

CoinChange.java starts

-----test1-----

Give minimum change for 6 cents using coins {1 3 4 }

i =     0    1    2    3    4    5    6

m array 0    1    2    1    1    2    2

k array   0    1    1    3    4    4    3

minimum change for 0 cents can be achieved using 0 coins

minimum change for 1 cents can be achieved using 1 coins

1::Pick coin 1. Current val= 1. Remaining val= 0

minimum change for 2 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 1

2::Pick coin 1. Current val= 2. Remaining val= 0

minimum change for 3 cents can be achieved using 1 coins

1::Pick coin 3. Current val= 3. Remaining val= 0

minimum change for 4 cents can be achieved using 1 coins

1::Pick coin 4. Current val= 4. Remaining val= 0

minimum change for 5 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 4

2::Pick coin 4. Current val= 5. Remaining val= 0

minimum change for 6 cents can be achieved using 2 coins

1::Pick coin 3. Current val= 3. Remaining val= 3

2::Pick coin 3. Current val= 6. Remaining val= 0

-----test2-----

Give minimum change for 100 cents using coins {1 2 6 10 24 30 90 }

i =     0    1    2    3    4    5    6    7    8    9    10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   26   27   28   29   30   31

     32   33   34   35   36   37   38   39   40   41   42   43   44   45   46   47   48   49   50   51   52   53   54   55   56   57   58   59   60   61   62   63   64

     65   66   67   68   69   70   71   72   73   74   75   76   77   78   79   80   81   82   83   84   85   86   87   88   89   90   91   92   93   94   95   96   97

     98   99   100

m array 0    1    1    2    2    3    1    2    2    3    1    2    2    3    3    4    2    3    3    4    2    3    3    4    1    2    2    3    3    4    1    2    2

     3    2    3    2    3    3    4    2    3    3    4    3    4    2    3    3    4    4    5    2    3    3    4    3    4    2    3    3    4    3    4    3

	4	4	5	3	4	3	4	4	5	4	5	3	4	4	5	4	5	3	4	4	5	4	5	1	2	2	3	3	4	2	3	3	4	2
k array	0	1	2	2	2	2	6	6	6	6	10	10	6	6	6	6	10	10	6	6	10	10	10	10	24	24	24	24	24	24	24	30	30	
	30	30	24	24	30	30	30	30	30	30	30	24	24	30	30	24	24	24	24	24	24	30	30	30	30	24	24	30	30	30	30	30	30	
	30	30	30	24	24	30	30	24	24	24	24	30	30	30	30	30	24	24	30	30	30	30	30	30	90	90	90	90	90	90	90	90	90	
	90	90	90																															

minimum change for 0 cents can be achieved using 0 coins

minimum change for 1 cents can be achieved using 1 coins

1::Pick coin 1. Current val= 1. Remaining val= 0

minimum change for 2 cents can be achieved using 1 coins

1::Pick coin 2. Current val= 2. Remaining val= 0

minimum change for 3 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 2

2::Pick coin 2. Current val= 3. Remaining val= 0

minimum change for 4 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 2

2::Pick coin 2. Current val= 4. Remaining val= 0

minimum change for 5 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 4

2::Pick coin 2. Current val= 3. Remaining val= 2

3::Pick coin 2. Current val= 5. Remaining val= 0

minimum change for 6 cents can be achieved using 1 coins

1::Pick coin 6. Current val= 6. Remaining val= 0

minimum change for 7 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 6

2::Pick coin 6. Current val= 7. Remaining val= 0

minimum change for 8 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 6

2::Pick coin 6. Current val= 8. Remaining val= 0

minimum change for 9 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 8  
2::Pick coin 2. Current val= 3. Remaining val= 6  
3::Pick coin 6. Current val= 9. Remaining val= 0  
minimum change for 10 cents can be achieved using 1 coins  
1::Pick coin 10. Current val= 10. Remaining val= 0  
minimum change for 11 cents can be achieved using 2 coins  
1::Pick coin 1. Current val= 1. Remaining val= 10  
2::Pick coin 10. Current val= 11. Remaining val= 0  
minimum change for 12 cents can be achieved using 2 coins  
1::Pick coin 6. Current val= 6. Remaining val= 6  
2::Pick coin 6. Current val= 12. Remaining val= 0  
minimum change for 13 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 12  
2::Pick coin 6. Current val= 7. Remaining val= 6  
3::Pick coin 6. Current val= 13. Remaining val= 0  
minimum change for 14 cents can be achieved using 3 coins  
1::Pick coin 2. Current val= 2. Remaining val= 12  
2::Pick coin 6. Current val= 8. Remaining val= 6  
3::Pick coin 6. Current val= 14. Remaining val= 0  
minimum change for 15 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 14  
2::Pick coin 2. Current val= 3. Remaining val= 12  
3::Pick coin 6. Current val= 9. Remaining val= 6  
4::Pick coin 6. Current val= 15. Remaining val= 0  
minimum change for 16 cents can be achieved using 2 coins  
1::Pick coin 6. Current val= 6. Remaining val= 10  
2::Pick coin 10. Current val= 16. Remaining val= 0  
minimum change for 17 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 16  
2::Pick coin 6. Current val= 7. Remaining val= 10  
3::Pick coin 10. Current val= 17. Remaining val= 0

