

**Find the number of (positive) integer solutions**

$$ab + 6a + 3b = 73$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+3)(b+6) = 91 = 7 \times 13$$

$$ab + 8a + 5b = 54$$

Number of positive integer solutions: 0  
Number of integer solutions: 8

$$(a+5)(b+8) = 94 = 2 \times 47$$

$$ab + 2a - 3b = 10$$

Number of positive integer solutions: 1  
Number of integer solutions: 6

$$(a-3)(b+2) = 4 = 2^2$$

$$ab + a + 2b = 13$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+2)(b+1) = 15 = 3 \times 5$$

$$ab - 7a - 9b = 29$$

Number of positive integer solutions: 6  
Number of integer solutions: 12

$$(a-9)(b-7) = 92 = 2^2 \times 23$$

$$ab - 2a - b = 20$$

Number of positive integer solutions: 4  
Number of integer solutions: 8

$$(a-1)(b-2) = 22 = 2 \times 11$$

$$ab - 2a - 9b = 43$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-9)(b-2) = 61$$

$$ab - a - 5b = 83$$

Number of positive integer solutions: 8  
Number of integer solutions: 16

$$(a-5)(b-1) = 88 = 2^3 \times 11^1$$

$$ab + 2a - 2b = 15$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-2)(b+2) = 11$$

$$ab + 4b = 7$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a+4)b = 7$$

$$ab + 4a + b = 59$$

Number of positive integer solutions: 4  
Number of integer solutions: 12

$$(a+1)(b+4) = 63 = 7 \times 3^2$$

$$ab + 6b = 65$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+6)b = 65$$

$$ab + 4a - 5b = 23$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a-5)(b+4) = 3$$

$$ab - 3a + 6b = 78$$

Number of positive integer solutions: 6  
Number of integer solutions: 24

$$(a+6)(b-3) = 60 = 2^2 \times 3^1 \times 5^1$$

$$ab + a - 8b = 33$$

Number of positive integer solutions: 2  
Number of integer solutions: 6

$$(a-8)(b+1) = 25$$

$$ab - 3a + 2b = 66$$

Number of positive integer solutions: 10  
Number of integer solutions: 24

$$(a+2)(b-3) = 60$$

$$ab + 3a - 8b = 53$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-8)(b+3) = 2^9$$

$$ab + a - 7b = 93$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a-7)(b+1) = 86$$

$$ab + 4a + 5b = 57$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+5)(b+4)=77$$

$$ab + 2a + 7b = 17$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a+7)(b+2)=31$$

$$ab - 8a - b = 5$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-1)(b-8)=13$$

$$ab + 7a - 5b = 38$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a-5)(b+7)=3$$

$$ab - 6a - 6b = 38$$

Number of positive integer solutions: 4  
Number of integer solutions: 8

$$(a-6)(b-6)=74$$

$$ab - 5a + 3b = 27$$

Number of positive integer solutions: 3  
Number of integer solutions: 12

$$(a+3)(b-5)=12=3^1 \cdot 2^2$$

$$ab + 7a + 8b = 60$$

Number of positive integer solutions: 0  
Number of integer solutions: 12

$$(a+8)(b+7) = 116 = 2^2 \times 29$$

$$ab + 6a - 4b = 76$$

Number of positive integer solutions: 3  
Number of integer solutions: 12

$$(a-4)(b+6) = 52$$

$$ab + 6a - 4b = 53$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-4)(b+6) = 29$$

$$ab + a - 6b = 35$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-6)(b+1) = 29$$

$$ab + a + 9b = 19$$

Number of positive integer solutions: 1  
Number of integer solutions: 12

$$(a+9)(b+1) = 28$$

$$ab + 5a + 7b = 45$$

Number of positive integer solutions: 2  
Number of integer solutions: 20

$$(a+7)(b+5) = 80 = 5 \times 2^4$$

$$ab + 6a + 9b = 26$$

Number of positive integer solutions: 1  
Number of integer solutions: 20

$$(a+9)(b+6) = 80$$

$$ab + 6a - b = 42$$

Number of positive integer solutions: 4  
Number of integer solutions: 18

$$(a-1)(b+6) = 36$$

$$ab + 6a - 6b = 42$$

Number of positive integer solutions: 0  
Number of integer solutions: 8

$$(a-6)(b+6) = 6$$

$$ab + 2a + 6b = 95$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a+6)(b+2) = 107$$

$$ab - 5a - 4b = 88$$

Number of positive integer solutions: 12  
Number of integer solutions: 24

$$(a-4)(b-5) = 108 = 2^2 \times 3^3$$

$$ab + 7a + 6b = 84$$

Number of positive integer solutions: 3  
Number of integer solutions: 24

$$(a+6)(b+7) = 126 = 7 \times 2 \times 3^2$$

$$ab - 7a - 5b = 92$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-5)(b-7) = 127$$

$$ab + a + 8b = 46$$

Number of positive integer solutions: 3  
Number of integer solutions: 16

$$(a+8)(b+1) = 54 = 2^1 \times 3^3$$

$$ab + 9a + 6b = 97$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a+6)(b+9) = 151$$

$$ab + 3a + 2b = 15$$

Number of positive integer solutions: 1  
Number of integer solutions: 8

$$(a+2)(b+3) = 21$$

$$ab + a - 9b = 67$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a-9)(b+1) = 58$$

