

## DMV(Q<sub>n</sub>)

**Q3    4**

'000'

'001'

'010'

'100'

**Q4    8**

'0000'

'0001'

'0010'

'0101'

'1010'

'1101'

'1110'

'1111'

**Q5    10**

'00000'

'00001'

'00010'

'00110'

'01110'

'10000'

'11000'

'11100'

'11101'

'11110'

**Q6**    **20**    (Convert i-1 to binary)

1,2,3,7,10,19,26,27,28,30,34,38,39,40,47,54,59,61,62,63

**Q7**    **29**    (Convert i-1 to binary)

1 2 3 11 27 28 30 32 40 53 57 59 61 62 66 75 79 82 85 86 94 98 100 103 104 106 111 117 119

**Q8**    **52**    (Convert i-1 to binary)

1 2 3 16 17 21 29 35 39 43 53 55 56 58 66 70 74 85 86 88 91 98 99 100 109 116 120 129 140 144 154  
155 156 166 173 174 176 186 190 199 205 207 208 219 223 233 237 241 248 249 250 251

**Q9**    **84**    (Convert i-1 to binary)

1 2 3 6 9 22 25 29 30 32 35 38 39 40 48 51 57 59 60 64 73 94 112 117 123 134 137 163 176 181 196  
197 198 200 206 212 218 219 220 222 225 227 228 229 235 245 251 253 254 255 258 279 313 322  
327 329 330 333 335 338 340 343 344 354 365 376 399 400 403 404 405 407 415 430 432 434 436  
437 438 446 463 468 483 510

**Q10**    **122**    (Convert i-1 to binary)

1 2 3 9 13 19 40 41 51 57 58 59 62 66 77 79 80 82 83 84 87 90 95 104 112 122 130 134 149 150 158  
162 187 190 191 192 213 215 236 240 256 269 270 275 302 309 310 318 322 351 357 359 360 369  
373 401 403 404 405 409 418 420 428 436 437 457 459 460 473 487 492 514 553 581 589 602 611  
617 619 621 637 655 660 668 677 679 687 703 712 714 730 731 732 758 782 784 792 799 800 809  
818 822 824 835 863 867 871 881 882 883 910 916 920 921 937 939 940 943 953 968 984 1011

**Q11**    ?

## OMV(Q<sub>n</sub>)

**Q3    4**

'000'

'001'

'110'

'111'

**Q4    6**

'0000'

'0001'

'0110'

'0111'

'1010'

'1011'

**Q5    12**

'00000'

'00001'

'00110'

'00111'

'01010'

'01011'

'10100'

'10101'

'11000'

'11001'

'11110'

'11111'

**Q6**    **24**    (Convert i-1 to binary)

1,2,8,11,13,16,19,22,23,26,28,29,36,37,39,42,43,46,49,52,54,57,63,64

**Q7**    **40**    (Convert i-1 to binary)

1 2 7 12 13 14 19 20 22 25 31 32 35 36 38 41 47 48 56 59 69 74 81 82 87 92 93 94 97 98 103 108 109  
110 115 116 118 121 127 128

**Q8**    **72**    (Convert i-1 to binary)

1 2 8 11 13 16 19 22 23 26 28 29 36 37 39 42 43 46 49 52 54 57 63 64 67 68 69 79 82 85 108 111 114  
124 125 126 134 137 138 155 158 160 161 163 166 183 184 187 193 194 200 203 205 208 211 214  
215 218 220 221 228 229 231 234 235 238 241 244 246 249 255 256

**Q9**    126

**Q10**    252

**Q11**    462

## **MV(Q<sub>h</sub>)**

**Q3    5**

'000'

'001'

'010'

'101'

'110'

**Q4    9**

'0000'

'0001'

'0010'

'0110'

'0111'

'1001'

'1011'

'1100'

'1111'

**Q5    16**

'00000'

'00001'

'00010'

'00100'

'01001'

'01010'

'01110'

'01111'

'10011'

'10100'

'10110'

'10111'

'11000'

'11001'

'11101'

'11111'

**Q6 32** (Convert i-1 to binary)

1,2,3,7,10,14,15,16,20,21,22,24,25,27,28,29,36,37,38,40,41,43,44,45,49,50,51,55,58,62,63,64

**Q7 59** (Convert i-1 to binary)

1 2 3 6 7 10 11 16 20 21 23 25 26 30 31 32 36 37 38 41 43 46 47 48 49 50 51 56 60 61 68 69 72 73 76  
78 79 82 83 85 88 89 92 93 98 99 101 104 105 108 109 113 118 119 122 123 126 127 128