minimum change for 18 cents can be achieved using 3 coins

1::Pick coin 6. Current val= 6. Remaining val= 12

2::Pick coin 6. Current val= 12. Remaining val= 6

3::Pick coin 6. Current val= 18. Remaining val= 0

minimum change for 19 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 18

2::Pick coin 6. Current val= 7. Remaining val= 12

3::Pick coin 6. Current val= 13. Remaining val= 6

4::Pick coin 6. Current val= 19. Remaining val= 0

minimum change for 20 cents can be achieved using 2 coins

1::Pick coin 10. Current val= 10. Remaining val= 10

2::Pick coin 10. Current val= 20. Remaining val= 0

minimum change for 21 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 20

2::Pick coin 10. Current val= 11. Remaining val= 10

3::Pick coin 10. Current val= 21. Remaining val= 0

minimum change for 22 cents can be achieved using 3 coins

1::Pick coin 6. Current val= 6. Remaining val= 16

2::Pick coin 6. Current val= 12. Remaining val= 10

3::Pick coin 10. Current val= 22. Remaining val= 0

minimum change for 23 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 22

2::Pick coin 6. Current val= 7. Remaining val= 16

3::Pick coin 6. Current val= 13. Remaining val= 10

4::Pick coin 10. Current val= 23. Remaining val= 0

minimum change for 24 cents can be achieved using 1 coins

1::Pick coin 24. Current val= 24. Remaining val= 0

minimum change for 25 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 24

2::Pick coin 24. Current val= 25. Remaining val= 0

minimum change for 26 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 24  
2::Pick coin 24. Current val= 26. Remaining val= 0  
minimum change for 27 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 26  
2::Pick coin 2. Current val= 3. Remaining val= 24  
3::Pick coin 24. Current val= 27. Remaining val= 0  
minimum change for 28 cents can be achieved using 3 coins  
1::Pick coin 2. Current val= 2. Remaining val= 26  
2::Pick coin 2. Current val= 4. Remaining val= 24  
3::Pick coin 24. Current val= 28. Remaining val= 0  
minimum change for 29 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 28  
2::Pick coin 2. Current val= 3. Remaining val= 26  
3::Pick coin 2. Current val= 5. Remaining val= 24  
4::Pick coin 24. Current val= 29. Remaining val= 0  
minimum change for 30 cents can be achieved using 1 coins  
1::Pick coin 30. Current val= 30. Remaining val= 0  
minimum change for 31 cents can be achieved using 2 coins  
1::Pick coin 1. Current val= 1. Remaining val= 30  
2::Pick coin 30. Current val= 31. Remaining val= 0  
minimum change for 32 cents can be achieved using 2 coins  
1::Pick coin 2. Current val= 2. Remaining val= 30  
2::Pick coin 30. Current val= 32. Remaining val= 0  
minimum change for 33 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 32  
2::Pick coin 2. Current val= 3. Remaining val= 30  
3::Pick coin 30. Current val= 33. Remaining val= 0  
minimum change for 34 cents can be achieved using 2 coins  
1::Pick coin 10. Current val= 10. Remaining val= 24  
2::Pick coin 24. Current val= 34. Remaining val= 0  
minimum change for 35 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 34  
2::Pick coin 10. Current val= 11. Remaining val= 24  
3::Pick coin 24. Current val= 35. Remaining val= 0  
minimum change for 36 cents can be achieved using 2 coins  
1::Pick coin 6. Current val= 6. Remaining val= 30  
2::Pick coin 30. Current val= 36. Remaining val= 0  
minimum change for 37 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 36  
2::Pick coin 6. Current val= 7. Remaining val= 30  
3::Pick coin 30. Current val= 37. Remaining val= 0  
minimum change for 38 cents can be achieved using 3 coins  
1::Pick coin 2. Current val= 2. Remaining val= 36  
2::Pick coin 6. Current val= 8. Remaining val= 30  
3::Pick coin 30. Current val= 38. Remaining val= 0  
minimum change for 39 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 38  
2::Pick coin 2. Current val= 3. Remaining val= 36  
3::Pick coin 6. Current val= 9. Remaining val= 30  
4::Pick coin 30. Current val= 39. Remaining val= 0  
minimum change for 40 cents can be achieved using 2 coins  
1::Pick coin 10. Current val= 10. Remaining val= 30  
2::Pick coin 30. Current val= 40. Remaining val= 0  
minimum change for 41 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 40  
2::Pick coin 10. Current val= 11. Remaining val= 30  
3::Pick coin 30. Current val= 41. Remaining val= 0  
minimum change for 42 cents can be achieved using 3 coins  
1::Pick coin 6. Current val= 6. Remaining val= 36  
2::Pick coin 6. Current val= 12. Remaining val= 30  
3::Pick coin 30. Current val= 42. Remaining val= 0  
minimum change for 43 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 42  
2::Pick coin 6. Current val= 7. Remaining val= 36  
3::Pick coin 6. Current val= 13. Remaining val= 30  
4::Pick coin 30. Current val= 43. Remaining val= 0  
minimum change for 44 cents can be achieved using 3 coins  
1::Pick coin 10. Current val= 10. Remaining val= 34  
2::Pick coin 10. Current val= 20. Remaining val= 24  
3::Pick coin 24. Current val= 44. Remaining val= 0  
minimum change for 45 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 44  
2::Pick coin 10. Current val= 11. Remaining val= 34  
3::Pick coin 10. Current val= 21. Remaining val= 24  
4::Pick coin 24. Current val= 45. Remaining val= 0  
minimum change for 46 cents can be achieved using 3 coins  
1::Pick coin 6. Current val= 6. Remaining val= 40  
2::Pick coin 10. Current val= 16. Remaining val= 30  
3::Pick coin 30. Current val= 46. Remaining val= 0  
minimum change for 47 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 46  
2::Pick coin 6. Current val= 7. Remaining val= 40  
3::Pick coin 10. Current val= 17. Remaining val= 30  
4::Pick coin 30. Current val= 47. Remaining val= 0  
minimum change for 48 cents can be achieved using 2 coins  
1::Pick coin 24. Current val= 24. Remaining val= 24  
2::Pick coin 24. Current val= 48. Remaining val= 0  
minimum change for 49 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 48  
2::Pick coin 24. Current val= 25. Remaining val= 24  
3::Pick coin 24. Current val= 49. Remaining val= 0  
minimum change for 50 cents can be achieved using 3 coins  
1::Pick coin 2. Current val= 2. Remaining val= 48

