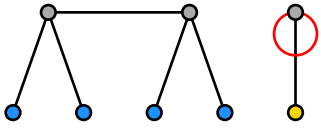
$V_{1^{n-1}} \boxtimes V_1$
ID: 463 n: 7 4 1



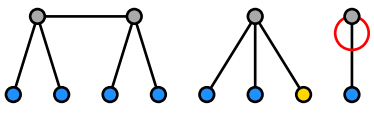
V_{1^n}
ID: 267 n: 7 4 1



V_{1^n}
ID: 393 n: 7 4 1

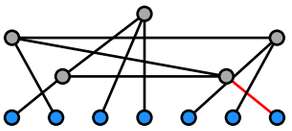


V_{1^n}
ID: 465 n: 4 1

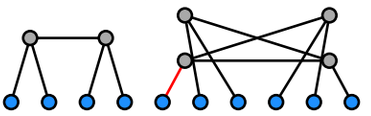


--------- edges: 14-n graphs: 76 ---------
--- A2 case with weight 13 relations relation groups: 6 ---

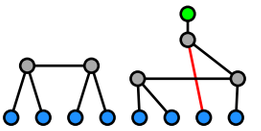
V_{1^n}
ID: 186 n: 4 1



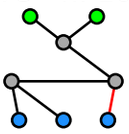
V_{1^n}
ID: 380 n: 1



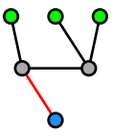
$V_{1^{n-1}} \boxtimes V_1$
ID: 378 n: 4 1



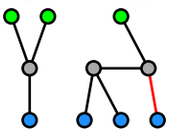
$V_{1^{n-2}} \boxtimes V_2$
ID: 173 n: 10 7 4



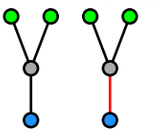
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 162 n: 13 10 7 4



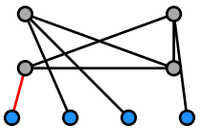
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 596 n: 10 7 4



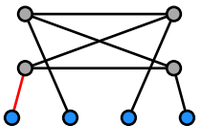
$V_{1^{n-4}} \boxtimes V_2 \boxtimes V_2$
ID: 589 n: 13 10 7 4



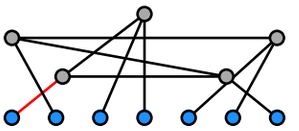
V_{1^n}
ID: 176 n: 7 4 1



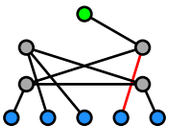
V_{1^n}
ID: 177 n: 7 4 1



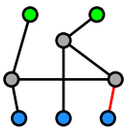
V_{1^n}
ID: 185 n: 4 1



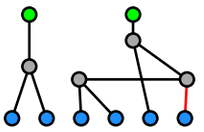
$V_{1^{n-1}} \boxtimes V_1$
ID: 183 n: 7 4 1



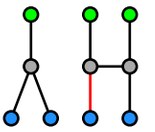
$V_{1^{n-2}} \boxtimes V_{1^2}$
ID: 175 n: 10 7 4



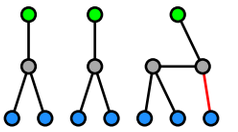
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 349 n: 7 4



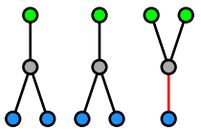
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_1 \boxtimes V_1$
ID: 346 n: 10 7 4



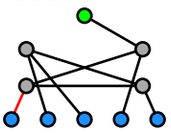
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 522 n: 7 4



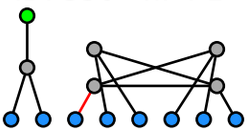
$V_{1^{n-4}} \boxtimes V_2 \boxtimes V_2$
ID: 521 n: 10 7 4



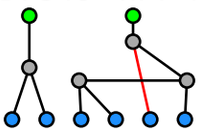
$V_{1^{n-1}} \boxtimes V_1$
ID: 182 n: 7 4 1



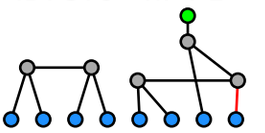
$V_{1^{n-1}} \boxtimes V_1$
ID: 350 n: 4 1



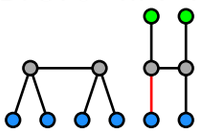
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 348 n: 7 4



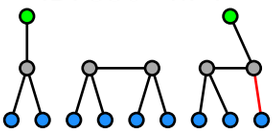
$V_{1^{n-1}} \boxtimes V_1$
ID: 379 n: 4 1



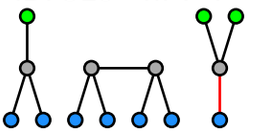
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 376 n: 7 4



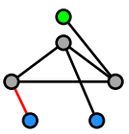
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 530 n: 4



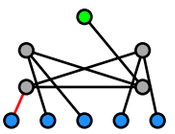
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 529 n: 7 4



