# R5

# 2

TESTFILE: solver\_test/new/r5/r5.txt

DiskCount = 20

Column = 9

Err = OK

Cost [98, 96, 102, 102, 92, 96, 116, 94, 100]

[98, 92, 94, 96, 96, 100, 102, 102, 116]

STAGE 20: ERR count disk

BF 0000-D>2222

BF 2222-D>1111

BF 0000-D>2222

BF 2222-D>1111

BF 000-D>222

BF 222-D>111

Exec time: 0.5942909717559814 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 230830

mkGen #13 466830

mkGen #14 85896

mkGen #15 28704

mkGen #16 3656

mkGen #17 204

mkGen #18 4

mkGen #19 20

mkGen #20 80

mkGen #21 280

mkGen #22 60

mkGen #23 20

mkGen #24 5

mkGen #25 1

mkGen #26 0

Solved!

BF 000000000-D>111111111

6044 ['0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '000', '100', '130', '132', '122', '222', '000000000', '100000000', '120000000', '123000000', '123400000', '124400000', '144400000', '444400000', '444410000', '444412000', '444422000', '444422300', '444422350', '444422351', '444402351', '444402311', '444402111', '444401111', '444411111', '044411111', '024411111', '023411111', '023111111', '021111111', '011111111', '111111111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '222', '022', '032', '031', '011', '111']

Exec time: 87.87785315513611 seconds

Total cost: 6044

BF 00000-D>22222

BF 22222-D>11111

BF 0000-D>2222

BF 2222-D>1111

BF 000-D>222

BF 222-D>111

Exec time: 2.7332663536071777 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6032 ['00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '000', '100', '130', '132', '122', '222', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '222', '022', '032', '031', '011', '111']

Exec time: 21.240952014923096 seconds

Total cost: 6032

BF 00000-D>22222

BF 22222-D>11111

BF 00000-D>22222

BF 22222-D>11111

BF 000-D>222

BF 222-D>111

Exec time: 4.0169358253479 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 10056

mkGen #11 2484

mkGen #12 408

mkGen #13 52

mkGen #14 4

mkGen #15 20

mkGen #16 5

mkGen #17 1

mkGen #18 0

Solved!

BF 0000000-D>1111111

6030 ['00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '000', '100', '130', '132', '122', '222', '0000000', '1000000', '1200000', '2200000', '2210000', '2213000', '2233000', '2233400', '2233450', '2233451', '2203451', '2203411', '2203111', '2201111', '2211111', '0211111', '0111111', '1111111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '222', '022', '032', '031', '011', '111']

Exec time: 8.222769260406494 seconds

Total cost: 6030

BF 000000-D>222222

BF 222222-D>111111

BF 00000-D>22222

BF 22222-D>11111

BF 000-D>222

BF 222-D>111

Exec time: 19.24494767189026 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6036 ['000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '000', '100', '130', '132', '122', '222', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '222', '022', '032', '031', '011', '111']

Exec time: 19.902026414871216 seconds

Total cost: 6036

BF 000000-D>222222

BF 222222-D>111111

BF 000000-D>222222

BF 222222-D>111111

BF 000-D>222

BF 222-D>111

Exec time: 24.957393407821655 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6046 ['000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '000', '100', '130', '132', '122', '222', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '222', '022', '032', '031', '011', '111']

Exec time: 25.03226637840271 seconds

Total cost: 6046

BF 00000-D>22222

BF 22222-D>11111

BF 00000-D>22222

BF 22222-D>11111

BF 00000-D>22222

BF 22222-D>11111

Exec time: 4.514297246932983 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6048 ['00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111']

Exec time: 4.587758779525757 seconds

Total cost: 6048

BF 000000-D>222222

BF 222222-D>111111

BF 00000-D>22222

BF 22222-D>11111

BF 0000-D>2222

BF 2222-D>1111

Exec time: 19.423502922058105 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6046 ['000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111']

Exec time: 19.501397371292114 seconds

Total cost: 6046

BF 000000-D>222222

BF 222222-D>111111

BF 000000-D>222222

BF 222222-D>111111

BF 000-D>222

BF 222-D>111

Exec time: 25.219698190689087 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6046 ['000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '000', '100', '130', '132', '122', '222', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '222', '022', '032', '031', '011', '111']