2::Pick coin 24. Current val= 26. Remaining val= 24

3::Pick coin 24. Current val= 50. Remaining val= 0

minimum change for 51 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 50

2::Pick coin 2. Current val= 3. Remaining val= 48

3::Pick coin 24. Current val= 27. Remaining val= 24

4::Pick coin 24. Current val= 51. Remaining val= 0

minimum change for 52 cents can be achieved using 4 coins

1::Pick coin 2. Current val= 2. Remaining val= 50

2::Pick coin 2. Current val= 4. Remaining val= 48

3::Pick coin 24. Current val= 28. Remaining val= 24

4::Pick coin 24. Current val= 52. Remaining val= 0

minimum change for 53 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 52

2::Pick coin 2. Current val= 3. Remaining val= 50

3::Pick coin 2. Current val= 5. Remaining val= 48

4::Pick coin 24. Current val= 29. Remaining val= 24

5::Pick coin 24. Current val= 53. Remaining val= 0

minimum change for 54 cents can be achieved using 2 coins

1::Pick coin 24. Current val= 24. Remaining val= 30

2::Pick coin 30. Current val= 54. Remaining val= 0

minimum change for 55 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 54

2::Pick coin 24. Current val= 25. Remaining val= 30

3::Pick coin 30. Current val= 55. Remaining val= 0

minimum change for 56 cents can be achieved using 3 coins

1::Pick coin 2. Current val= 2. Remaining val= 54

2::Pick coin 24. Current val= 26. Remaining val= 30

3::Pick coin 30. Current val= 56. Remaining val= 0

minimum change for 57 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 56



2::Pick coin 2. Current val= 3. Remaining val= 54

3::Pick coin 24. Current val= 27. Remaining val= 30

4::Pick coin 30. Current val= 57. Remaining val= 0

minimum change for 58 cents can be achieved using 3 coins

1::Pick coin 10. Current val= 10. Remaining val= 48

2::Pick coin 24. Current val= 34. Remaining val= 24

3::Pick coin 24. Current val= 58. Remaining val= 0

minimum change for 59 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 58

2::Pick coin 10. Current val= 11. Remaining val= 48

3::Pick coin 24. Current val= 35. Remaining val= 24

4::Pick coin 24. Current val= 59. Remaining val= 0

minimum change for 60 cents can be achieved using 2 coins

1::Pick coin 30. Current val= 30. Remaining val= 30

2::Pick coin 30. Current val= 60. Remaining val= 0

minimum change for 61 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 60

2::Pick coin 30. Current val= 31. Remaining val= 30

3::Pick coin 30. Current val= 61. Remaining val= 0

minimum change for 62 cents can be achieved using 3 coins

1::Pick coin 2. Current val= 2. Remaining val= 60

2::Pick coin 30. Current val= 32. Remaining val= 30

3::Pick coin 30. Current val= 62. Remaining val= 0

minimum change for 63 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 62

2::Pick coin 2. Current val= 3. Remaining val= 60

3::Pick coin 30. Current val= 33. Remaining val= 30

4::Pick coin 30. Current val= 63. Remaining val= 0

minimum change for 64 cents can be achieved using 3 coins

1::Pick coin 10. Current val= 10. Remaining val= 54

2::Pick coin 24. Current val= 34. Remaining val= 30

3::Pick coin 30. Current val= 64. Remaining val= 0  