**Q8 110** (Convert i-1 to binary)

1 2 3 8 11 12 13 14 18 21 23 24 25 26 32 33 37 40 42 43 46 47 51 52 53 54 57 60 63 64 67 68 69 70  
79 80 81 83 86 91 92 93 94 98 100 103 105 108 109 110 113 114 119 120 123 126 134 135 136 137  
138 140 141 145 147 148 149 155 158 159 160 161 163 164 166 170 175 176 178 182 185 188 189  
193 194 196 199 203 205 206 210 215 216 217 218 223 225 229 230 232 234 235 240 243 244 245  
250 253 255 256

**Q9 200** (Convert i-1 to binary)

1 2 3 6 10 12 15 20 24 25 29 30 35 37 39 41 42 48 53 56 59 68 69 71 73 75 78 83 85 90 92 95 96 97  
104 107 108 110 111 114 115 116 118 119 121 122 125 132 133 134 135 137 139 144 145 147 150  
154 159 160 162 164 167 171 173 174 177 180 182 184 186 187 189 191 193 194 204 205 206 208  
210 212 215 216 219 221 227 229 230 232 233 234 239 241 245 252 254 256 257 261 264 267 268  
269 270 277 279 282 283 288 290 292 299 301 307 308 309 310 313 314 319 320 322 324 329 334  
335 336 337 338 339 342 344 347 348 349 354 355 357 358 359 361 364 368 369 376 380 381 382  
386 387 392 393 398 399 402 404 407 409 412 413 414 417 422 423 424 427 428 429 433 435 438  
444 448 449 454 455 456 458 459 460 469 470 473 474 479 480 483 484 485 490 493 498 500 503  
504 505 507 510 511

**Q10 342** (directly) (Convert i-1 to binary)

1 2 3 5 14 23 24 25 26 27 30 38 39 40 41 44 47 49 50 54 60 61 63 64 66 67 71 73 77 84 85 88 94 97  
100 102 107 108 109 110 115 117 119 123 132 133 134 139 143 145 146 150 156 160 161 164 171  
176 179 180 181 183 190 193 195 198 200 202 204 206 207 211 217 218 219 223 226 228 229 231  
233 241 242 248 252 253 254 263 265 267 268 269 270 274 280 284 285 289 290 291 308 309 311

312 313 319 321 324 326 327 335 341 342 345 346 347 350 351 354 363 366 367 368 369 370 376  
377 384 385 387 388 389 393 400 404 406 407 409 411 414 415 418 422 424 427 429 430 433 434  
435 442 444 445 448 450 456 459 461 464 465 468 469 471 474 480 483 485 488 489 490 492 500  
502 507 509 511 516 517 520 521 522 526 527 532 533 534 537 543 546 549 551 553 555 558 562  
563 568 572 573 578 579 582 587 591 592 593 594 603 606 608 612 613 618 621 624 630 631 632  
634 635 636 648 650 651 656 658 659 660 665 670 673 674 685 686 688 695 696 697 698 699 703  
705 708 709 716 717 725 728 730 736 739 742 744 745 746 747 754 755 756 757 769 770 771 776  
778 783 784 785 789 791 794 795 806 807 814 819 820 825 828 830 831 835 837 841 844 846 852  
855 856 860 861 866 868 871 872 873 875 877 881 885 886 894 898 901 902 907 908 915 919 924  
925 926 931 932 935 937 940 943 945 952 954 957 963 966 967 975 976 977 978 980 982 987 993  
994 1000 1006 1011 1015 1018 1022 1023 1024

Q10 344 (TMVS set augmented to MVS) (Convert i-1 to binary)

1 2 3 6 7 9 13 21 22 23 26 27 28 32 35 38 40 42 43 47 48 49 52 56 58 59 61 66 68 72 73 76 79 81 83  
86 89 93 94 96 99 101 105 106 110 112 113 114 118 119 120 124 127 129 135 142 143 144 146 148  
149 154 160 165 166 170 175 177 179 180 182 189 190 191 194 195 197 198 203 204 206 212 213  
216 221 223 226 227 231 232 233 237 247 249 251 252 254 260 261 267 268 272 273 274 283 285  
286 287 293 294 295 297 302 305 311 312 313 314 320 321 326 328 330 333 335 336 338 339 340  
341 346 354 355 363 364 365 371 373 380 381 382 383 385 388 389 395 397 398 402 403 407 408  
414 415 418 420 423 425 427 428 429 435 438 443 448 451 452 455 457 470 472 473 474 476 481  
482 488 492 494 500 501 502 505 511 512 520 523 524 525 526 528 529 532 535 536 537 541 546  
548 552 555 561 562 570 577 579 580 587 591 599 602 604 608 610 613 614 618 623 624 627 630  
633 635 636 637 643 646 649 652 657 659 662 666 670 673 675 679 680 681 682 686 687 693 696  
699 700 701 711 713 714 717 721 722 726 731 735 736 737 740 741 748 752 754 756 759 760 761  
766 772 773 774 775 777 783 786 787 790 791 793 796 801 803 804 809 815 819 821 828 829 831  
832 840 841 842 845 852 853 854 862 863 866 869 871 875 880 887 888 891 894 897 898 902 911  
912 920 923 924 925 926 930 936 940 941 944 949 950 954 955 961 966 967 968 971 972 975 987  
989 1002 1005 1006 1011 1012 1018 1021

