bremen\_subgraph\_20/Expected

Solution: [4, 9, 13, 14, 15, 24, 27, 29, 30]

Number of Vertices: 9

results/resultsFirst/bremen\_subgraph\_20.gr/orTools/data.csv

Solution: [4, 9, 13, 14, 15, 25, 27, 29, 30] - Occurrences: 1 - Number of Vertices: 9

Solution: [4, 9, 12, 13, 15, 25, 27, 29, 30] - Occurrences: 2 - Number of Vertices: 9

Solution: [4, 9, 13, 15, 25, 26, 27, 29, 30] - Occurrences: 7 - Number of Vertices: 9

Average execution time: 0.369538 seconds

results/resultsSecond/bremen\_subgraph\_20.gr/ourSolution/data.csv

Solution: [4, 9, 12, 13, 15, 24, 27, 29, 30] - Occurrences: 10 - Number of Vertices: 9

Average execution time: 8.915110 seconds

results/resultsFirst/bremen\_subgraph\_20.gr/tabu\_search/data.csv

Solution: [1, 4, 8, 9, 11, 13, 15, 24, 29, 30] - Occurrences: 9 - Number of Vertices: 10

Average execution time: 0.000142 seconds

bremen\_subgraph\_20.gr/docplex

Solution: [4, 9, 13, 14, 15, 24, 27, 29, 30] - Occurrences: 10 - Number of Vertices: 9

Average execution time: 0.019227 seconds

bremen\_subgraph\_50/Expected

Solution: [1, 8, 11, 14, 17, 19, 24, 27, 28, 34, 35, 36, 41, 44, 46, 50, 60]

Number of Vertices: 17

results/resultsFirst/bremen\_subgraph\_50.gr/orTools/data.csv

Solution: [1, 8, 11, 14, 19, 24, 27, 28, 34, 35, 36, 41, 44, 46, 50, 60, 63] - Occurrences: 4 - Number of Vertices: 17

Solution: [1, 8, 11, 14, 16, 24, 27, 28, 34, 35, 36, 41, 44, 46, 50, 60, 63] - Occurrences: 6 - Number of Vertices: 17

Average execution time: 0.372828 seconds

results/resultsSecond/bremen\_subgraph\_50.gr/ourSolution/data.csv

Solution: [4, 6, 7, 8, 11, 14, 20, 22, 25, 35, 36, 39, 42, 44, 48, 49, 58, 59, 62] - Occurrences: 10 - Number of Vertices: 19

Average execution time: 1800.093858 seconds

results/resultsFirst/bremen\_subgraph\_50.gr/tabu\_search/data.csv

Solution: [1, 8, 11, 14, 16, 22, 24, 27, 29, 34, 35, 36, 41, 44, 46, 50, 60, 62] - Occurrences: 1 - Number of Vertices: 18

Solution: [1, 3, 4, 16, 23, 29, 34, 40, 43, 46, 47, 49, 51, 53, 56, 59, 60, 63] - Occurrences: 1 - Number of Vertices: 18

Solution: [1, 4, 8, 11, 14, 17, 19, 24, 28, 32, 34, 35, 41, 44, 46, 47, 50, 60] - Occurrences: 1 - Number of Vertices: 18

Solution: [3, 7, 13, 14, 18, 23, 28, 34, 40, 42, 43, 44, 45, 47, 49, 54, 57, 63] - Occurrences: 1 - Number of Vertices: 18

Solution: [1, 13, 16, 18, 21, 25, 26, 29, 34, 35, 45, 47, 49, 51, 53, 56, 60, 63] - Occurrences: 1 - Number of Vertices: 18

Solution: [2, 8, 14, 19, 21, 24, 27, 29, 33, 36, 39, 41, 45, 50, 51, 53, 58, 63] - Occurrences: 1 - Number of Vertices: 18

Solution: [2, 5, 8, 11, 14, 19, 20, 24, 27, 28, 36, 39, 41, 44, 46, 50, 58, 62] - Occurrences: 1 - Number of Vertices: 18

Solution: [1, 4, 6, 8, 11, 14, 16, 17, 22, 24, 32, 34, 35, 41, 44, 48, 50, 60] - Occurrences: 1 - Number of Vertices: 18

Solution: [1, 6, 8, 10, 11, 14, 16, 22, 24, 27, 33, 34, 35, 36, 43, 44, 50, 63] - Occurrences: 1 - Number of Vertices: 18

Solution: [8, 10, 11, 14, 17, 18, 19, 24, 29, 31, 34, 35, 37, 41, 44, 45, 50, 58] - Occurrences: 1 - Number of Vertices: 18

Average execution time: 481.146373 seconds

bremen\_subgraph\_50.gr/docplex

Solution: [1, 8, 11, 14, 17, 19, 24, 27, 28, 34, 35, 36, 41, 44, 46, 50, 60] - Occurrences: 10 - Number of Vertices: 17

Average execution time: 0.047666 seconds

bremen\_subgraph\_100/Expected

Solution: [2, 6, 7, 12, 14, 22, 24, 26, 31, 37, 39, 43, 48, 49, 53, 57, 58, 62, 64, 68, 73, 79, 84, 87, 88, 94, 99, 101, 104]