minimum change for 65 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 64

2::Pick coin 10. Current val= 11. Remaining val= 54

3::Pick coin 24. Current val= 35. Remaining val= 30

4::Pick coin 30. Current val= 65. Remaining val= 0

minimum change for 66 cents can be achieved using 3 coins

1::Pick coin 6. Current val= 6. Remaining val= 60

2::Pick coin 30. Current val= 36. Remaining val= 30

3::Pick coin 30. Current val= 66. Remaining val= 0

minimum change for 67 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 66

2::Pick coin 6. Current val= 7. Remaining val= 60

3::Pick coin 30. Current val= 37. Remaining val= 30

4::Pick coin 30. Current val= 67. Remaining val= 0

minimum change for 68 cents can be achieved using 4 coins

1::Pick coin 10. Current val= 10. Remaining val= 58

2::Pick coin 10. Current val= 20. Remaining val= 48

3::Pick coin 24. Current val= 44. Remaining val= 24

4::Pick coin 24. Current val= 68. Remaining val= 0

minimum change for 69 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 68

2::Pick coin 10. Current val= 11. Remaining val= 58

3::Pick coin 10. Current val= 21. Remaining val= 48

4::Pick coin 24. Current val= 45. Remaining val= 24

5::Pick coin 24. Current val= 69. Remaining val= 0

minimum change for 70 cents can be achieved using 3 coins

1::Pick coin 10. Current val= 10. Remaining val= 60

2::Pick coin 30. Current val= 40. Remaining val= 30

3::Pick coin 30. Current val= 70. Remaining val= 0

minimum change for 71 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 70  
2::Pick coin 10. Current val= 11. Remaining val= 60  
3::Pick coin 30. Current val= 41. Remaining val= 30  
4::Pick coin 30. Current val= 71. Remaining val= 0  
minimum change for 72 cents can be achieved using 3 coins  
1::Pick coin 24. Current val= 24. Remaining val= 48  
2::Pick coin 24. Current val= 48. Remaining val= 24  
3::Pick coin 24. Current val= 72. Remaining val= 0  
minimum change for 73 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 72  
2::Pick coin 24. Current val= 25. Remaining val= 48  
3::Pick coin 24. Current val= 49. Remaining val= 24  
4::Pick coin 24. Current val= 73. Remaining val= 0  
minimum change for 74 cents can be achieved using 4 coins  
1::Pick coin 2. Current val= 2. Remaining val= 72  
2::Pick coin 24. Current val= 26. Remaining val= 48  
3::Pick coin 24. Current val= 50. Remaining val= 24  
4::Pick coin 24. Current val= 74. Remaining val= 0  
minimum change for 75 cents can be achieved using 5 coins  
1::Pick coin 1. Current val= 1. Remaining val= 74  
2::Pick coin 2. Current val= 3. Remaining val= 72  
3::Pick coin 24. Current val= 27. Remaining val= 48  
4::Pick coin 24. Current val= 51. Remaining val= 24  
5::Pick coin 24. Current val= 75. Remaining val= 0  
minimum change for 76 cents can be achieved using 4 coins  
1::Pick coin 6. Current val= 6. Remaining val= 70  
2::Pick coin 10. Current val= 16. Remaining val= 60  
3::Pick coin 30. Current val= 46. Remaining val= 30  
4::Pick coin 30. Current val= 76. Remaining val= 0  
minimum change for 77 cents can be achieved using 5 coins  
1::Pick coin 1. Current val= 1. Remaining val= 76