Exec time: 25.294434547424316 seconds

Total cost: 6046

BF 00000-D>22222

BF 22222-D>11111

BF 00000-D>22222

BF 22222-D>11111

BF 0000-D>2222

BF 2222-D>1111

Exec time: 4.08700966835022 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6038 ['00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '00000', '10000', '13000', '13400', '13450', '13452', '13422', '13222', '12222', '22222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '22222', '02222', '03222', '03422', '03452', '03451', '03411', '03111', '01111', '11111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111']

Exec time: 4.783856630325317 seconds

Total cost: 6038

BF 0000-D>2222

BF 2222-D>1111

BF 0000-D>2222

BF 2222-D>1111

BF 0000-D>2222

BF 2222-D>1111

Exec time: 0.6500649452209473 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6038 ['0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111']

Exec time: 21.03792381286621 seconds

Total cost: 6038

BF 000000-D>222222

BF 222222-D>111111

BF 0000-D>2222

BF 2222-D>1111

BF 0000-D>2222

BF 2222-D>1111

Exec time: 19.805933475494385 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6036 ['000000', '100000', '130000', '134000', '134500', '134560', '134562', '134522', '134222', '132222', '122222', '222222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '0000', '1000', '1300', '1340', '1342', '1322', '1222', '2222', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '222222', '022222', '032222', '034222', '034522', '034562', '034561', '034511', '034111', '031111', '011111', '111111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111', '2222', '0222', '0322', '0342', '0341', '0311', '0111', '1111']

Exec time: 20.996111154556274 seconds

Total cost: 6036

- - - - - - - - - - - - - - - - - - - - - - -

Dst\_rod = 2

Stage cost

Stage 3 pyr 333 : 0

Stage 3 pyr 443 : 6044

Stage 3 pyr 543 : 6032

Stage 3 pyr 553 : 6030

Stage 3 pyr 653 : 6036

Stage 3 pyr 663 : 6046

Stage 3 pyr 555 : 6048

Stage 3 pyr 654 : 6046

Stage 3 pyr 663 : 6046

Stage 3 pyr 554 : 6038

Stage 3 pyr 444 : 6038

Stage 3 pyr 644 : 6036

Exec time: 258.53980922698975 seconds

# 3

TESTFILE: solver\_test/new/r5/r5.txt

DiskCount = 20

Column = 9

Err = OK

Cost [98, 96, 102, 102, 92, 96, 116, 94, 100]

[98, 92, 94, 96, 96, 100, 102, 102, 116]

STAGE 20: ERR count disk

BF 0000-D>3333

BF 3333-D>1111

BF 0000-D>3333

BF 3333-D>1111

BF 000-D>333

BF 333-D>111

Exec time: 0.5624387264251709 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 230830

mkGen #13 466830

mkGen #14 85896

mkGen #15 28704

mkGen #16 3656

mkGen #17 204

mkGen #18 4

mkGen #19 20

mkGen #20 80

mkGen #21 280

mkGen #22 60

mkGen #23 20

mkGen #24 5

mkGen #25 1

mkGen #26 0

Solved!

BF 000000000-D>111111111

6020 ['0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '000', '100', '120', '123', '133', '333', '000000000', '100000000', '120000000', '123000000', '123400000', '124400000', '144400000', '444400000', '444410000', '444412000', '444422000', '444422300', '444422350', '444422351', '444402351', '444402311', '444402111', '444401111', '444411111', '044411111', '024411111', '023411111', '023111111', '021111111', '011111111', '111111111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '333', '033', '023', '021', '011', '111']

Exec time: 92.23077845573425 seconds

Total cost: 6020

BF 00000-D>33333

BF 33333-D>11111

BF 0000-D>3333

BF 3333-D>1111

BF 000-D>333

BF 333-D>111

Exec time: 2.749636173248291 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6010 ['00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '000', '100', '120', '123', '133', '333', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '333', '033', '023', '021', '011', '111']

Exec time: 21.638643980026245 seconds

Total cost: 6010

BF 00000-D>33333

BF 33333-D>11111

BF 00000-D>33333

BF 33333-D>11111

BF 000-D>333

BF 333-D>111

Exec time: 4.024224042892456 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 10056

mkGen #11 2484

mkGen #12 408

mkGen #13 52

mkGen #14 4

mkGen #15 20

mkGen #16 5

mkGen #17 1

mkGen #18 0

Solved!

