1)

Enter the number of blocks

5

Enter the number of stacks

3

Initial state

| D E B A C

|

|

iteration 1: queue=1 h=f+g= 0 depth=0

iteration 2: queue=2 h=f+g= 6 depth=1

iteration 3: queue=3 h=f+g= 6 depth=1

iteration 4: queue=4 h=f+g= 7 depth=2

iteration 5: queue=5 h=f+g= 7 depth=2

iteration 6: queue=8 h=f+g= 7 depth=2

iteration 7: queue=9 h=f+g= 7 depth=3

iteration 8: queue=12 h=f+g= 7 depth=3

iteration 9: queue=13 h=f+g= 7 depth=4

iteration 10: queue=14 h=f+g= 7 depth=2

iteration 11: queue=16 h=f+g= 7 depth=3

iteration 12: queue=19 h=f+g= 7 depth=4

iteration 13: queue=20 h=f+g= 8 depth=3

iteration 14: queue=23 h=f+g= 8 depth=3

iteration 15: queue=26 h=f+g= 8 depth=3

iteration 16: queue=27 h=f+g= 8 depth=4

iteration 17: queue=27 h=f+g= 8 depth=4

iteration 18: queue=30 h=f+g= 8 depth=3

iteration 19: queue=31 h=f+g= 8 depth=4

iteration 20: queue=32 h=f+g= 8 depth=5

iteration 21: queue=33 h=f+g= 8 depth=4

iteration 22: queue=34 h=f+g= 8 depth=4

iteration 23: queue=34 h=f+g= 8 depth=4

iteration 24: queue=34 h=f+g= 8 depth=3

iteration 25: queue=35 h=f+g= 8 depth=4

iteration 26: queue=36 h=f+g= 8 depth=4

iteration 27: queue=36 h=f+g= 8 depth=3

iteration 28: queue=38 h=f+g= 8 depth=3

iteration 29: queue=39 h=f+g= 8 depth=3

iteration 30: queue=41 h=f+g= 8 depth=4

iteration 31: queue=41 h=f+g= 8 depth=4

iteration 32: queue=44 h=f+g= 8 depth=5

iteration 33: queue=44 h=f+g= 9 depth=5

iteration 34: queue=45 h=f+g= 9 depth=4

iteration 35: queue=47 h=f+g= 9 depth=5

iteration 36: queue=50 h=f+g= 8 depth=6

iteration 37: queue=51 h=f+g= 9 depth=5

iteration 38: queue=52 h=f+g= 8 depth=6

iteration 39: queue=52 h=f+g= 9 depth=4

iteration 40: queue=53 h=f+g= 9 depth=5

iteration 41: queue=56 h=f+g= 8 depth=6

iteration 42: queue=57 h=f+g= 9 depth=5

iteration 43: queue=57 h=f+g= 9 depth=6

iteration 44: queue=58 h=f+g= 9 depth=6

iteration 45: queue=59 h=f+g= 9 depth=6

iteration 46: queue=59 h=f+g= 9 depth=4

iteration 47: queue=59 h=f+g= 9 depth=4

iteration 48: queue=60 h=f+g= 9 depth=5

iteration 49: queue=61 h=f+g= 9 depth=6

iteration 50: queue=62 h=f+g= 9 depth=5

iteration 51: queue=62 h=f+g= 9 depth=4

iteration 52: queue=64 h=f+g= 8 depth=5

iteration 53: queue=65 h=f+g= 9 depth=5

iteration 54: queue=65 h=f+g= 9 depth=5

iteration 55: queue=66 h=f+g= 9 depth=6

iteration 56: queue=66 h=f+g= 9 depth=5

iteration 57: queue=66 h=f+g= 8 depth=6

iteration 58: queue=66 h=f+g= 9 depth=4

iteration 59: queue=66 h=f+g= 9 depth=4

iteration 60: queue=69 h=f+g= 8 depth=5

iteration 61: queue=70 h=f+g= 9 depth=4

iteration 62: queue=73 h=f+g= 8 depth=5

iteration 63: queue=74 h=f+g= 9 depth=5

iteration 64: queue=74 h=f+g= 9 depth=5

iteration 65: queue=74 h=f+g= 9 depth=6

iteration 66: queue=74 h=f+g= 9 depth=6

iteration 67: queue=74 h=f+g= 9 depth=5