2::Pick coin 6. Current val= 7. Remaining val= 70

3::Pick coin 10. Current val= 17. Remaining val= 60

4::Pick coin 30. Current val= 47. Remaining val= 30

5::Pick coin 30. Current val= 77. Remaining val= 0

minimum change for 78 cents can be achieved using 3 coins

1::Pick coin 24. Current val= 24. Remaining val= 54

2::Pick coin 24. Current val= 48. Remaining val= 30

3::Pick coin 30. Current val= 78. Remaining val= 0

minimum change for 79 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 78

2::Pick coin 24. Current val= 25. Remaining val= 54

3::Pick coin 24. Current val= 49. Remaining val= 30

4::Pick coin 30. Current val= 79. Remaining val= 0

minimum change for 80 cents can be achieved using 4 coins

1::Pick coin 2. Current val= 2. Remaining val= 78

2::Pick coin 24. Current val= 26. Remaining val= 54

3::Pick coin 24. Current val= 50. Remaining val= 30

4::Pick coin 30. Current val= 80. Remaining val= 0

minimum change for 81 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 80

2::Pick coin 2. Current val= 3. Remaining val= 78

3::Pick coin 24. Current val= 27. Remaining val= 54

4::Pick coin 24. Current val= 51. Remaining val= 30

5::Pick coin 30. Current val= 81. Remaining val= 0

minimum change for 82 cents can be achieved using 4 coins

1::Pick coin 10. Current val= 10. Remaining val= 72

2::Pick coin 24. Current val= 34. Remaining val= 48

3::Pick coin 24. Current val= 58. Remaining val= 24

4::Pick coin 24. Current val= 82. Remaining val= 0

minimum change for 83 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 82

2::Pick coin 10. Current val= 11. Remaining val= 72

3::Pick coin 24. Current val= 35. Remaining val= 48

4::Pick coin 24. Current val= 59. Remaining val= 24

5::Pick coin 24. Current val= 83. Remaining val= 0

minimum change for 84 cents can be achieved using 3 coins

1::Pick coin 24. Current val= 24. Remaining val= 60

2::Pick coin 30. Current val= 54. Remaining val= 30

3::Pick coin 30. Current val= 84. Remaining val= 0

minimum change for 85 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 84

2::Pick coin 24. Current val= 25. Remaining val= 60

3::Pick coin 30. Current val= 55. Remaining val= 30

4::Pick coin 30. Current val= 85. Remaining val= 0

minimum change for 86 cents can be achieved using 4 coins

1::Pick coin 2. Current val= 2. Remaining val= 84

2::Pick coin 24. Current val= 26. Remaining val= 60

3::Pick coin 30. Current val= 56. Remaining val= 30

4::Pick coin 30. Current val= 86. Remaining val= 0

minimum change for 87 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 86

2::Pick coin 2. Current val= 3. Remaining val= 84

3::Pick coin 24. Current val= 27. Remaining val= 60

4::Pick coin 30. Current val= 57. Remaining val= 30

5::Pick coin 30. Current val= 87. Remaining val= 0

minimum change for 88 cents can be achieved using 4 coins

1::Pick coin 10. Current val= 10. Remaining val= 78

2::Pick coin 24. Current val= 34. Remaining val= 54

3::Pick coin 24. Current val= 58. Remaining val= 30

4::Pick coin 30. Current val= 88. Remaining val= 0

minimum change for 89 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 88

2::Pick coin 10. Current val= 11. Remaining val= 78  
3::Pick coin 24. Current val= 35. Remaining val= 54  
4::Pick coin 24. Current val= 59. Remaining val= 30  
5::Pick coin 30. Current val= 89. Remaining val= 0  
minimum change for 90 cents can be achieved using 1 coins  
1::Pick coin 90. Current val= 90. Remaining val= 0  
minimum change for 91 cents can be achieved using 2 coins  
1::Pick coin 1. Current val= 1. Remaining val= 90  
2::Pick coin 90. Current val= 91. Remaining val= 0  
minimum change for 92 cents can be achieved using 2 coins  
1::Pick coin 2. Current val= 2. Remaining val= 90  
2::Pick coin 90. Current val= 92. Remaining val= 0  
minimum change for 93 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 92  
2::Pick coin 2. Current val= 3. Remaining val= 90  
3::Pick coin 90. Current val= 93. Remaining val= 0  
minimum change for 94 cents can be achieved using 3 coins  
1::Pick coin 2. Current val= 2. Remaining val= 92  
2::Pick coin 2. Current val= 4. Remaining val= 90  
3::Pick coin 90. Current val= 94. Remaining val= 0  
minimum change for 95 cents can be achieved using 4 coins  
1::Pick coin 1. Current val= 1. Remaining val= 94  
2::Pick coin 2. Current val= 3. Remaining val= 92  
3::Pick coin 2. Current val= 5. Remaining val= 90  
4::Pick coin 90. Current val= 95. Remaining val= 0  
minimum change for 96 cents can be achieved using 2 coins  
1::Pick coin 6. Current val= 6. Remaining val= 90  
2::Pick coin 90. Current val= 96. Remaining val= 0  
minimum change for 97 cents can be achieved using 3 coins  
1::Pick coin 1. Current val= 1. Remaining val= 96  
2::Pick coin 6. Current val= 7. Remaining val= 90