BF 0000000-D>1111111

6020 ['00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '000', '100', '120', '123', '133', '333', '0000000', '1000000', '1200000', '2200000', '2210000', '2213000', '2233000', '2233400', '2233450', '2233451', '2203451', '2203411', '2203111', '2201111', '2211111', '0211111', '0111111', '1111111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '333', '033', '023', '021', '011', '111']

Exec time: 8.283785343170166 seconds

Total cost: 6020

BF 000000-D>333333

BF 333333-D>111111

BF 00000-D>33333

BF 33333-D>11111

BF 000-D>333

BF 333-D>111

Exec time: 19.6284396648407 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6028 ['000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '000', '100', '120', '123', '133', '333', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '333', '033', '023', '021', '011', '111']

Exec time: 20.300499439239502 seconds

Total cost: 6028

BF 000000-D>333333

BF 333333-D>111111

BF 000000-D>333333

BF 333333-D>111111

BF 000-D>333

BF 333-D>111

Exec time: 25.51119589805603 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6044 ['000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '000', '100', '120', '123', '133', '333', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '333', '033', '023', '021', '011', '111']

Exec time: 25.583770990371704 seconds

Total cost: 6044

BF 00000-D>33333

BF 33333-D>11111

BF 00000-D>33333

BF 33333-D>11111

BF 00000-D>33333

BF 33333-D>11111

Exec time: 4.47950291633606 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6052 ['00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111']

Exec time: 4.553241491317749 seconds

Total cost: 6052

BF 000000-D>333333

BF 333333-D>111111

BF 00000-D>33333

BF 33333-D>11111

BF 0000-D>3333

BF 3333-D>1111

Exec time: 19.68048667907715 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6048 ['000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111']

Exec time: 19.758687019348145 seconds

Total cost: 6048

BF 000000-D>333333

BF 333333-D>111111

BF 000000-D>333333

BF 333333-D>111111

BF 000-D>333

BF 333-D>111

Exec time: 25.441384315490723 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6044 ['000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '000', '100', '120', '123', '133', '333', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '333', '033', '023', '021', '011', '111']

Exec time: 25.515113353729248 seconds

Total cost: 6044

BF 00000-D>33333

BF 33333-D>11111

BF 00000-D>33333

BF 33333-D>11111

BF 0000-D>3333

BF 3333-D>1111

Exec time: 4.087123394012451 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6032 ['00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '00000', '10000', '12000', '12400', '12450', '12453', '12433', '12333', '13333', '33333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '33333', '03333', '02333', '02433', '02453', '02451', '02411', '02111', '01111', '11111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111']

Exec time: 4.817594528198242 seconds

Total cost: 6032

BF 0000-D>3333

BF 3333-D>1111

BF 0000-D>3333

BF 3333-D>1111

BF 0000-D>3333

BF 3333-D>1111

Exec time: 0.6474854946136475 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6018 ['0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111']

Exec time: 21.55232524871826 seconds

Total cost: 6018

BF 000000-D>333333

BF 333333-D>111111

BF 0000-D>3333

BF 3333-D>1111

BF 0000-D>3333

BF 3333-D>1111

Exec time: 18.51463294029236 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6032 ['000000', '100000', '120000', '124000', '124500', '124560', '124563', '124533', '124333', '123333', '133333', '333333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '0000', '1000', '1200', '1240', '1243', '1233', '1333', '3333', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '333333', '033333', '023333', '024333', '024533', '024563', '024561', '024511', '024111', '021111', '011111', '111111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111', '3333', '0333', '0233', '0243', '0241', '0211', '0111', '1111']

Exec time: 19.13004183769226 seconds

Total cost: 6032

- - - - - - - - - - - - - - - - - - - - - - -

Dst\_rod = 3

Stage cost

Stage 3 pyr 333 : 0

Stage 3 pyr 443 : 6020

Stage 3 pyr 543 : 6010

Stage 3 pyr 553 : 6020

Stage 3 pyr 653 : 6028

Stage 3 pyr 663 : 6044

Stage 3 pyr 555 : 6052

Stage 3 pyr 654 : 6048

Stage 3 pyr 663 : 6044

Stage 3 pyr 554 : 6032

Stage 3 pyr 444 : 6018

Stage 3 pyr 644 : 6032

Exec time: 263.4373950958252 seconds

# 4

TESTFILE: solver\_test/new/r5/r5.txt

DiskCount = 20

Column = 9

Err = OK

Cost [98, 96, 102, 102, 92, 96, 116, 94, 100]