Number of Vertices: 29

results/resultsFirst/bremen\_subgraph\_100.gr/orTools/data.csv

Solution: [1, 5, 7, 14, 16, 24, 28, 29, 34, 37, 39, 42, 48, 51, 53, 55, 62, 68, 73, 79, 80, 85, 87, 88, 92, 93, 99, 101, 104] - Occurrences: 3 - Number of Vertices: 29

Solution: [1, 5, 8, 9, 16, 24, 28, 29, 34, 37, 39, 43, 48, 49, 51, 53, 55, 62, 68, 73, 79, 84, 85, 87, 88, 94, 99, 101, 104] - Occurrences: 6 - Number of Vertices: 29

Solution: [2, 5, 14, 17, 18, 23, 27, 31, 32, 37, 39, 43, 48, 49, 51, 53, 55, 62, 68, 73, 79, 84, 85, 87, 88, 94, 99, 101, 104] - Occurrences: 1 - Number of Vertices: 29

Average execution time: 0.969475 seconds

results/resultsSecond/bremen\_subgraph\_100.gr/ourSolution/data.csv

Solution: [3, 4, 8, 9, 11, 12, 15, 17, 19, 27, 31, 35, 36, 37, 38, 39, 40, 41, 44, 46, 48, 51, 54, 57, 62, 64, 73, 79, 80, 86, 96, 105, 106] - Occurrences: 10 - Number of Vertices: 33

Average execution time: 1800.147817 seconds

results/resultsFirst/bremen\_subgraph\_100.gr/tabu\_search/data.csv

Solution: [2, 6, 10, 12, 18, 22, 24, 26, 31, 40, 42, 43, 44, 46, 50, 51, 54, 55, 62, 73, 79, 80, 82, 85, 87, 94, 98, 101, 105, 106] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 6, 14, 16, 17, 18, 26, 33, 40, 48, 51, 55, 63, 65, 66, 71, 75, 82, 84, 85, 87, 88, 90, 91, 92, 95, 97, 100, 103, 106] - Occurrences: 1 - Number of Vertices: 30

Solution: [3, 7, 11, 12, 14, 20, 24, 25, 28, 31, 37, 39, 43, 48, 49, 52, 53, 57, 62, 68, 69, 73, 79, 84, 86, 88, 94, 99, 101, 104] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 5, 9, 12, 22, 23, 24, 26, 31, 35, 36, 41, 46, 47, 48, 54, 56, 62, 64, 73, 77, 79, 83, 85, 87, 91, 95, 98, 103, 108] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 6, 7, 12, 14, 22, 24, 26, 31, 35, 36, 38, 40, 41, 44, 46, 48, 54, 56, 62, 64, 73, 79, 80, 82, 85, 86, 96, 105, 106] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 7, 12, 14, 20, 22, 24, 26, 31, 43, 44, 46, 47, 50, 54, 56, 62, 64, 68, 73, 76, 77, 79, 80, 85, 86, 94, 98, 101, 105] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 6, 8, 9, 12, 22, 24, 26, 31, 42, 43, 44, 47, 48, 49, 52, 54, 57, 62, 69, 73, 77, 79, 84, 86, 94, 98, 101, 104, 108] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 6, 8, 12, 14, 22, 24, 26, 31, 38, 40, 45, 47, 56, 62, 64, 66, 73, 79, 81, 82, 83, 85, 86, 90, 91, 98, 102, 105, 109] - Occurrences: 1 - Number of Vertices: 30

Solution: [2, 7, 12, 14, 20, 22, 24, 26, 31, 40, 42, 43, 46, 48, 51, 54, 57, 61, 71, 73, 79, 82, 83, 87, 91, 95, 98, 103, 106, 108] - Occurrences: 1 - Number of Vertices: 30

Solution: [3, 6, 7, 11, 12, 14, 22, 24, 26, 31, 40, 43, 46, 47, 51, 57, 62, 69, 73, 79, 81, 82, 83, 86, 88, 91, 95, 98, 103, 109] - Occurrences: 1 - Number of Vertices: 30

Average execution time: 480.981996 seconds

bremen\_subgraph\_100.gr/docplex

Solution: [2, 6, 7, 12, 14, 22, 24, 26, 31, 37, 39, 43, 48, 49, 53, 57, 58, 62, 64, 68, 73, 79, 84, 87, 88, 94, 99, 101, 104] - Occurrences: 10 - Number of Vertices: 29

Average execution time: 0.047666 seconds

bremen\_subgraph\_150/Expected

Solution: [2, 6, 10, 13, 15, 22, 23, 26, 28, 34, 36, 40, 44, 49, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 99, 100, 103, 107, 109, 110, 113, 123, 129, 130, 134, 143, 146, 147, 148, 152, 159, 162]

Number of Vertices: 42

results/resultsFirst/bremen\_subgraph\_150.gr/orTools/data.csv

Solution: [2, 6, 10, 13, 15, 21, 26, 27, 30, 34, 36, 40, 44, 49, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 99, 100, 103, 107, 109, 110, 113, 123, 129, 130, 134, 143, 146, 147, 148, 152, 156, 159] - Occurrences: 10 - Number of Vertices: 42

Average execution time: 0.251249 seconds

results/resultsSecond/bremen\_subgraph\_150.gr/ourSolution/data.csv

Solution: [2, 4, 6, 7, 10, 13, 15, 22, 27, 28, 30, 31, 32, 40, 42, 44, 47, 49, 53, 58, 61, 63, 73, 74, 77, 80, 82, 86, 88, 92, 95, 96, 97, 100, 102, 105, 108, 112, 116, 125, 130, 134, 144, 146, 148, 151, 154, 158] - Occurrences: 10 - Number of Vertices: 48