1::Pick coin 2. Current val= 2. Remaining val= 2

2::Pick coin 2. Current val= 4. Remaining val= 0

minimum change for 5 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 4

2::Pick coin 2. Current val= 3. Remaining val= 2

3::Pick coin 2. Current val= 5. Remaining val= 0

minimum change for 6 cents can be achieved using 1 coins

1::Pick coin 6. Current val= 6. Remaining val= 0

minimum change for 7 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 6

2::Pick coin 6. Current val= 7. Remaining val= 0

minimum change for 8 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 6

2::Pick coin 6. Current val= 8. Remaining val= 0

minimum change for 9 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 8

2::Pick coin 2. Current val= 3. Remaining val= 6

3::Pick coin 6. Current val= 9. Remaining val= 0

minimum change for 10 cents can be achieved using 1 coins

1::Pick coin 10. Current val= 10. Remaining val= 0

minimum change for 11 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 10

2::Pick coin 10. Current val= 11. Remaining val= 0

minimum change for 12 cents can be achieved using 2 coins

1::Pick coin 6. Current val= 6. Remaining val= 6

2::Pick coin 6. Current val= 12. Remaining val= 0

minimum change for 13 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 12

2::Pick coin 6. Current val= 7. Remaining val= 6

3::Pick coin 6. Current val= 13. Remaining val= 0

minimum change for 14 cents can be achieved using 3 coins



1::Pick coin 2. Current val= 2. Remaining val= 12

2::Pick coin 6. Current val= 8. Remaining val= 6

3::Pick coin 6. Current val= 14. Remaining val= 0

minimum change for 15 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 14

2::Pick coin 2. Current val= 3. Remaining val= 12

3::Pick coin 6. Current val= 9. Remaining val= 6

4::Pick coin 6. Current val= 15. Remaining val= 0

minimum change for 16 cents can be achieved using 2 coins

1::Pick coin 6. Current val= 6. Remaining val= 10

2::Pick coin 10. Current val= 16. Remaining val= 0

minimum change for 17 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 16

2::Pick coin 6. Current val= 7. Remaining val= 10

3::Pick coin 10. Current val= 17. Remaining val= 0

minimum change for 18 cents can be achieved using 3 coins

1::Pick coin 6. Current val= 6. Remaining val= 12

2::Pick coin 6. Current val= 12. Remaining val= 6

3::Pick coin 6. Current val= 18. Remaining val= 0

minimum change for 19 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 18

2::Pick coin 6. Current val= 7. Remaining val= 12

3::Pick coin 6. Current val= 13. Remaining val= 6

4::Pick coin 6. Current val= 19. Remaining val= 0

minimum change for 20 cents can be achieved using 2 coins

1::Pick coin 10. Current val= 10. Remaining val= 10

2::Pick coin 10. Current val= 20. Remaining val= 0

minimum change for 21 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 20

2::Pick coin 10. Current val= 11. Remaining val= 10

3::Pick coin 10. Current val= 21. Remaining val= 0

minimum change for 22 cents can be achieved using 3 coins

1::Pick coin 6. Current val= 6. Remaining val= 16

2::Pick coin 6. Current val= 12. Remaining val= 10

3::Pick coin 10. Current val= 22. Remaining val= 0

minimum change for 23 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 22

2::Pick coin 6. Current val= 7. Remaining val= 16

3::Pick coin 6. Current val= 13. Remaining val= 10

4::Pick coin 10. Current val= 23. Remaining val= 0

minimum change for 24 cents can be achieved using 1 coins

1::Pick coin 24. Current val= 24. Remaining val= 0

minimum change for 25 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 24

2::Pick coin 24. Current val= 25. Remaining val= 0

minimum change for 26 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 24

2::Pick coin 24. Current val= 26. Remaining val= 0

minimum change for 27 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 26

2::Pick coin 2. Current val= 3. Remaining val= 24

3::Pick coin 24. Current val= 27. Remaining val= 0

minimum change for 28 cents can be achieved using 3 coins

1::Pick coin 2. Current val= 2. Remaining val= 26

2::Pick coin 2. Current val= 4. Remaining val= 24

3::Pick coin 24. Current val= 28. Remaining val= 0

minimum change for 29 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 28

2::Pick coin 2. Current val= 3. Remaining val= 26

3::Pick coin 2. Current val= 5. Remaining val= 24

4::Pick coin 24. Current val= 29. Remaining val= 0

minimum change for 30 cents can be achieved using 1 coins

1::Pick coin 30. Current val= 30. Remaining val= 0  
minimum change for 31 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 30