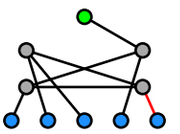
$V_{1^{n-1}} \boxtimes V_1$
ID: 167 n: 10 7 4 1



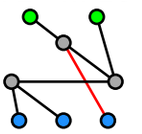
$V_{1^{n-1}} \boxtimes V_1$
ID: 181 n: 7 4 1



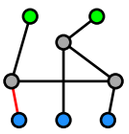
$V_{1^{n-1}} \boxtimes V_1$
ID: 184 n: 7 4 1



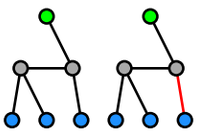
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 172 n: 10 7 4



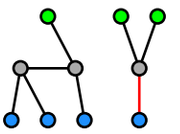
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 174 n: 10 7 4



$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 598 n: 7 4

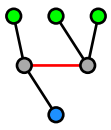


$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 591 n: 10 7 4

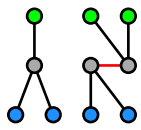


--- B,Birr cases without weight 11 relations graphs: 46 ---

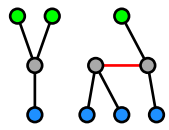
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 198 n: 13 10 7 4



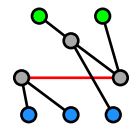
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 356 n: 10 7 4



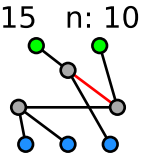
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 610 n: 10 7 4



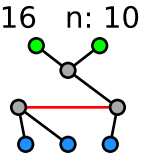
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 214 n: 10 7 4



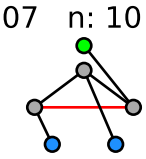
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 215 n: 10 7 4



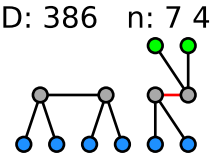
$V_{1^{n-2}} \boxtimes V_2$
ID: 216 n: 10 7 4



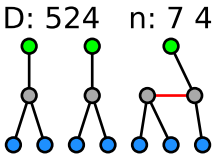
$V_{1^{n-1}} \boxtimes V_1$
ID: 207 n: 10 7 4 1



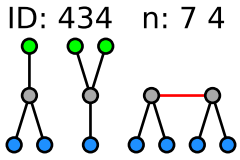
$V_{1^{n-2}} \boxtimes V_2$
ID: 386 n: 7 4



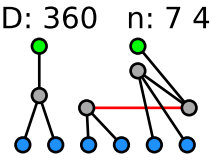
$V_{1^{n-3}} \boxtimes V_2 \boxtimes V_1$
ID: 524 n: 7 4



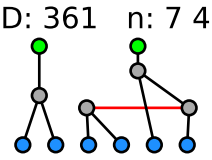
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 434 n: 7 4



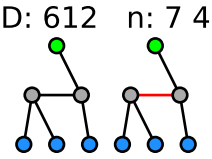
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 360 n: 7 4



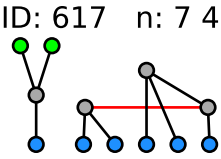
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 361 n: 7 4



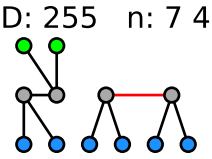
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 612 n: 7 4



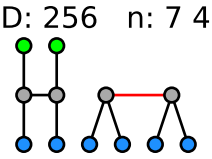
$V_{1^{n-2}} \boxtimes V_2$
ID: 617 n: 7 4



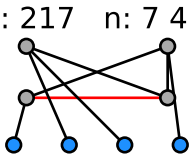
$V_{1^{n-2}} \boxtimes V_2$
ID: 255 n: 7 4



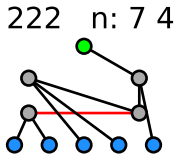
$V_{1^{n-2}} \boxtimes V_2$
ID: 256 n: 7 4



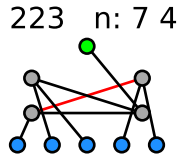
V_{1^n}
ID: 217 n: 7 4 1



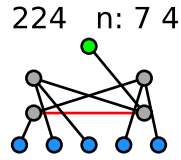
$V_{1^{n-1}} \boxtimes V_1$
ID: 222 n: 7 4 1



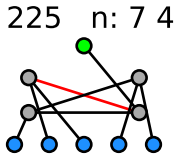
$V_{1^{n-1}} \boxtimes V_1$
ID: 223 n: 7 4 1



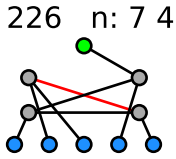
$V_{1^{n-1}} \boxtimes V_1$
ID: 224 n: 7 4 1



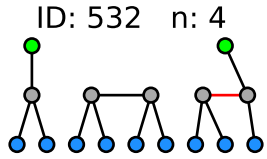
$V_{1^{n-1}} \boxtimes V_1$
ID: 225 n: 7 4 1