[98, 92, 94, 96, 96, 100, 102, 102, 116]

STAGE 20: ERR count disk

BF 0000-D>4444

BF 4444-D>1111

BF 0000-D>4444

BF 4444-D>1111

BF 000-D>444

BF 444-D>111

Exec time: 0.5948696136474609 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 230830

mkGen #13 466830

mkGen #14 85896

mkGen #15 28704

mkGen #16 3656

mkGen #17 204

mkGen #18 4

mkGen #19 20

mkGen #20 80

mkGen #21 280

mkGen #22 60

mkGen #23 20

mkGen #24 5

mkGen #25 1

mkGen #26 0

Solved!

BF 000000000-D>111111111

6016 ['0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '000', '100', '120', '124', '144', '444', '000000000', '100000000', '120000000', '123000000', '123400000', '124400000', '144400000', '444400000', '444410000', '444412000', '444422000', '444422300', '444422350', '444422351', '444402351', '444402311', '444402111', '444401111', '444411111', '044411111', '024411111', '023411111', '023111111', '021111111', '011111111', '111111111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '444', '044', '024', '021', '011', '111']

Exec time: 97.24648118019104 seconds

Total cost: 6016

BF 00000-D>44444

BF 44444-D>11111

BF 0000-D>4444

BF 4444-D>1111

BF 000-D>444

BF 444-D>111

Exec time: 2.8248465061187744 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6006 ['00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '000', '100', '120', '124', '144', '444', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '444', '044', '024', '021', '011', '111']

Exec time: 21.929800271987915 seconds

Total cost: 6006

BF 00000-D>44444

BF 44444-D>11111

BF 00000-D>44444

BF 44444-D>11111

BF 000-D>444

BF 444-D>111

Exec time: 4.0963029861450195 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 10056

mkGen #11 2484

mkGen #12 408

mkGen #13 52

mkGen #14 4

mkGen #15 20

mkGen #16 5

mkGen #17 1

mkGen #18 0

Solved!

BF 0000000-D>1111111

6026 ['00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '000', '100', '120', '124', '144', '444', '0000000', '1000000', '1200000', '2200000', '2210000', '2213000', '2233000', '2233400', '2233450', '2233451', '2203451', '2203411', '2203111', '2201111', '2211111', '0211111', '0111111', '1111111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '444', '044', '024', '021', '011', '111']

Exec time: 8.441751480102539 seconds

Total cost: 6026

BF 000000-D>444444

BF 444444-D>111111

BF 00000-D>44444

BF 44444-D>11111

BF 000-D>444

BF 444-D>111

Exec time: 19.834174633026123 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6040 ['000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '000', '100', '120', '124', '144', '444', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '444', '044', '024', '021', '011', '111']

Exec time: 20.511710166931152 seconds

Total cost: 6040

BF 000000-D>444444

BF 444444-D>111111

BF 000000-D>444444

BF 444444-D>111111

BF 000-D>444

BF 444-D>111

Exec time: 25.7034649848938 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6060 ['000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '000', '100', '120', '124', '144', '444', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '444', '044', '024', '021', '011', '111']

Exec time: 25.785454273223877 seconds

Total cost: 6060

BF 00000-D>44444

BF 44444-D>11111

BF 00000-D>44444

BF 44444-D>11111

BF 00000-D>44444

BF 44444-D>11111

Exec time: 4.569967746734619 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6056 ['00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111']

Exec time: 4.646019458770752 seconds

Total cost: 6056

BF 000000-D>444444

BF 444444-D>111111

BF 00000-D>44444

BF 44444-D>11111

BF 0000-D>4444

BF 4444-D>1111

Exec time: 19.95620059967041 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6050 ['000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111']

