

**Results for Retinoblastoma
BioConsert Project – February 2011**

GS=Gold Standard, BI=Bioggle, IE= In Edge, PR = Page Rank and PC = Path Count

1. Using complete data sets

a. Rankings given as input

GS=[[1, 2, 3, 4, 5], [6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, , 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402]]:

BI=[[2], [1], [5], [109], [3, 4, 19, 73, 94, 95, 96, 169, 181, 205, 223, 309, 342, 343, 344, 345, 346], [46], [7, 37, 42, 43, 57, 59, 61, 135, 173, 206, 219, 340, 341, 382], [277], [12], [64, 222], [198, 234], [193], [235], [33], [69, 245, 373], [190], [6, 97, 101, 370, 380, 383, 386], [119], [67], [133], [18, 30, 255], [8, 11, 26, 41, 44, 45, 63, 68, 93, 98, 102, 112, 113, 125, 127, 130, 137, 163, 165, 170, 174, 179, 180, 182, 185, 188, 207, 211, 231, 232, 237, 241, 270, 331, 332, 333, 337, 357, 361, 371, 376, 378, 388, 398], [110], [15, 22, 140, 176, 177, 204, 209, 210, 213, 242, 347, 364, 402], [91, 238], [116], [9], [184, 228, 356, 372], [105], [21, 120, 239], [366, 367, 368, 369], [10, 23, 24, 31, 32, 34, 62, 88, 89, 121, 126, 132, 161, 175, 186, 208, 212, 214, 215, 217, 218, 224, 229, 269, 278, 339, 358, 362, 374, 377, 385, 397, 399, 400], [27, 28, 29, 38, 39, 40, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 70, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 114, 115, 129, 131, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 162, 172, 202, 225, 230, 233, 271, 338, 348, 349, 350, 351, 352, 353, 354, 355, 365, 375, 379, 381, 389, 396, 401], [92, 99], [100], [13, 25, 35, 65,

66, 72, 90, 103, 104, 106, 107, 108, 117, 122, 124, 128, 166, 167, 168, 171, 178, 187, 194, 195, 196, 197, 199, 200, 201, 226, 236, 244, 310, 312, 313, 314, 317, 318, 319, 320, 321, 322, 323, 324, 325, 327, 328, 329, 335, 359, 360, 363, 384, 390, 391, 393, 395], [14, 71, 118, 123, 189, 192, 227, 311, 315, 316, 326, 330, 334, 336], [60], [136, 138, 139, 164, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 394], [111], [183], [16, 17, 20, 134, 191, 203, 216, 220, 221, 240, 243, 246, 247, 248, 249, 250, 251, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 387], [36, 273, 274, 275, 276], [272, 392]]:

IE:=[[1, 46, 109], [2, 3, 4, 5, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382], [64, 193, 198, 222, 234, 235, 277], [110, 116], [6, 9, 18, 30, 67, 91, 119, 133, 190, 238, 255], [8, 11, 21, 26, 33, 41, 44, 45, 63, 68, 69, 93, 97, 98, 101, 102, 105, 111, 112, 113, 120, 125, 127, 130, 137, 163, 165, 170, 174, 179, 180, 182, 185, 188, 207, 211, 231, 232, 237, 239, 241, 245, 270, 331, 332, 333, 337, 357, 361, 366, 367, 368, 369, 370, 371, 373, 376, 378, 380, 383, 386, 388, 398], [10, 13, 14, 15, 16, 17, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 34, 35, 36, 38, 39, 40, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 60, 62, 65, 66, 70, 71, 72, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 99, 100, 103, 104, 106, 107, 108, 114, 115, 117, 118, 121, 122, 123, 124, 126, 128, 129, 131, 132, 134, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 166, 167, 168, 171, 172, 175, 176, 177, 178, 183, 184, 186, 187, 189, 191, 192, 194, 195, 196, 197, 199, 200, 201, 202, 203, 204, 208, 209, 210, 212, 213, 214, 215, 216, 217, 218, 220, 221, 224, 225, 226, 227, 228, 229, 230, 233, 236, 240, 242, 243, 244, 246, 247, 248, 249, 250, 251, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 271, 272, 273, 274, 275, 276, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 334, 335, 336, 338, 339, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 358, 359, 360, 362, 363, 364, 365, 372, 374, 375, 377, 379, 381, 384, 385, 387, 389, 390, 391, 392, 393, 394, 395, 396, 397, 399, 400, 401, 402]]:

PR:=[[2], [1], [5], [3, 4, 7, 19, 37, 42, 61, 73, 94, 95, 96, 109, 169, 173, 181, 205, 206, 219, 223, 340, 341, 342, 343, 344, 345, 346, 382], [135, 309], [43, 57, 59], [46], [245], [277], [33], [64], [372], [69, 373], [6, 8, 9, 11, 15, 22, 30, 41, 44, 45, 63, 68, 93, 97, 98, 101, 112, 113, 127, 130, 133, 140, 163, 165, 170, 174, 177, 179, 180, 182, 185, 188, 207, 210, 211, 213, 214, 217, 224, 229, 231, 232, 237, 238, 241, 270, 278, 331, 332, 333, 337, 357, 361, 364, 370, 371, 376, 380, 383, 386, 388, 398, 400, 402], [91], [18, 110], [119, 190], [255], [21, 26, 102, 125, 137, 378], [67], [222], [12], [356], [10, 120, 176, 186, 204, 242, 385], [116], [60], [209], [184, 228], [20, 126, 191], [23, 218], [92, 99, 100, 111, 136, 138, 139, 175, 272, 377, 392], [234, 235], [32, 34, 88, 89, 121, 161, 339, 347, 358, 387, 397], [62, 208], [193, 198], [36, 273, 274, 275, 276], [134, 220, 221, 239], [203, 240, 243], [24, 132, 212, 269, 362, 374, 399], [105], [31, 215, 216], [25, 35, 65, 71, 72, 103, 104, 106, 107, 108, 117, 118, 122, 123, 124, 128, 166, 167, 168, 171, 178, 187, 236, 334, 335, 336, 363, 384, 390, 391, 393], [47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58],

[16, 17], [13, 14, 66, 90, 189, 192, 194, 195, 196, 197, 199, 200, 201, 226, 227, 244, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 359, 360, 395], [246, 247, 248, 249, 250, 251, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268], [366, 367, 369], [164, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 394], [368], [27, 28, 29, 38, 39, 40, 70, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 114, 115, 129, 131, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 162, 172, 202, 225, 230, 233, 271, 338, 348, 349, 350, 351, 352, 353, 354, 355, 365, 375, 379, 381, 389, 396, 401], [183]]:

PC:=[[2], [46, 109], [1, 3, 4, 5, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382], [64, 193, 198, 222, 234, 235, 277], [116], [6, 9, 18, 30, 67, 91, 110, 119, 133, 190, 238, 255], [8, 11, 21, 26, 33, 41, 44, 45, 63, 68, 69, 93, 97, 98, 101, 102, 105, 112, 113, 120, 125, 127, 130, 137, 163, 165, 170, 174, 179, 180, 182, 185, 188, 207, 211, 231, 232, 237, 239, 241, 245, 270, 331, 332, 333, 337, 357, 361, 366, 367, 368, 369, 370, 371, 373, 376, 378, 380, 383, 386, 388, 398], [10, 13, 14, 15, 16, 17, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 34, 35, 36, 38, 39, 40, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 60, 62, 65, 66, 70, 71, 72, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 99, 100, 103, 104, 106, 107, 108, 111, 114, 115, 117, 118, 121, 122, 123, 124, 126, 128, 129, 131, 132, 134, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 166, 167, 168, 171, 172, 175, 176, 177, 178, 183, 184, 186, 187, 189, 191, 192, 194, 195, 196, 197, 199, 200, 201, 202, 203, 204, 208, 209, 210, 212, 213, 214, 215, 216, 217, 218, 220, 221, 224, 225, 226, 227, 228, 229, 230, 233, 236, 240, 242, 243, 244, 246, 247, 248, 249, 250, 251, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 271, 272, 273, 274, 275, 276, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 334, 335, 336, 338, 339, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 358, 359, 360, 362, 363, 364, 365, 372, 374, 375, 377, 379, 381, 384, 385, 387, 389, 390, 391, 392, 393, 394, 395, 396, 397, 399, 400, 401, 402]]

b. Results

Using BioConsert

Med1:=[[2], [1], [109], [46], [5], [3, 4, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382], [64, 222, 277], [193, 198, 234, 235], [110], [33, 69, 245, 373], [116], [6, 9, 18, 30, 67, 91, 119, 133, 190, 238, 255], [8, 11, 21, 26, 41, 44, 45, 63, 68, 93, 97, 98, 101, 102, 105, 111, 112, 113, 120, 125, 127, 130, 137, 163, 165, 170, 174, 179, 180, 182, 185, 188, 207, 211, 231, 232, 237, 239, 241, 270, 331, 332, 333, 337, 357, 361, 366, 367, 368, 369, 370, 371, 376, 378, 380, 383, 386, 388, 398], [10, 13, 14, 15, 16, 17, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 34, 35, 36, 38, 39, 40, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58,