iteration 68: queue=75 h=f+g= 9 depth=5

iteration 69: queue=76 h=f+g= 9 depth=4

iteration 70: queue=79 h=f+g= 8 depth=5

iteration 71: queue=80 h=f+g= 9 depth=5

iteration 72: queue=81 h=f+g= 9 depth=6

iteration 73: queue=82 h=f+g= 9 depth=6

iteration 74: queue=82 h=f+g= 10 depth=5

iteration 75: queue=84 h=f+g= 9 depth=6

iteration 76: queue=85 h=f+g= 10 depth=5

iteration 77: queue=86 h=f+g= 10 depth=6

iteration 78: queue=86 h=f+g= 10 depth=6

iteration 79: queue=86 h=f+g= 10 depth=7

iteration 80: queue=86 h=f+g= 10 depth=5

iteration 81: queue=88 h=f+g= 9 depth=6

iteration 82: queue=89 h=f+g= 9 depth=7

iteration 83: queue=89 h=f+g= 10 depth=6

iteration 84: queue=89 h=f+g= 10 depth=5

iteration 85: queue=89 h=f+g= 10 depth=5

iteration 86: queue=90 h=f+g= 9 depth=6

iteration 87: queue=90 h=f+g= 10 depth=7

iteration 88: queue=90 h=f+g= 10 depth=5

iteration 89: queue=90 h=f+g= 10 depth=5

iteration 90: queue=93 h=f+g= 10 depth=7

iteration 91: queue=94 h=f+g= 10 depth=6

iteration 92: queue=94 h=f+g= 10 depth=5

iteration 93: queue=96 h=f+g= 9 depth=6

iteration 94: queue=97 h=f+g= 10 depth=5

iteration 95: queue=98 h=f+g= 9 depth=6

iteration 96: queue=98 h=f+g= 10 depth=7

iteration 97: queue=98 h=f+g= 10 depth=7

iteration 98: queue=101 h=f+g= 10 depth=4

iteration 99: queue=104 h=f+g= 9 depth=5

iteration 100: queue=105 h=f+g= 9 depth=6

iteration 101: queue=105 h=f+g= 10 depth=6

iteration 102: queue=105 h=f+g= 10 depth=8

iteration 103: queue=108 h=f+g= 9 depth=9

iteration 104: queue=109 h=f+g= 9 depth=10

Success! Depth=11 No.of iterations = 105 Max queue size=110

Solution path:

| D E B A C

|

|

| D E B A

| C

|

| D E B

| C

| A

| D E

| C B

| A

| D E

| C B A

|

| D

| C B A

| E

|

| C B A

| E D

| A

| C B

| E D

| A B

| C

| E D

| A B C

|

| E D

| A B C D

|

| E

| A B C D E

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2)

Enter the number of blocks

6

Enter the number of stacks

4

Intial state

|

| C

| F B A

| E D

iteration 1: queue=1 h=f+g= 0 depth=0

iteration 2: queue=9 h=f+g= 4 depth=1

iteration 3: queue=11 h=f+g= 5 depth=1

iteration 4: queue=13 h=f+g= 6 depth=1

iteration 5: queue=18 h=f+g= 6 depth=1

iteration 6: queue=23 h=f+g= 6 depth=2

iteration 7: queue=25 h=f+g= 6 depth=1

iteration 8: queue=28 h=f+g= 6 depth=1

iteration 9: queue=33 h=f+g= 6 depth=2

iteration 10: queue=37 h=f+g= 6 depth=1

iteration 11: queue=44 h=f+g= 5 depth=2

iteration 12: queue=52 h=f+g= 4 depth=3

iteration 13: queue=57 h=f+g= 4 depth=4

iteration 14: queue=62 h=f+g= 3 depth=5

Success! Depth=6 No.of iterations = 15 Max queue size=64

Solution path:

|

| C

| F B A

| E D

| A

| C

| F B

| E D

| A B

| C

| F

| E D

| A B C

|

| F

| E D

| A B C D

|

| F

| E

| A B C D E

|

| F

|

| A B C D E F

|

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