Average execution time: 1800.206518 seconds

results/resultsFirst/bremen\_subgraph\_150.gr/tabu\_search/data.csv

Solution: [2, 6, 10, 15, 22, 27, 29, 34, 36, 40, 42, 46, 49, 53, 58, 59, 71, 72, 74, 77, 82, 86, 88, 92, 95, 99, 100, 102, 103, 106, 110, 113, 119, 129, 130, 134, 146, 147, 148, 152, 155, 159, 164] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 6, 10, 13, 15, 22, 23, 27, 34, 36, 41, 44, 47, 49, 53, 58, 59, 62, 63, 64, 71, 73, 75, 77, 82, 86, 88, 92, 97, 100, 102, 105, 111, 112, 116, 130, 134, 146, 147, 148, 152, 155, 159] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 6, 10, 13, 15, 22, 27, 30, 34, 36, 37, 40, 43, 44, 49, 53, 58, 59, 64, 71, 73, 74, 77, 82, 86, 88, 92, 98, 100, 104, 107, 111, 112, 116, 123, 129, 130, 134, 146, 147, 150, 154, 157] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 3, 4, 6, 10, 13, 15, 22, 25, 29, 33, 39, 42, 46, 50, 51, 58, 64, 73, 74, 77, 80, 82, 86, 88, 92, 98, 100, 101, 104, 107, 110, 113, 119, 126, 129, 134, 143, 146, 148, 150, 154, 157] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 4, 6, 7, 10, 13, 15, 22, 23, 27, 34, 36, 39, 42, 46, 50, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 97, 100, 101, 106, 107, 108, 116, 129, 130, 134, 143, 146, 147, 148, 151, 159, 161, 162] - Occurrences: 1 - Number of Vertices: 44

Solution: [2, 6, 10, 13, 14, 21, 24, 25, 26, 30, 34, 36, 37, 40, 44, 49, 53, 58, 64, 72, 74, 77, 82, 89, 99, 100, 103, 106, 110, 113, 119, 123, 129, 130, 133, 138, 143, 146, 147, 150, 154, 157, 164] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 6, 10, 13, 15, 22, 26, 27, 29, 34, 36, 40, 44, 49, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 99, 100, 103, 107, 110, 113, 119, 123, 129, 130, 134, 143, 146, 147, 150, 154, 157, 160] - Occurrences: 1 - Number of Vertices: 42

Solution: [2, 6, 10, 13, 15, 22, 26, 27, 29, 34, 36, 40, 44, 49, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 99, 100, 103, 107, 109, 110, 113, 121, 123, 129, 130, 134, 143, 146, 147, 148, 151, 154, 158] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 4, 6, 10, 13, 15, 22, 23, 25, 34, 36, 40, 42, 46, 49, 53, 58, 62, 63, 64, 73, 76, 77, 82, 86, 88, 92, 97, 100, 102, 105, 111, 112, 116, 130, 134, 144, 146, 147, 148, 150, 154, 157] - Occurrences: 1 - Number of Vertices: 43

Solution: [2, 3, 6, 10, 13, 15, 22, 23, 26, 27, 32, 39, 42, 46, 50, 51, 58, 64, 73, 74, 77, 80, 82, 86, 88, 92, 98, 100, 101, 104, 107, 111, 112, 119, 126, 129, 134, 143, 146, 148, 150, 154, 157] - Occurrences: 1 - Number of Vertices: 43

Average execution time: 480.952714 seconds

bremen\_subgraph\_150.gr/docplex

Solution: [2, 6, 10, 13, 15, 22, 23, 26, 28, 34, 36, 40, 44, 49, 53, 58, 64, 73, 74, 77, 82, 86, 88, 92, 99, 100, 103, 107, 109, 110, 113, 123, 129, 130, 134, 143, 146, 147, 148, 152, 159, 162] - Occurrences: 10 - Number of Vertices: 42

Average execution time: 0.073350 secondss

bremen\_subgraph\_200/Expected

Solution: [1, 2, 5, 7, 9, 11, 13, 18, 19, 28, 29, 33, 34, 35, 38, 39, 47, 50, 53, 55, 59, 62, 65, 66, 67, 75, 78, 94, 99, 102, 104, 111, 113, 116, 118, 121, 126, 128, 129, 132, 136, 141, 146, 155, 162, 172, 176, 179, 182, 188, 192, 196, 198, 203, 210, 211, 215]

Number of Vertices: 57

results/resultsFirst/bremen\_subgraph\_200.gr/orTools/data.csv

Solution: [1, 3, 4, 7, 9, 12, 13, 22, 27, 33, 34, 36, 38, 39, 46, 50, 54, 55, 59, 61, 62, 74, 76, 79, 95, 98, 101, 102, 103, 107, 108, 112, 118, 123, 126, 127, 128, 129, 132, 135, 141, 145, 153, 156, 159, 165, 171, 175, 179, 188, 192, 196, 199, 203, 209, 211, 215] - Occurrences: 10 - Number of Vertices: 57