60, 62, 65, 66, 70, 71, 72, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 99, 100, 103, 104, 106, 107, 108, 114, 115, 117, 118, 121, 122, 123, 124, 126, 128, 129, 131, 132, 134, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164, 166, 167, 168, 171, 172, 175, 176, 177, 178, 183, 184, 186, 187, 189, 191, 192, 194, 195, 196, 197, 199, 200, 201, 202, 203, 204, 208, 209, 210, 212, 213, 214, 215, 216, 217, 218, 220, 221, 224, 225, 226, 227, 228, 229, 230, 233, 236, 240, 242, 243, 244, 246, 247, 248, 249, 250, 251, 252, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 271, 272, 273, 274, 275, 276, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 334, 335, 336, 338, 339, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 358, 359, 360, 362, 363, 364, 365, 372, 374, 375, 377, 379, 381, 384, 385, 387, 389, 390, 391, 392, 393, 394, 395, 396, 397, 399, 400, 401, 402]

Distance to [BI,IE,PR,PC] = 75 183

Using Fagin's approach

Fagin 1:=[2], [1], [109], [5], [46], [3], [4], [73], [94], [95], [96], [169], [181], [205], [223], [342], [343], [344], [345], [346], [309], [7], [19], [61], [173], [206], [219], [340], [341], [382], [42], [37], [43], [57], [59], [135], [12], [277], [64], [222], [33], [193], [198], [234], [235], [245], [69], [373], [190], [6], [119], [67], [18], [30], [133], [255], [9], [97], [101], [238], [370], [380], [383], [386], [110], [8], [11], [41], [44], [45], [63], [68], [93], [98], [112], [113], [127], [130], [163], [165], [170], [174], [179], [180], [182], [185], [188], [207], [211], [231], [232], [237], [241], [270], [331], [332], [333], [337], [357], [361], [371], [376], [388], [398], [91], [116], [26], [102], [125], [137], [372], [378], [15], [22], [140], [177], [210], [213], [364], [402], [21], [105], [120], [214], [217], [224], [229], [239], [278], [366], [367], [368], [369], [400], [111], [176], [204], [209], [242], [356], [184], [228], [10], [23], [126], [186], [218], [347], [385], [175], [377], [24], [32], [34], [62], [88], [89], [121], [132], [161], [208], [212], [269], [339], [358], [362], [374], [397], [399], [31], [215], [20], [60], [92], [99], [100], [136], [138], [139], [191], [272], [392], [387], [36], [47], [48], [49], [50], [51], [52], [53], [54], [55], [56], [58], [134], [203], [216], [220], [221], [240], [243], [273], [274], [275], [276], [16], [17], [25], [27], [28], [29], [35], [38], [39], [40], [65], [70], [71], [72], [74], [75], [76], [77], [78], [79], [80], [81], [82], [83], [84], [85], [86], [87], [103], [104], [106], [107], [108], [114], [115], [117], [118], [122], [123], [124], [128], [129], [131], [141], [142], [143], [144], [145], [146], [147], [148], [149], [150], [151], [152], [153], [154], [155], [156], [157], [158], [159], [160], [162], [166], [167], [168], [171], [172], [178], [187], [202], [225], [230], [233], [236], [271], [334], [335], [336], [338], [348], [349], [350], [351], [352], [353], [354], [355], [363], [365], [375], [379], [381], [384], [389], [390], [391], [393], [396], [401], [13], [14], [66], [90], [189], [192], [194], [195], [196], [197], [199], [200], [201], [226], [227], [244], [310], [311], [312], [313], [314], [315], [316], [317], [318], [319], [320], [321], [322], [323], [324], [325], [326], [327], [328], [329], [330], [359], [360], [395], [246], [247], [248], [249], [250], [251], [252], [253], [254], [256], [257], [258], [259], [260], [261], [262], [263], [264], [265], [266], [267], [268], [164], [279], [280], [281], [282], [283], [284], [285], [286], [287], [288], [289],

[290], [291], [292], [293], [294], [295], [296], [297], [298], [299], [300], [301], [302], [303], [304], [305], [306], [307], [308], [394], [183]]

Distance to [BI,IE,PR,PC] = 117612

Fagin 2:=

[[2], [1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402]]