2::Pick coin 30. Current val= 31. Remaining val= 0

minimum change for 32 cents can be achieved using 2 coins

1::Pick coin 2. Current val= 2. Remaining val= 30

2::Pick coin 30. Current val= 32. Remaining val= 0

minimum change for 33 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 32

2::Pick coin 2. Current val= 3. Remaining val= 30

3::Pick coin 30. Current val= 33. Remaining val= 0

minimum change for 34 cents can be achieved using 2 coins

1::Pick coin 10. Current val= 10. Remaining val= 24

2::Pick coin 24. Current val= 34. Remaining val= 0

-----US coins-----

Give minimum change for 24 cents using coins {1 5 10 25 }

i =	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
m array	0	1	2	3	4	1	2	3	4	5	1	2	3	4	5	2	3	4	5	6	2	3	4	5	6
k array	0	1	1	1	1	5	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

minimum change for 0 cents can be achieved using 0 coins

minimum change for 1 cents can be achieved using 1 coins

1::Pick coin 1. Current val= 1. Remaining val= 0

minimum change for 2 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 1

2::Pick coin 1. Current val= 2. Remaining val= 0

minimum change for 3 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 2

2::Pick coin 1. Current val= 2. Remaining val= 1

3::Pick coin 1. Current val= 3. Remaining val= 0

minimum change for 4 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 3

2::Pick coin 1. Current val= 2. Remaining val= 2

3::Pick coin 1. Current val= 3. Remaining val= 1

4::Pick coin 1. Current val= 4. Remaining val= 0

minimum change for 5 cents can be achieved using 1 coins

1::Pick coin 5. Current val= 5. Remaining val= 0

minimum change for 6 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 5

2::Pick coin 5. Current val= 6. Remaining val= 0

minimum change for 7 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 6

2::Pick coin 1. Current val= 2. Remaining val= 5

3::Pick coin 5. Current val= 7. Remaining val= 0

minimum change for 8 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 7

2::Pick coin 1. Current val= 2. Remaining val= 6

3::Pick coin 1. Current val= 3. Remaining val= 5

4::Pick coin 5. Current val= 8. Remaining val= 0

minimum change for 9 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 8

2::Pick coin 1. Current val= 2. Remaining val= 7

3::Pick coin 1. Current val= 3. Remaining val= 6

4::Pick coin 1. Current val= 4. Remaining val= 5

5::Pick coin 5. Current val= 9. Remaining val= 0

minimum change for 10 cents can be achieved using 1 coins

1::Pick coin 10. Current val= 10. Remaining val= 0

minimum change for 11 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 10

2::Pick coin 10. Current val= 11. Remaining val= 0

minimum change for 12 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 11

2::Pick coin 1. Current val= 2. Remaining val= 10

3::Pick coin 10. Current val= 12. Remaining val= 0

minimum change for 13 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 12

2::Pick coin 1. Current val= 2. Remaining val= 11

3::Pick coin 1. Current val= 3. Remaining val= 10

4::Pick coin 10. Current val= 13. Remaining val= 0

minimum change for 14 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 13

2::Pick coin 1. Current val= 2. Remaining val= 12

3::Pick coin 1. Current val= 3. Remaining val= 11

4::Pick coin 1. Current val= 4. Remaining val= 10

5::Pick coin 10. Current val= 14. Remaining val= 0

minimum change for 15 cents can be achieved using 2 coins

1::Pick coin 5. Current val= 5. Remaining val= 10

2::Pick coin 10. Current val= 15. Remaining val= 0

minimum change for 16 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 15

2::Pick coin 5. Current val= 6. Remaining val= 10

3::Pick coin 10. Current val= 16. Remaining val= 0

minimum change for 17 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 16

2::Pick coin 1. Current val= 2. Remaining val= 15

3::Pick coin 5. Current val= 7. Remaining val= 10

4::Pick coin 10. Current val= 17. Remaining val= 0

minimum change for 18 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 17

2::Pick coin 1. Current val= 2. Remaining val= 16

3::Pick coin 1. Current val= 3. Remaining val= 15

4::Pick coin 5. Current val= 8. Remaining val= 10

5::Pick coin 10. Current val= 18. Remaining val= 0

minimum change for 19 cents can be achieved using 6 coins

1::Pick coin 1. Current val= 1. Remaining val= 18

2::Pick coin 1. Current val= 2. Remaining val= 17

3::Pick coin 1. Current val= 3. Remaining val= 16