Exec time: 20.034569025039673 seconds

Total cost: 6050

BF 000000-D>444444

BF 444444-D>111111

BF 000000-D>444444

BF 444444-D>111111

BF 000-D>444

BF 444-D>111

Exec time: 25.60530924797058 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6060 ['000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '000', '100', '120', '124', '144', '444', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '444', '044', '024', '021', '011', '111']

Exec time: 25.68005132675171 seconds

Total cost: 6060

BF 00000-D>44444

BF 44444-D>11111

BF 00000-D>44444

BF 44444-D>11111

BF 0000-D>4444

BF 4444-D>1111

Exec time: 4.1746649742126465 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6034 ['00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '00000', '10000', '12000', '12300', '12350', '12354', '12344', '12444', '14444', '44444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '44444', '04444', '02444', '02344', '02354', '02351', '02311', '02111', '01111', '11111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111']

Exec time: 4.893533706665039 seconds

Total cost: 6034

BF 0000-D>4444

BF 4444-D>1111

BF 0000-D>4444

BF 4444-D>1111

BF 0000-D>4444

BF 4444-D>1111

Exec time: 0.6566469669342041 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6004 ['0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111']

Exec time: 21.779202699661255 seconds

Total cost: 6004

BF 000000-D>444444

BF 444444-D>111111

BF 0000-D>4444

BF 4444-D>1111

BF 0000-D>4444

BF 4444-D>1111

Exec time: 18.595353364944458 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6030 ['000000', '100000', '120000', '123000', '123500', '123560', '123564', '123544', '123444', '124444', '144444', '444444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '0000', '1000', '1200', '1230', '1234', '1244', '1444', '4444', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '444444', '044444', '024444', '023444', '023544', '023564', '023561', '023511', '023111', '021111', '011111', '111111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111', '4444', '0444', '0244', '0234', '0231', '0211', '0111', '1111']

Exec time: 19.230151891708374 seconds

Total cost: 6030

- - - - - - - - - - - - - - - - - - - - - - -

Dst\_rod = 4

Stage cost

Stage 3 pyr 333 : 0

Stage 3 pyr 443 : 6016

Stage 3 pyr 543 : 6006

Stage 3 pyr 553 : 6026

Stage 3 pyr 653 : 6040

Stage 3 pyr 663 : 6060

Stage 3 pyr 555 : 6056

Stage 3 pyr 654 : 6050

Stage 3 pyr 663 : 6060

Stage 3 pyr 554 : 6034

Stage 3 pyr 444 : 6004

Stage 3 pyr 644 : 6030

Exec time: 270.2275848388672 seconds

# 5

TESTFILE: solver\_test/new/r5/r5.txt

DiskCount = 20

Column = 9

Err = OK

Cost [98, 96, 102, 102, 92, 96, 116, 94, 100]

[98, 92, 94, 96, 96, 100, 102, 102, 116]

STAGE 20: ERR count disk

BF 0000-D>5555

BF 5555-D>1111

BF 0000-D>5555

BF 5555-D>1111

BF 000-D>555

BF 555-D>111

Exec time: 0.5953848361968994 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 230830

mkGen #13 466830

mkGen #14 85896

mkGen #15 28704

mkGen #16 3656

mkGen #17 204

mkGen #18 4

mkGen #19 20

mkGen #20 80

mkGen #21 280

mkGen #22 60

mkGen #23 20

mkGen #24 5

mkGen #25 1

mkGen #26 0

Solved!

BF 000000000-D>111111111

6016 ['0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '000', '100', '120', '125', '155', '555', '000000000', '100000000', '120000000', '123000000', '123400000', '124400000', '144400000', '444400000', '444410000', '444412000', '444422000', '444422300', '444422350', '444422351', '444402351', '444402311', '444402111', '444401111', '444411111', '044411111', '024411111', '023411111', '023111111', '021111111', '011111111', '111111111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '555', '055', '025', '021', '011', '111']

Exec time: 90.73515105247498 seconds

Total cost: 6016

BF 00000-D>55555

BF 55555-D>11111

BF 0000-D>5555

BF 5555-D>1111

BF 000-D>555

BF 555-D>111

Exec time: 2.76021671295166 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6020 ['00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '000', '100', '120', '125', '155', '555', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '555', '055', '025', '021', '011', '111']

Exec time: 21.44700860977173 seconds

Total cost: 6020

BF 00000-D>55555

BF 55555-D>11111

BF 00000-D>55555

BF 55555-D>11111

BF 000-D>555

BF 555-D>111

Exec time: 4.0073018074035645 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 10056

mkGen #11 2484

mkGen #12 408

mkGen #13 52

mkGen #14 4

mkGen #15 20

mkGen #16 5

mkGen #17 1

mkGen #18 0

Solved!