Distance to [BI,IE,PR,PC] = 221 538

Fagin 3:=[[2], [1, 3, 4, 5, 46, 109], [73, 94, 95, 96, 169, 181, 205, 223, 309, 342, 343, 344, 345, 346], [7, 19, 61, 173, 206], [37, 42, 43, 219, 340, 341, 382], [57, 59, 135], [12, 64, 222, 277], [33, 193, 198, 234, 235], [69, 190, 245, 373], [6, 8, 9, 18, 30, 67, 97, 101, 110, 119, 133, 238, 255, 370, 380, 383, 386], [11, 41, 44, 45, 63, 68], [93, 98, 112, 113, 127], [130, 163, 165, 170, 174, 179, 180, 182, 185, 188, 207, 211, 231, 232, 237], [241, 270, 331, 332, 333, 337, 357, 361, 371], [15, 22, 26, 91, 102, 116, 125, 137, 140, 372, 376, 378, 388, 398], [177], [21, 210, 213, 364, 402], [105, 111, 120, 176, 214, 217, 224, 229, 239, 278, 366, 367, 368, 369, 400], [10, 23, 184, 204, 209, 228, 242, 356], [24, 126, 175, 186, 218, 347, 377, 385], [32, 34, 62, 88, 89, 121, 132, 161, 208, 212, 269, 339], [358, 362, 374], [31, 215, 397, 399], [20, 60, 92], [99, 100, 136, 138, 139, 191, 272, 392], [36, 47, 48, 49, 50, 51, 52, 53, 54, 55, 387], [56, 58, 134, 203, 216, 220, 221], [16, 240, 243, 273, 274, 275, 276], [17, 25, 27, 28], [29, 35, 38, 39, 40, 65, 70, 71], [72, 74, 75, 76], [77], [78, 79, 80, 81, 82, 83], [84, 85, 86, 87, 103, 104, 106, 107, 108, 114], [115, 117, 118, 122, 123, 124, 128, 129], [131], [141], [142, 143, 144, 145, 146, 147, 148], [149, 150, 151, 152], [153, 154, 155, 156, 157, 158, 159], [160, 162], [166, 167, 168,

171, 172, 178, 187, 202, 225, 230, 233, 236, 271, 334, 335], [336, 338, 348, 349, 350, 351], [352, 353, 354, 355], [363, 365, 375, 379, 381, 384, 389], [13, 14, 390, 391, 393, 396, 401], [66, 90, 189, 192, 194, 195, 196, 197, 199, 200, 201], [226, 227, 244, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319], [320, 321, 322, 323, 324, 325], [326, 327, 328, 329, 330], [246, 247, 359, 360, 395], [248, 249, 250, 251, 252], [164, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268], [279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296], [297, 298, 299, 300, 301], [302], [183, 303, 304, 305, 306, 307, 308, 394]]

Distance to [BI,IE,PR,PC] = 113 242

2. Reduced data sets

a. Rankings given as input

GS_c:=[[1, 2, 3, 4, 5], [7, 12, 19, 37, 42, 43, 46, 57, 59, 61, 73, 94, 95, 96, 109, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

BI_c:=[[2], [1], [5], [109], [3, 4, 19, 73, 94, 95, 96, 169, 181, 205, 223, 309, 342, 343, 344, 345, 346], [46], [7, 37, 42, 43, 57, 59, 61, 135, 173, 206, 219, 340, 341, 382], [12]]

IE_c:=[[1, 46, 109], [2, 3, 4, 5, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

PR_c:=[[2], [1], [5], [3, 4, 7, 19, 37, 42, 61, 73, 94, 95, 96, 109, 169, 173, 181, 205, 206, 219, 223, 340, 341, 342, 343, 344, 345, 346, 382], [135, 309], [43, 57, 59], [46], [12]]

PC_c:=[[2], [46, 109], [1, 3, 4, 5, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

b. Results

Using BioConsert

M1:=[[2], [1], [109], [46], [5], [3, 4, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

M3:=[[2], [1], [46, 109], [3, 4, 5, 7, 12, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

M4:=[[2], [1], [109], [46], [5], [3, 4, 7, 19, 37, 42, 43, 57, 59, 61, 73, 94, 95, 96, 169, 173, 181, 205, 206, 219, 223, 340, 341, 342, 343, 344, 345, 346, 382, 135, 309], [12]];

Distance to [BI_c,IE_c,PR_c,PC_c] = 653

Using Fagin's approach

Fagin1:=[[2], [1], [109], [5], [46], [3], [4], [19], [73], [94], [95], [96], [169], [181], [205], [223], [342], [343], [344], [345], [346], [7], [37], [42], [61], [173], [206], [219], [309], [340], [341], [382], [43], [57], [59], [135], [12]]

Distance to [Bl_c,IE_c,PR_c,PC_c] = 1778

Fagin 2:=[[2], [1, 3, 4, 5, 7, 12, 19, 37, 42, 43, 46, 57, 59, 61, 73, 94, 95, 96, 109, 135, 169, 173, 181, 205, 206, 219, 223, 309, 340, 341, 342, 343, 344, 345, 346, 382]]

Distance to [Bl_c,IE_c,PR_c,PC_c] = 881

Fagin 3:=[[2], [1, 3, 4, 5, 19, 46, 73, 109], [94, 95, 96, 169, 181, 205, 223, 342], [7, 343, 344, 345, 346], [37, 42], [61], [173, 206, 219], [309, 340], [341, 382], [43, 57], [12, 59, 135]]

Distance to [Bl_c,IE_c,PR_c,PC_c] = 1614