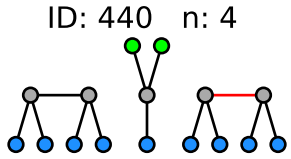
$V_{1^{n-1}} \boxtimes V_1$
ID: 226 n: 7 4 1



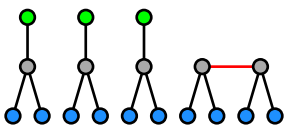
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 532 n: 4



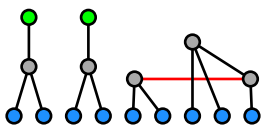
$V_{1^{n-2}} \boxtimes V_2$
ID: 440 n: 4



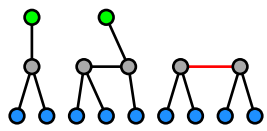
$V_{1^{n-3}} \boxtimes V_3$
ID: 549 n: 4



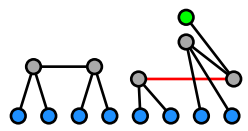
$V_{1^{n-2}} \boxtimes V_2$
ID: 525 n: 4



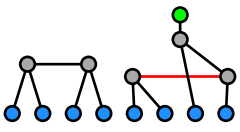
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 436 n: 4



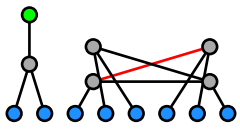
$V_{1^{n-1}} \boxtimes V_1$
ID: 390 n: 4 1



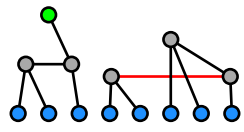
$V_{1^{n-1}} \boxtimes V_1$
ID: 391 n: 4 1



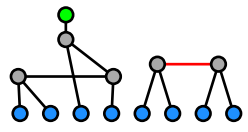
$V_{1^{n-1}} \boxtimes V_1$
ID: 362 n: 4 1



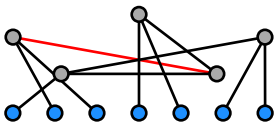
$V_{1^{n-1}} \boxtimes V_1$
ID: 619 n: 4 1



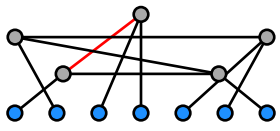
$V_{1^{n-1}} \boxtimes V_1$
ID: 258 n: 4 1



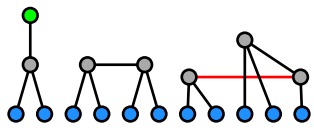
V_{1^n}
ID: 227 n: 4 1



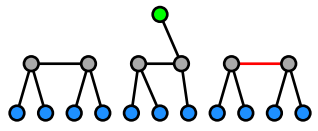
V_{1^n}
ID: 228 n: 4 1



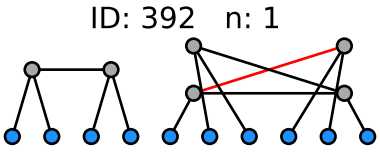
$V_{1^{n-1}} \boxtimes V_1$
ID: 533 n: 1



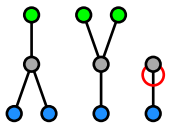
$V_{1^{n-1}} \boxtimes V_1$
ID: 441 n: 1



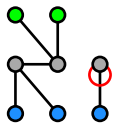
V_{1^n}
ID: 392 n: 1



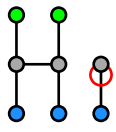
$V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
ID: 460 n: 10 7 4



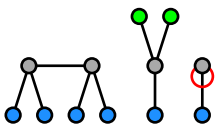
$V_{1^{n-2}} \boxtimes V_2$
ID: 270 n: 10 7 4



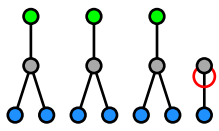
$V_{1^{n-2}} \boxtimes V_2$
ID: 271 n: 10 7 4



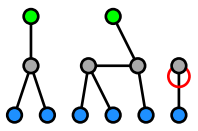
$V_{1^{n-2}} \boxtimes V_2$
ID: 467 n: 7 4



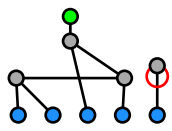
$V_{1^{n-3}} \boxtimes V_3$
ID: 562 n: 7 4



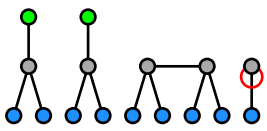
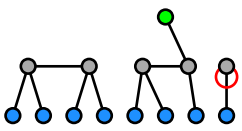
$V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
ID: 462 n: 7 4



$V_{1^{n-1}} \boxtimes V_1$
ID: 273 n: 7 4 1



$V_{1^{n-2}} \boxtimes V_2$
ID: 563 n: 4



$V_{1^{n-1}} \boxtimes V_1$
ID: 469 n: 4 1