4::Pick coin 1. Current val= 4. Remaining val= 15

5::Pick coin 5. Current val= 9. Remaining val= 10

6::Pick coin 10. Current val= 19. Remaining val= 0

minimum change for 20 cents can be achieved using 2 coins

1::Pick coin 10. Current val= 10. Remaining val= 10

2::Pick coin 10. Current val= 20. Remaining val= 0

minimum change for 21 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 20

2::Pick coin 10. Current val= 11. Remaining val= 10

3::Pick coin 10. Current val= 21. Remaining val= 0

minimum change for 22 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 21

2::Pick coin 1. Current val= 2. Remaining val= 20

3::Pick coin 10. Current val= 12. Remaining val= 10

4::Pick coin 10. Current val= 22. Remaining val= 0

minimum change for 23 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 22

2::Pick coin 1. Current val= 2. Remaining val= 21

3::Pick coin 1. Current val= 3. Remaining val= 20

4::Pick coin 10. Current val= 13. Remaining val= 10

5::Pick coin 10. Current val= 23. Remaining val= 0

minimum change for 24 cents can be achieved using 6 coins

1::Pick coin 1. Current val= 1. Remaining val= 23

2::Pick coin 1. Current val= 2. Remaining val= 22

3::Pick coin 1. Current val= 3. Remaining val= 21

4::Pick coin 1. Current val= 4. Remaining val= 20

5::Pick coin 10. Current val= 14. Remaining val= 10

6::Pick coin 10. Current val= 24. Remaining val= 0

-----Weird Coins-----

Give minimum change for 16 cents using coins {1 5 10 12 }

i =	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
m array	0	1	2	3	4	1	2	3	4	5	1	2	1	2	3	2	3
k array	0	1	1	1	1	5	5	5	5	5	10	10	12	12	12	10	10

minimum change for 0 cents can be achieved using 0 coins

minimum change for 1 cents can be achieved using 1 coins

1::Pick coin 1. Current val= 1. Remaining val= 0

minimum change for 2 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 1

2::Pick coin 1. Current val= 2. Remaining val= 0

minimum change for 3 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 2

2::Pick coin 1. Current val= 2. Remaining val= 1

3::Pick coin 1. Current val= 3. Remaining val= 0

minimum change for 4 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 3

2::Pick coin 1. Current val= 2. Remaining val= 2

3::Pick coin 1. Current val= 3. Remaining val= 1

4::Pick coin 1. Current val= 4. Remaining val= 0

minimum change for 5 cents can be achieved using 1 coins

1::Pick coin 5. Current val= 5. Remaining val= 0

minimum change for 6 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 5

2::Pick coin 5. Current val= 6. Remaining val= 0

minimum change for 7 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 6

2::Pick coin 1. Current val= 2. Remaining val= 5

3::Pick coin 5. Current val= 7. Remaining val= 0

minimum change for 8 cents can be achieved using 4 coins

1::Pick coin 1. Current val= 1. Remaining val= 7

2::Pick coin 1. Current val= 2. Remaining val= 6

3::Pick coin 1. Current val= 3. Remaining val= 5

4::Pick coin 5. Current val= 8. Remaining val= 0

minimum change for 9 cents can be achieved using 5 coins

1::Pick coin 1. Current val= 1. Remaining val= 8

2::Pick coin 1. Current val= 2. Remaining val= 7

3::Pick coin 1. Current val= 3. Remaining val= 6

4::Pick coin 1. Current val= 4. Remaining val= 5

5::Pick coin 5. Current val= 9. Remaining val= 0

minimum change for 10 cents can be achieved using 1 coins

1::Pick coin 10. Current val= 10. Remaining val= 0

minimum change for 11 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 10

2::Pick coin 10. Current val= 11. Remaining val= 0

minimum change for 12 cents can be achieved using 1 coins

1::Pick coin 12. Current val= 12. Remaining val= 0

minimum change for 13 cents can be achieved using 2 coins

1::Pick coin 1. Current val= 1. Remaining val= 12

2::Pick coin 12. Current val= 13. Remaining val= 0

minimum change for 14 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 13

2::Pick coin 1. Current val= 2. Remaining val= 12

3::Pick coin 12. Current val= 14. Remaining val= 0

minimum change for 15 cents can be achieved using 2 coins

1::Pick coin 5. Current val= 5. Remaining val= 10

2::Pick coin 10. Current val= 15. Remaining val= 0

minimum change for 16 cents can be achieved using 3 coins

1::Pick coin 1. Current val= 1. Remaining val= 15

2::Pick coin 5. Current val= 6. Remaining val= 10



3::Pick coin 10. Current val= 16. Remaining val= 0

You are amazing. Bring me a bar of Chocolate

CoinChange.java ends