BF 0000000-D>1111111

6030 ['00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '000', '100', '120', '125', '155', '555', '0000000', '1000000', '1200000', '2200000', '2210000', '2213000', '2233000', '2233400', '2233450', '2233451', '2203451', '2203411', '2203111', '2201111', '2211111', '0211111', '0111111', '1111111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '555', '055', '025', '021', '011', '111']

Exec time: 8.258797883987427 seconds

Total cost: 6030

BF 000000-D>555555

BF 555555-D>111111

BF 00000-D>55555

BF 55555-D>11111

BF 000-D>555

BF 555-D>111

Exec time: 19.543056964874268 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6048 ['000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '000', '100', '120', '125', '155', '555', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '555', '055', '025', '021', '011', '111']

Exec time: 20.201590061187744 seconds

Total cost: 6048

BF 000000-D>555555

BF 555555-D>111111

BF 000000-D>555555

BF 555555-D>111111

BF 000-D>555

BF 555-D>111

Exec time: 25.33354878425598 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6070 ['000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '000', '100', '120', '125', '155', '555', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '555', '055', '025', '021', '011', '111']

Exec time: 25.40695810317993 seconds

Total cost: 6070

BF 00000-D>55555

BF 55555-D>11111

BF 00000-D>55555

BF 55555-D>11111

BF 00000-D>55555

BF 55555-D>11111

Exec time: 4.486329078674316 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6048 ['00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111']

Exec time: 4.567833423614502 seconds

Total cost: 6048

BF 000000-D>555555

BF 555555-D>111111

BF 00000-D>55555

BF 55555-D>11111

BF 0000-D>5555

BF 5555-D>1111

Exec time: 19.66366744041443 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6058 ['000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111']

Exec time: 19.74117088317871 seconds

Total cost: 6058

BF 000000-D>555555

BF 555555-D>111111

BF 000000-D>555555

BF 555555-D>111111

BF 000-D>555

BF 555-D>111

Exec time: 25.498730182647705 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6070 ['000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '000', '100', '120', '125', '155', '555', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '555', '055', '025', '021', '011', '111']

Exec time: 25.57537865638733 seconds

Total cost: 6070

BF 00000-D>55555

BF 55555-D>11111

BF 00000-D>55555

BF 55555-D>11111

BF 0000-D>5555

BF 5555-D>1111

Exec time: 4.210586786270142 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6038 ['00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '00000', '10000', '12000', '12300', '12340', '12345', '12355', '12555', '15555', '55555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '55555', '05555', '02555', '02355', '02345', '02341', '02311', '02111', '01111', '11111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111']

Exec time: 4.942665338516235 seconds

Total cost: 6038

BF 0000-D>5555

BF 5555-D>1111

BF 0000-D>5555

BF 5555-D>1111

BF 0000-D>5555

BF 5555-D>1111

Exec time: 0.6894924640655518 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6022 ['0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111']

Exec time: 21.42937397956848 seconds

Total cost: 6022

BF 000000-D>555555

BF 555555-D>111111

BF 0000-D>5555

BF 5555-D>1111

BF 0000-D>5555

BF 5555-D>1111

Exec time: 18.31281352043152 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6048 ['000000', '100000', '120000', '123000', '123400', '123460', '123465', '123455', '123555', '125555', '155555', '555555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '0000', '1000', '1200', '1230', '1235', '1255', '1555', '5555', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '555555', '055555', '025555', '023555', '023455', '023465', '023461', '023411', '023111', '021111', '011111', '111111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111', '5555', '0555', '0255', '0235', '0231', '0211', '0111', '1111']