Average execution time: 0.284717 seconds

results/resultsSecond/bremen\_subgraph\_200.gr/ourSolution/data.csv

Solution: [1, 2, 5, 6, 7, 9, 11, 13, 15, 18, 19, 20, 21, 23, 28, 31, 33, 34, 35, 38, 39, 42, 45, 48, 50, 53, 54, 59, 61, 62, 66, 67, 74, 75, 76, 79, 89, 94, 97, 104, 110, 115, 118, 121, 124, 125, 128, 129, 132, 136, 145, 148, 156, 158, 167, 172, 176, 191, 192, 195, 196, 198, 203, 210, 213] - Occurrences: 10 - Number of Vertices: 65

Average execution time: 1800.158477 seconds

results/resultsFirst/bremen\_subgraph\_200.gr/tabu\_search/data.csv

Solution: [1, 2, 3, 5, 6, 9, 11, 13, 17, 22, 23, 24, 27, 33, 34, 37, 39, 45, 48, 52, 55, 59, 70, 75, 76, 78, 94, 97, 100, 104, 108, 112, 114, 118, 122, 126, 128, 130, 132, 146, 151, 152, 154, 157, 165, 171, 176, 179, 182, 186, 192, 196, 198, 203, 210, 211, 212] - Occurrences: 1 - Number of Vertices: 57

Solution: [1, 2, 3, 5, 9, 11, 13, 18, 23, 28, 29, 33, 34, 35, 38, 39, 46, 48, 52, 55, 59, 62, 67, 72, 78, 88, 94, 97, 104, 111, 116, 118, 126, 129, 132, 134, 137, 141, 146, 148, 153, 155, 159, 165, 170, 171, 176, 182, 188, 191, 192, 196, 198, 203, 210, 211, 213, 215] - Occurrences: 1 - Number of Vertices: 58

Solution: [1, 2, 5, 9, 11, 13, 18, 19, 22, 28, 33, 35, 38, 39, 46, 48, 52, 55, 59, 62, 63, 65, 70, 75, 78, 89, 94, 98, 102, 104, 113, 116, 118, 121, 126, 134, 136, 138, 145, 146, 147, 148, 152, 155, 172, 176, 182, 187, 189, 191, 192, 196, 203, 207, 210, 211, 212, 213] - Occurrences: 1 - Number of Vertices: 58

Solution: [1, 2, 5, 7, 9, 11, 13, 17, 22, 23, 24, 27, 33, 34, 37, 39, 45, 49, 54, 55, 59, 62, 65, 73, 78, 94, 96, 99, 104, 107, 112, 118, 121, 126, 128, 129, 132, 135, 136, 139, 141, 151, 156, 157, 158, 165, 172, 176, 179, 182, 188, 192, 196, 203, 207, 210, 211, 215] - Occurrences: 1 - Number of Vertices: 58

Solution: [1, 2, 3, 5, 7, 9, 11, 13, 17, 22, 23, 24, 27, 33, 34, 37, 38, 39, 42, 45, 48, 52, 55, 59, 70, 72, 78, 94, 96, 99, 104, 112, 114, 118, 123, 126, 128, 129, 132, 134, 153, 155, 159, 165, 170, 171, 176, 179, 182, 188, 192, 196, 199, 203, 210, 211, 215] - Occurrences: 1 - Number of Vertices: 57

Solution: [1, 3, 5, 9, 11, 13, 18, 22, 23, 27, 30, 33, 34, 35, 38, 39, 45, 48, 52, 55, 59, 61, 62, 67, 74, 76, 79, 97, 104, 111, 116, 118, 123, 126, 129, 132, 134, 141, 148, 153, 155, 159, 165, 171, 176, 180, 188, 191, 192, 196, 199, 203, 209, 211, 212, 213, 215] - Occurrences: 1 - Number of Vertices: 57

Solution: [1, 2, 5, 7, 9, 13, 18, 21, 23, 28, 32, 34, 36, 39, 45, 48, 52, 56, 58, 62, 65, 66, 68, 70, 75, 78, 94, 97, 100, 104, 111, 116, 118, 121, 124, 128, 129, 132, 136, 141, 151, 155, 161, 162, 165, 167, 172, 176, 179, 182, 185, 188, 192, 196, 200, 203, 210, 215] - Occurrences: 1 - Number of Vertices: 58

Solution: [1, 3, 4, 9, 11, 13, 17, 22, 24, 27, 33, 34, 37, 39, 45, 48, 52, 55, 59, 61, 74, 76, 79, 80, 88, 91, 96, 99, 102, 103, 105, 107, 112, 114, 118, 121, 126, 132, 134, 136, 146, 151, 152, 155, 165, 171, 175, 178, 187, 189, 192, 196, 199, 203, 209, 211, 215, 216] - Occurrences: 1 - Number of Vertices: 58

Solution: [1, 2, 5, 7, 9, 13, 17, 20, 21, 23, 24, 28, 33, 34, 37, 38, 39, 42, 46, 48, 52, 55, 59, 65, 66, 75, 78, 94, 96, 99, 104, 107, 112, 114, 118, 121, 124, 126, 128, 129, 132, 136, 155, 161, 162, 172, 176, 179, 182, 186, 192, 196, 198, 203, 210, 211, 215] - Occurrences: 1 - Number of Vertices: 57