Q11 620 (heuristic program) (Convert i-1 to binary)

1,4,9,14,15,16,24,28,29,34,35,37,41,44,47,52,55,58,59,62,64,68,72,78,79,81,86,87,91,92,94,97,98,1  
07,109,115,117,122,127,131,133,136,139,141,148,149,150,153,158,167,172,173,174,178,179,180,1  
81,185,186,191,192,194,198,201,204,208,209,212,216,218,221,223,224,226,227,232,235,240,241,2  
46,255,258,264,267,272,276,279,281,285,292,293,294,302,305,310,311,314,315,323,328,329,332,3  
33,337,338,340,359,360,362,363,366,368,370,379,381,384,388,391,393,401,402,411,415,416,418,4  
21,424,425,427,428,430,435,439,444,445,449,453,454,455,460,463,467,470,474,475,478,482,483,4  
84,489,500,501,502,508,509,512,513,517,520,522,523,525,534,535,540,541,546,549,555,562,563,5  
64,565,569,577,578,579,584,586,596,597,599,601,603,606,608,617,620,621,624,625,632,634,642,6  
46,653,656,660,663,667,671,675,676,678,680,682,687,695,697,700,704,709,715,716,717,719,723,7  
25,730,740,742,746,752,754,757,763,764,765,766,774,775,779,780,786,787,790,791,793,794,802,8  
04,807,809,812,816,826,827,829,830,835,837,838,841,842,846,851,853,860,862,863,865,866,872,8  
75,877,881,884,886,892,893,896,898,899,901,905,906,913,916,920,925,926,927,931,935,941,942,9  
44,945,952,953,961,964,968,975,977,980,982,988,992,999,1000,1001,1002,1004,1010,1011,1013,1  
016,1017,1019,1025,1029,1031,1032,1035,1036,1038,1042,1045,1046,1050,1055,1056,1058,1059,1

063,1065,1074,1076,1080,1083,1090,1098,1112,1113,1116,1119,1121,1126,1128,1131,1133,1135,1  
140,1146,1150,1154,1155,1156,1167,1168,1169,1175,1179,1180,1182,1188,1189,1190,1200,1203,1  
208,1212,1213,1214,1220,1221,1222,1227,1228,1231,1234,1237,1239,1241,1246,1255,1256,1257,1  
258,1262,1265,1267,1270,1275,1276,1277,1286,1290,1291,1293,1300,1304,1309,1310,1319,1320,1  
323,1325,1326,1328,1329,1331,1334,1338,1340,1343,1345,1348,1354,1359,1360,1368,1369,1371,1  
372,1374,1377,1379,1380,1381,1388,1389,1393,1394,1406,1407,1409,1410,1413,1416,1421,1424,1  
428,1430,1431,1433,1434,1440,1443,1444,1447,1449,1450,1458,1461,1465,1467,1470,1471,1473,1  
480,1482,1485,1486,1491,1492,1493,1501,1503,1509,1514,1519,1520,1522,1524,1527,1529,1540,1  
548,1550,1553,1556,1559,1561,1563,1568,1569,1580,1582,1583,1584,1587,1589,1590,1595,1606,1  
607,1611,1612,1614,1624,1625,1632,1635,1638,1642,1647,1651,1652,1654,1655,1660,1661,1663,1  
666,1671,1672,1673,1674,1677,1679,1682,1685,1686,1688,1689,1692,1697,1699,1708,1710,1717,1  
720,1722,1725,1727,1729,1731,1742,1746,1748,1756,1757,1759,1762,1763,1765,1768,1769,1773,1  
783,1784,1786,1793,1796,1797,1799,1801,1802,1807,1809,1814,1819,1824,1828,1830,1837,1839,1  
842,1844,1845,1854,1856,1858,1864,1868,1871,1873,1875,1876,1877,1882,1885,1894,1897,1899,1  
900,1912,1913,1919,1920,1925,1928,1931,1932,1934,1939,1941,1946,1947,1952,1953,1954,1959,1  
964,1965,1968,1970,1971,1976,1987,1988,1990,1991,1993,1994,1995,2014,2015,2018,2020,2021,2  
037,2038,2042,2043,2044,2046,2047