Exec time: 18.935150623321533 seconds

Total cost: 6048

- - - - - - - - - - - - - - - - - - - - - - -

Dst\_rod = 5

Stage cost

Stage 3 pyr 333 : 0

Stage 3 pyr 443 : 6016

Stage 3 pyr 543 : 6020

Stage 3 pyr 553 : 6030

Stage 3 pyr 653 : 6048

Stage 3 pyr 663 : 6070

Stage 3 pyr 555 : 6048

Stage 3 pyr 654 : 6058

Stage 3 pyr 663 : 6070

Stage 3 pyr 554 : 6038

Stage 3 pyr 444 : 6022

Stage 3 pyr 644 : 6048

Exec time: 261.3041331768036 seconds

# 6

TESTFILE: solver\_test/new/r5/r5.txt

DiskCount = 20

Column = 9

Err = OK

Cost [98, 96, 102, 102, 92, 96, 116, 94, 100]

[98, 92, 94, 96, 96, 100, 102, 102, 116]

STAGE 20: ERR count disk

BF 0000-D>6666

BF 6666-D>1111

BF 0000-D>6666

BF 6666-D>1111

BF 000-D>666

BF 666-D>111

Exec time: 0.5843954086303711 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 230830

mkGen #13 466830

mkGen #14 85896

mkGen #15 28704

mkGen #16 3656

mkGen #17 204

mkGen #18 4

mkGen #19 20

mkGen #20 80

mkGen #21 280

mkGen #22 60

mkGen #23 20

mkGen #24 5

mkGen #25 1

mkGen #26 0

Solved!

BF 000000000-D>111111111

6050 ['0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '000', '100', '120', '126', '166', '666', '000000000', '100000000', '120000000', '123000000', '123400000', '124400000', '144400000', '444400000', '444410000', '444412000', '444422000', '444422300', '444422350', '444422351', '444402351', '444402311', '444402111', '444401111', '444411111', '044411111', '024411111', '023411111', '023111111', '021111111', '011111111', '111111111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '666', '066', '026', '021', '011', '111']

Exec time: 93.55887508392334 seconds

Total cost: 6050

BF 00000-D>66666

BF 66666-D>11111

BF 0000-D>6666

BF 6666-D>1111

BF 000-D>666

BF 666-D>111

Exec time: 2.78896427154541 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6056 ['00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '000', '100', '120', '126', '166', '666', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '666', '066', '026', '021', '011', '111']

Exec time: 21.901996850967407 seconds

Total cost: 6056

BF 00000-D>66666

BF 66666-D>11111

BF 00000-D>66666

BF 66666-D>11111

BF 000-D>666

BF 666-D>111

Exec time: 4.139878034591675 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 10056

mkGen #11 2484

mkGen #12 408

mkGen #13 52

mkGen #14 4

mkGen #15 20

mkGen #16 5

mkGen #17 1

mkGen #18 0

Solved!

BF 0000000-D>1111111

6066 ['00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '000', '100', '120', '126', '166', '666', '0000000', '1000000', '1200000', '2200000', '2210000', '2213000', '2233000', '2233400', '2233450', '2233451', '2203451', '2203411', '2203111', '2201111', '2211111', '0211111', '0111111', '1111111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '666', '066', '026', '021', '011', '111']

Exec time: 8.48558497428894 seconds

Total cost: 6066

BF 000000-D>666666

BF 666666-D>111111

BF 00000-D>66666

BF 66666-D>11111

BF 000-D>666

BF 666-D>111

Exec time: 20.2323317527771 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6082 ['000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '000', '100', '120', '126', '166', '666', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '666', '066', '026', '021', '011', '111']

Exec time: 20.91995906829834 seconds

Total cost: 6082

BF 000000-D>666666

BF 666666-D>111111

BF 000000-D>666666

BF 666666-D>111111

BF 000-D>666

BF 666-D>111

Exec time: 25.98350954055786 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6100 ['000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '000', '100', '120', '126', '166', '666', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '666', '066', '026', '021', '011', '111']

Exec time: 26.05882954597473 seconds

Total cost: 6100

BF 00000-D>66666

BF 66666-D>11111

BF 00000-D>66666

BF 66666-D>11111

BF 00000-D>66666

BF 66666-D>11111

Exec time: 4.571100950241089 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6112 ['00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111']

Exec time: 4.654323577880859 seconds

Total cost: 6112

BF 000000-D>666666

BF 666666-D>111111

BF 00000-D>66666

BF 66666-D>11111

BF 0000-D>6666

BF 6666-D>1111

Exec time: 20.150912284851074 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6106 ['000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111']

Exec time: 20.237042665481567 seconds

Total cost: 6106

BF 000000-D>666666

BF 666666-D>111111

BF 000000-D>666666

BF 666666-D>111111

BF 000-D>666

BF 666-D>111

Exec time: 26.01441478729248 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 336

mkGen #7 108

mkGen #8 20

mkGen #9 2

mkGen #10 0

Solved!