Solution: [1, 2, 5, 7, 9, 11, 13, 17, 24, 28, 29, 33, 34, 37, 39, 47, 50, 53, 55, 59, 64, 66, 70, 72, 78, 94, 97, 100, 102, 104, 112, 114, 118, 121, 126, 128, 129, 132, 134, 136, 141, 146, 151, 155, 165, 172, 176, 179, 182, 188, 192, 196, 200, 203, 210, 211, 215] - Occurrences: 1 - Number of Vertices: 57

Average execution time: 480.910649 seconds

bremen\_subgraph\_200.gr/docplex

Solution: [1, 2, 5, 7, 9, 11, 13, 18, 19, 28, 29, 33, 34, 35, 38, 39, 47, 50, 53, 55, 59, 62, 65, 66, 67, 75, 78, 94, 99, 102, 104, 111, 113, 116, 118, 121, 126, 128, 129, 132, 136, 141, 146, 155, 162, 172, 176, 179, 182, 188, 192, 196, 198, 203, 210, 211, 215] - Occurrences: 10 - Number of Vertices: 57

Average execution time: 0.386598 seconds

bremen\_subgraph\_250/Expected

Solution: [1, 4, 6, 7, 11, 12, 17, 20, 26, 27, 29, 31, 46, 48, 51, 54, 58, 66, 68, 71, 73, 77, 82, 87, 89, 93, 94, 99, 100, 102, 108, 111, 113, 116, 120, 121, 132, 133, 135, 138, 141, 143, 146, 151, 165, 168, 172, 176, 182, 183, 184, 186, 188, 194, 197, 200, 205, 206, 212, 216, 218, 221, 228, 233, 236, 237, 241, 242, 246, 251, 254, 262, 265, 268]

Number of Vertices: 74

results/resultsFirst/bremen\_subgraph\_250.gr/orTools/data.csv

Solution: [1, 4, 6, 7, 11, 12, 17, 20, 26, 27, 29, 31, 39, 46, 48, 51, 54, 58, 66, 68, 71, 73, 77, 82, 87, 89, 93, 94, 99, 100, 102, 108, 111, 113, 116, 120, 121, 133, 138, 141, 143, 146, 151, 164, 165, 169, 172, 177, 180, 182, 183, 186, 188, 194, 197, 200, 205, 206, 212, 216, 221, 228, 233, 236, 237, 241, 242, 246, 251, 254, 259, 262, 265, 268] - Occurrences: 10 - Number of Vertices: 74

Average execution time: 0.986071 seconds

results/resultsSecond/bremen\_subgraph\_250.gr/ourSolution/data.csv

Solution: [1, 5, 6, 7, 9, 10, 14, 15, 16, 17, 19, 33, 34, 37, 40, 41, 42, 43, 46, 48, 50, 53, 54, 58, 59, 61, 62, 63, 69, 72, 73, 74, 75, 76, 77, 82, 83, 85, 87, 91, 96, 99, 101, 106, 108, 111, 119, 121, 123, 132, 133, 134, 138, 143, 146, 148, 149, 152, 164, 167, 171, 174, 175, 176, 182, 184, 186, 190, 193, 198, 202, 206, 209, 225, 227, 228, 231, 232, 236, 237, 242, 246, 254, 260, 268, 269] - Occurrences: 10 - Number of Vertices: 86

Average execution time: 1800.124948 seconds

results/resultsFirst/bremen\_subgraph\_250.gr/tabu\_search/data.csv

Solution: [1, 5, 11, 12, 17, 21, 22, 29, 30, 35, 44, 46, 47, 51, 53, 54, 58, 61, 68, 71, 72, 79, 82, 83, 86, 88, 95, 99, 100, 106, 109, 111, 113, 120, 121, 133, 135, 137, 141, 143, 146, 151, 152, 153, 154, 158, 166, 170, 172, 177, 179, 183, 185, 188, 191, 194, 198, 205, 206, 211, 217, 222, 225, 226, 233, 237, 242, 246, 251, 254, 261, 262, 264, 268, 270] - Occurrences: 1 - Number of Vertices: 75

Solution: [1, 9, 15, 16, 17, 28, 30, 31, 33, 34, 46, 49, 52, 53, 58, 60, 62, 68, 71, 72, 79, 82, 90, 93, 94, 97, 99, 100, 102, 109, 111, 113, 116, 119, 121, 131, 132, 133, 135, 137, 142, 143, 146, 151, 152, 166, 169, 172, 174, 177, 183, 185, 186, 188, 193, 197, 200, 202, 206, 209, 213, 217, 222, 227, 231, 232, 235, 237, 242, 246, 248, 251, 254, 262, 265, 268] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 9, 10, 11, 12, 17, 20, 27, 29, 30, 31, 34, 46, 49, 52, 53, 54, 58, 62, 66, 71, 72, 79, 82, 86, 88, 95, 97, 99, 100, 102, 109, 111, 113, 120, 121, 131, 133, 137, 142, 143, 146, 149, 151, 164, 166, 172, 174, 177, 179, 182, 183, 185, 186, 188, 193, 196, 197, 200, 202, 209, 213, 217, 223, 227, 228, 237, 242, 246, 251, 254, 262, 264, 265, 268, 269] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 5, 6, 7, 12, 13, 18, 21, 22, 26, 29, 30, 31, 34, 39, 41, 46, 49, 50, 54, 58, 60, 63, 71, 72, 74, 79, 82, 83, 86, 88, 93, 99, 100, 109, 111, 113, 115, 116, 118, 120, 133, 137, 143, 145, 149, 151, 154, 155, 164, 166, 169, 171, 176, 183, 186, 188, 193, 197, 200, 202, 206, 209, 218, 222, 227, 228, 242, 246, 252, 254, 259, 261, 262, 265, 268] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 5, 21, 22, 23, 29, 34, 42, 43, 46, 47, 50, 55, 58, 61, 63, 65, 66, 68, 71, 73, 75, 77, 79, 81, 88, 92, 100, 106, 107, 109, 112, 113, 119, 123, 133, 135, 137, 140, 143, 146, 151, 153, 155, 158, 165, 170, 172, 177, 179, 185, 188, 191, 194, 197, 200, 205, 206, 212, 217, 222, 225, 228, 233, 236, 237, 238, 246, 251, 254, 261, 262, 264, 268, 270] - Occurrences: 1 - Number of Vertices: 75

