We can set up the following equations:

4x + y + a = 44

3x + 2y + b = 39

2x + 3y + c = 37

y + d = 9

-x + y + e = 6

-x + f = 0

-y + g = 0

-x -2y + z = 0

Hence we have the matrix:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| x | y | a | b | c | d | e | f | g | z | c |
| 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 2 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 37 |
| 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 |
| -1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| -1 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

X = 5

Y = 9

That will leads to the maximized objective function

Script output:

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[5.0, 9.0, 15.0, 6.0, 0, 0, 2.0, 5.0, 9.0, 0]