BF 00000-D>11111

6100 ['000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '000', '100', '120', '126', '166', '666', '00000', '20000', '23000', '23400', '23450', '23451', '23411', '23111', '21111', '11111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '666', '066', '026', '021', '011', '111']

Exec time: 26.09159803390503 seconds

Total cost: 6100

BF 00000-D>66666

BF 66666-D>11111

BF 00000-D>66666

BF 66666-D>11111

BF 0000-D>6666

BF 6666-D>1111

Exec time: 4.208873271942139 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6088 ['00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '00000', '10000', '12000', '12300', '12340', '12346', '12366', '12666', '16666', '66666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '66666', '06666', '02666', '02366', '02346', '02341', '02311', '02111', '01111', '11111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111']

Exec time: 4.949086904525757 seconds

Total cost: 6088

BF 0000-D>6666

BF 6666-D>1111

BF 0000-D>6666

BF 6666-D>1111

BF 0000-D>6666

BF 6666-D>1111

Exec time: 0.6551930904388428 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 12460

mkGen #9 23780

mkGen #10 57820

mkGen #11 109800

mkGen #12 33792

mkGen #13 9456

mkGen #14 1280

mkGen #15 104

mkGen #16 4

mkGen #17 20

mkGen #18 80

mkGen #19 20

mkGen #20 5

mkGen #21 1

mkGen #22 0

Solved!

BF 00000000-D>11111111

6070 ['0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '00000000', '10000000', '12000000', '12300000', '13300000', '33300000', '33310000', '33312000', '33322000', '33322400', '33322450', '33322451', '33302451', '33302411', '33302111', '33301111', '33311111', '03311111', '02311111', '02111111', '01111111', '11111111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111']

Exec time: 21.919583320617676 seconds

Total cost: 6070

BF 000000-D>666666

BF 666666-D>111111

BF 0000-D>6666

BF 6666-D>1111

BF 0000-D>6666

BF 6666-D>1111

Exec time: 18.711027145385742 seconds

mkGen #1 5

mkGen #2 20

mkGen #3 70

mkGen #4 220

mkGen #5 680

mkGen #6 2060

mkGen #7 4540

mkGen #8 2232

mkGen #9 564

mkGen #10 112

mkGen #11 24

mkGen #12 5

mkGen #13 1

mkGen #14 0

Solved!

BF 000000-D>111111

6096 ['000000', '100000', '120000', '123000', '123400', '123450', '123456', '123466', '123666', '126666', '166666', '666666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '0000', '1000', '1200', '1230', '1236', '1266', '1666', '6666', '000000', '100000', '120000', '220000', '223000', '223400', '223450', '223451', '023451', '023411', '023111', '021111', '011111', '111111', '666666', '066666', '026666', '023666', '023466', '023456', '023451', '023411', '023111', '021111', '011111', '111111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111', '6666', '0666', '0266', '0236', '0231', '0211', '0111', '1111']

Exec time: 19.339413166046143 seconds

Total cost: 6096

- - - - - - - - - - - - - - - - - - - - - - -

Dst\_rod = 6

Stage cost

Stage 3 pyr 333 : 0

Stage 3 pyr 443 : 6050

Stage 3 pyr 543 : 6056

Stage 3 pyr 553 : 6066

Stage 3 pyr 653 : 6082

Stage 3 pyr 663 : 6100

Stage 3 pyr 555 : 6112

Stage 3 pyr 654 : 6106

Stage 3 pyr 663 : 6100

Stage 3 pyr 554 : 6088

Stage 3 pyr 444 : 6070

Stage 3 pyr 644 : 6096

Exec time: 268.17154121398926 seconds

# R3

# 2

# 3

# 4

# 5

# 6