Solution: [1, 5, 6, 7, 8, 11, 12, 14, 18, 21, 22, 26, 32, 34, 39, 41, 46, 49, 52, 54, 58, 61, 66, 68, 71, 72, 82, 86, 88, 95, 99, 100, 104, 111, 113, 115, 116, 121, 133, 136, 142, 143, 146, 151, 155, 164, 166, 169, 172, 177, 180, 181, 183, 186, 187, 190, 193, 195, 197, 201, 202, 207, 209, 213, 223, 227, 229, 242, 246, 251, 254, 257, 259, 261, 265, 268] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 5, 6, 7, 12, 18, 21, 22, 26, 29, 30, 31, 35, 44, 45, 46, 50, 54, 58, 61, 63, 68, 71, 72, 74, 82, 83, 87, 88, 92, 99, 100, 108, 111, 113, 115, 116, 120, 133, 135, 137, 143, 145, 151, 154, 155, 158, 165, 169, 172, 174, 177, 183, 185, 188, 191, 193, 196, 201, 203, 207, 211, 217, 223, 225, 227, 228, 242, 246, 251, 254, 259, 261, 262, 265, 268] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 5, 7, 11, 18, 21, 22, 26, 29, 30, 33, 34, 37, 44, 46, 47, 52, 58, 61, 71, 72, 74, 82, 83, 86, 87, 88, 95, 99, 100, 102, 108, 113, 116, 120, 121, 132, 133, 135, 136, 142, 143, 149, 166, 169, 172, 174, 177, 183, 185, 186, 188, 191, 194, 198, 202, 205, 206, 211, 217, 223, 225, 226, 228, 231, 232, 237, 239, 246, 249, 252, 254, 262, 265, 268] - Occurrences: 1 - Number of Vertices: 75

Solution: [1, 3, 5, 16, 21, 23, 29, 30, 37, 43, 44, 46, 47, 50, 55, 58, 61, 65, 71, 72, 82, 83, 85, 87, 90, 93, 100, 102, 106, 107, 108, 112, 113, 119, 133, 135, 137, 140, 143, 146, 148, 149, 153, 154, 156, 166, 170, 172, 177, 179, 185, 186, 188, 191, 194, 198, 205, 206, 210, 211, 217, 222, 225, 226, 228, 232, 237, 238, 241, 246, 252, 254, 262, 264, 268, 270] - Occurrences: 1 - Number of Vertices: 76

Solution: [1, 5, 10, 19, 21, 23, 29, 33, 35, 40, 45, 46, 47, 50, 58, 61, 64, 66, 68, 71, 73, 77, 79, 82, 89, 92, 95, 97, 99, 100, 102, 108, 113, 120, 123, 133, 135, 138, 140, 143, 145, 146, 151, 152, 156, 157, 165, 170, 172, 177, 179, 183, 185, 188, 191, 194, 198, 205, 206, 212, 217, 225, 233, 236, 237, 239, 246, 249, 251, 254, 262, 264, 265, 268, 269] - Occurrences: 1 - Number of Vertices: 75

Average execution time: 480.731978 seconds

bremen\_subgraph\_250.gr/docplex

Solution: [1, 4, 6, 7, 11, 12, 17, 20, 26, 27, 29, 31, 46, 48, 51, 54, 58, 66, 68, 71, 73, 77, 82, 87, 89, 93, 94, 99, 100, 102, 108, 111, 113, 116, 120, 121, 132, 133, 135, 138, 141, 143, 146, 151, 165, 168, 172, 176, 182, 183, 184, 186, 188, 194, 197, 200, 205, 206, 212, 216, 218, 221, 228, 233, 236, 237, 241, 242, 246, 251, 254, 262, 265, 268] - Occurrences: 10 - Number of Vertices: 74

Average execution time: 0.934762 seconds

bremen\_subgraph\_300/Expected

Solution: [1, 6, 8, 10, 11, 13, 14, 16, 19, 21, 28, 32, 35, 39, 41, 43, 45, 48, 49, 53, 59, 62, 69, 71, 74, 83, 84, 89, 90, 95, 101, 102, 105, 109, 111, 113, 114, 121, 123, 128, 140, 144, 147, 151, 152, 156, 159, 163, 171, 174, 176, 179, 183, 187, 190, 195, 196, 198, 200, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 238, 241, 247, 248, 260, 263, 276, 283, 288, 291, 293, 299, 301, 306, 309]

Number of Vertices: 84

results/resultsFirst/bremen\_subgraph\_300.gr/orTools/data.csv

Solution: [6, 7, 8, 10, 11, 13, 14, 16, 20, 21, 22, 32, 35, 39, 41, 45, 48, 49, 51, 53, 62, 69, 71, 72, 74, 77, 83, 84, 85, 89, 90, 97, 101, 105, 108, 115, 118, 121, 123, 124, 128, 130, 144, 149, 151, 156, 163, 167, 171, 174, 176, 179, 183, 187, 193, 194, 196, 199, 201, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 238, 241, 247, 248, 260, 263, 276, 283, 287, 291, 293, 299, 301, 306, 310] - Occurrences: 9 - Number of Vertices: 84

Solution: [6, 7, 8, 10, 11, 13, 14, 16, 20, 21, 22, 32, 35, 39, 41, 45, 48, 49, 53, 62, 69, 71, 72, 74, 77, 83, 84, 85, 89, 90, 97, 101, 105, 108, 115, 118, 121, 123, 124, 128, 130, 144, 146, 149, 151, 156, 163, 167, 171, 174, 176, 179, 184, 187, 193, 194, 196, 198, 202, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 238, 241, 247, 248, 260, 263, 276, 283, 287, 291, 293, 299, 301, 306, 310] - Occurrences: 1 - Number of Vertices: 84

Average execution time: 1.376247 seconds

results/resultsSecond/bremen\_subgraph\_300.gr/ourSolution/data.csv

Solution: [1, 5, 6, 7, 8, 10, 11, 14, 16, 17, 18, 19, 20, 31, 33, 34, 35, 39, 40, 41, 42, 43, 45, 48, 49, 51, 52, 54, 55, 59, 60, 61, 62, 63, 64, 68, 71, 72, 74, 76, 77, 83, 84, 90, 93, 94, 95, 98, 99, 101, 104, 105, 108, 112, 117, 127, 139, 144, 163, 171, 173, 174, 179, 181, 183, 189, 192, 194, 196, 199, 200, 204, 206, 209, 212, 214, 215, 217, 218, 220, 222, 227, 237, 240, 246, 260, 263, 269, 270, 276, 281, 282, 287, 291, 292, 302, 304, 307] - Occurrences: 10 - Number of Vertices: 98

Average execution time: 1800.138760 seconds

results/resultsFirst/bremen\_subgraph\_300.gr/tabu\_search/data.csv

Solution: [1, 5, 6, 8, 11, 13, 14, 16, 22, 23, 24, 32, 35, 39, 41, 43, 45, 48, 49, 53, 59, 62, 64, 68, 71, 74, 82, 84, 89, 90, 95, 102, 105, 109, 111, 114, 118, 128, 140, 144, 147, 149, 151, 152, 156, 163, 165, 171, 176, 179, 183, 187, 191, 194, 196, 199, 201, 206, 208, 211, 212, 216, 218, 222, 228, 229, 236, 238, 241, 244, 246, 253, 260, 263, 270, 276, 283, 288, 291, 293, 299, 300, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [6, 8, 11, 13, 14, 16, 17, 19, 29, 32, 34, 35, 39, 41, 43, 48, 49, 53, 59, 62, 69, 71, 74, 83, 84, 89, 90, 93, 97, 105, 109, 113, 114, 121, 123, 128, 132, 140, 144, 147, 151, 152, 163, 167, 171, 174, 176, 179, 183, 187, 189, 192, 194, 198, 200, 206, 208, 211, 212, 216, 218, 220, 222, 228, 229, 238, 241, 244, 246, 259, 263, 266, 267, 270, 276, 281, 283, 288, 291, 293, 299, 301, 306, 311] - Occurrences: 1 - Number of Vertices: 84

Solution: [1, 5, 8, 13, 14, 16, 19, 22, 23, 32, 34, 36, 39, 41, 42, 45, 46, 48, 50, 53, 59, 64, 69, 74, 83, 84, 90, 92, 98, 99, 100, 103, 106, 110, 111, 112, 114, 118, 120, 134, 141, 144, 147, 152, 153, 163, 165, 170, 173, 177, 184, 186, 189, 192, 194, 197, 200, 206, 208, 210, 212, 218, 221, 222, 228, 229, 233, 238, 241, 243, 249, 252, 260, 263, 276, 280, 281, 282, 283, 291, 293, 296, 304, 305, 307] - Occurrences: 1 - Number of Vertices: 85

Solution: [5, 6, 8, 11, 13, 14, 16, 22, 23, 24, 32, 34, 35, 39, 41, 43, 45, 48, 49, 53, 59, 62, 69, 74, 76, 83, 84, 89, 90, 91, 102, 105, 111, 113, 114, 121, 128, 140, 144, 147, 150, 151, 152, 159, 163, 167, 171, 174, 176, 179, 184, 187, 190, 195, 197, 200, 206, 208, 212, 214, 215, 217, 223, 228, 229, 236, 238, 240, 243, 246, 253, 260, 263, 270, 276, 283, 288, 291, 293, 296, 299, 301, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [7, 8, 12, 13, 14, 16, 17, 19, 29, 32, 34, 35, 39, 41, 43, 45, 46, 48, 49, 53, 59, 62, 64, 69, 71, 74, 76, 82, 84, 96, 97, 101, 106, 111, 115, 118, 123, 124, 128, 131, 139, 140, 144, 147, 149, 151, 163, 165, 167, 176, 179, 184, 187, 193, 194, 197, 200, 206, 208, 211, 212, 216, 218, 220, 222, 228, 229, 237, 241, 247, 248, 259, 263, 276, 283, 285, 291, 293, 296, 298, 301, 303, 305, 311] - Occurrences: 1 - Number of Vertices: 84

Solution: [6, 8, 11, 13, 14, 16, 18, 19, 23, 25, 29, 32, 34, 35, 39, 41, 45, 48, 49, 53, 59, 62, 64, 69, 71, 74, 82, 84, 89, 91, 101, 102, 106, 109, 111, 114, 118, 123, 128, 131, 141, 144, 146, 149, 151, 152, 163, 165, 167, 176, 179, 184, 187, 193, 194, 198, 200, 206, 208, 210, 212, 216, 218, 220, 222, 228, 229, 238, 241, 247, 248, 260, 263, 266, 276, 283, 285, 288, 291, 293, 299, 301, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [1, 5, 6, 8, 11, 13, 14, 16, 19, 22, 23, 32, 35, 39, 41, 48, 49, 53, 59, 62, 64, 69, 71, 74, 83, 84, 89, 90, 95, 101, 102, 106, 109, 110, 115, 118, 128, 132, 141, 144, 146, 147, 149, 151, 152, 160, 163, 171, 174, 176, 179, 183, 187, 191, 194, 197, 200, 201, 206, 208, 212, 214, 216, 217, 223, 228, 229, 236, 238, 240, 247, 253, 260, 263, 272, 276, 283, 288, 291, 293, 299, 300, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [6, 8, 12, 13, 14, 16, 17, 24, 29, 32, 35, 39, 41, 45, 46, 48, 49, 53, 59, 62, 64, 69, 71, 74, 76, 83, 84, 89, 90, 95, 101, 102, 106, 111, 114, 118, 128, 141, 144, 146, 148, 149, 151, 152, 160, 163, 165, 167, 171, 176, 179, 183, 187, 193, 194, 197, 200, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 236, 238, 241, 247, 259, 260, 263, 276, 280, 283, 291, 293, 296, 299, 300, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [1, 8, 11, 13, 14, 16, 17, 19, 29, 32, 35, 39, 41, 42, 45, 46, 48, 51, 53, 59, 62, 68, 71, 74, 76, 83, 84, 89, 90, 95, 101, 102, 103, 105, 111, 116, 118, 121, 123, 141, 144, 147, 151, 152, 156, 159, 163, 171, 174, 176, 179, 184, 186, 187, 190, 195, 197, 200, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 238, 241, 247, 259, 260, 263, 270, 276, 283, 291, 293, 296, 299, 301, 306, 309] - Occurrences: 1 - Number of Vertices: 84

Solution: [1, 5, 8, 11, 13, 16, 20, 22, 23, 24, 33, 36, 39, 41, 45, 46, 48, 49, 51, 54, 59, 62, 64, 68, 71, 72, 74, 83, 84, 91, 101, 105, 110, 115, 118, 123, 124, 128, 144, 149, 151, 152, 156, 164, 170, 176, 179, 184, 186, 187, 188, 193, 194, 198, 202, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 232, 238, 241, 247, 248, 263, 267, 268, 276, 284, 285, 291, 292, 296, 298, 301, 303, 306, 309, 311] - Occurrences: 1 - Number of Vertices: 85

Average execution time: 480.677619 seconds

bremen\_subgraph\_300.gr/docplex

Solution: [1, 6, 8, 10, 11, 13, 14, 16, 19, 21, 28, 32, 35, 39, 41, 43, 45, 48, 49, 53, 59, 62, 69, 71, 74, 83, 84, 89, 90, 95, 101, 102, 105, 109, 111, 113, 114, 121, 123, 128, 140, 144, 147, 151, 152, 156, 159, 163, 171, 174, 176, 179, 183, 187, 190, 195, 196, 198, 200, 206, 208, 212, 214, 216, 218, 220, 222, 228, 229, 238, 241, 247, 248, 260, 263, 276, 283, 288, 291, 293, 299, 301, 306, 309] - Occurrences: 10 - Number of Vertices: 84

Average execution time: 0.728236 seconds

test/Expected

Solution: [3, 6]

Number of Vertices: 2

results/resultsFirst/test.gr/orTools/data.csv

Solution: [2, 5] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.346346 seconds

results/resultsSecond/test.gr/ourSolution/data.csv

Solution: [2, 5] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.000000 seconds

results/resultsFirst/test.gr/tabu\_search/data.csv

Solution: [2, 5] - Occurrences: 9 - Number of Vertices: 2

Average execution time: 0.000000 seconds

test.gr/docplex

Solution: [2, 5] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.008401 seconds

test\_isolated/Expected

Solution: [1, 3]

Number of Vertices: 2

results/resultsFirst/test\_isolated.gr/orTools/data.csv

Solution: [1, 3] - Occurrences: 9 - Number of Vertices: 2

Average execution time: 0.297491 seconds

results/resultsSecond/test\_isolated.gr/ourSolution/data.csv

Solution: [1, 3] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.000000 seconds

results/resultsFirst/test\_isolated.gr/tabu\_search/data.csv

Solution: [1, 3] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.000000 seconds

test\_isolated.gr/docplex

Solution: [1, 3] - Occurrences: 10 - Number of Vertices: 2

Average execution time: 0.006890 seconds