$$ab + 7a - 6b = 83$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-b)(b+7) = 41$$

$$ab - a - 2b = 98$$

Number of positive integer solutions: 9  
Number of integer solutions: 18

$$(a-2)(b-1) = 100$$

$$ab - 9a - 1b = 47$$

Number of positive integer solutions: 8  
Number of integer solutions: 16

$$(a-1)(b-9) = 56$$

$$ab - 7a + 4b = 83$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a+4)(b-7) = 55$$

$$ab - 8a - 2b = 32$$

Number of positive integer solutions: 10  
Number of integer solutions: 20

$$(a-2)(b-8) = 48$$

$$ab - 5a + 8b = 89$$

Number of positive integer solutions: 1  
Number of integer solutions: 6

$$(a+8)(b-5) = 49$$

$$ab - 8a + b = 97$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a+1)(b-8) = 89$$

$$ab - 5a - 7b = 74$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-7)(b-5) = 109$$

$$ab + 9a + 9b = 9$$

Number of positive integer solutions: 0  
Number of integer solutions: 24

$$(a+9)(b+9) = 90 = 2 \times 5 \times 3^2$$

$$ab - 5b = 75$$

Number of positive integer solutions: 6  
Number of integer solutions: 12

$$(a-5)b = 75$$

$$ab - 8b = 18$$

Number of positive integer solutions: 6  
Number of integer solutions: 12

$$(a-8)b = 18$$

$$ab + a + 8b = 55$$

Number of positive integer solutions: 2  
Number of integer solutions: 12

$$(a+8)(b+1) = 63$$

$$ab - 7a + b = 69$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a+1)(b-7) = 62$$

$$ab + 7a + 8b = 7$$

Number of positive integer solutions: 0  
Number of integer solutions: 12

$$(a+8)(b+7) = 63$$

$$ab - 6a - 2b = 83$$

Number of positive integer solutions: 4  
Number of integer solutions: 8

$$(a-2)(b-6) = 95$$

$$ab - 9a + 2b = 3$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a+2)(b-9) = -15$$

$$ab + 2a + 2b = 43$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a+2)(b+2) = 47$$

$$ab + 7a - 5b = 70$$

Number of positive integer solutions: 1  
Number of integer solutions: 8

$$(a-5)(b+7) = 35$$

$$ab - 8a - 7b = 19$$

Number of positive integer solutions: 6  
Number of integer solutions: 12

$$(a-7)(b-8) = 75$$

$$ab + 3a - b = 27$$

Number of positive integer solutions: 5  
Number of integer solutions: 16

$$(a-1)(b+3) = 24 = 3 \times 2^3$$

$$ab + a + 9b = 37$$

Number of positive integer solutions: 1  
Number of integer solutions: 8

$$(a+9)(b+1) = 46$$

$$ab + 6a + 3b = 1$$

Number of positive integer solutions: 0  
Number of integer solutions: 4

$$(a+3)(b+6) = 19$$

$$ab + 2a - 7b = 1$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a-7)(b+2) = -13$$

$$ab - a - 4b = 38$$

Number of positive integer solutions: 8  
Number of integer solutions: 16

$$(a-4)(b-1) = 42$$

$$ab + 8a + 5b = 38$$

Number of positive integer solutions:  
Number of integer solutions: 16

$$(a+5)(b+8) = 78$$

$$ab - 9a - 7b = 8$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-7)(b-9) = 71$$

$$ab - 6a + 4b = 74$$

Number of positive integer solutions: 4  
Number of integer solutions: 12

$$(a+4)(b-6) = 50$$

$$ab + 3a - 3b = 67$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a-3)(b+3) = 58$$

$$ab + a - 7b = 70$$

Number of positive integer solutions: 5  
Number of integer solutions: 12

$$(a-7)(b+1) = 63$$

$$ab - a - b = 37$$

Number of positive integer solutions: 4  
Number of integer solutions: 8

$$(a-1)(b-1) = 38$$

$$ab - 6a - 5b = 15$$

Number of positive integer solutions: 6  
Number of integer solutions: 12

$$(a-5)(b-6) = 45$$

$$ab - 2a + 9b = 55$$

Number of positive integer solutions: 1  
Number of integer solutions: 4

$$(a+9)(b-2) = 37$$

$$ab + 3a - 6b = 92$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a-6)(b+3) = 74$$

$$ab + 2b = 57$$

Number of positive integer solutions: 3  
Number of integer solutions: 8

$$(a+2)b = 57$$

$$ab - 3a + 9b = 57$$

Number of positive integer solutions: 3  
Number of integer solutions: 16

$$(a+9)(b-3) = 30$$

$$ab + 7a - 1b = 95$$

Number of positive integer solutions: 5  
Number of integer solutions: 16

$$(a-1)(b+7) = 88$$

$$ab + 5b = 69$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+5)b = 69$$

$$ab - 4a - 8b = 11$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-8)(b-4) = 43$$

$$ab + 7a - 8b = 36$$

Number of positive integer solutions: 2  
Number of integer solutions: 12

$$(a-8)(b+7) = -20$$

$$(8-a)(b+7) = 20$$

$$ab - 7b = 84$$

Number of positive integer solutions: 12  
Number of integer solutions: 24

$$(a-7)b = 84 = 7 \times 2^2 \times 3$$

$$ab + 9a - 9b = 41$$

Number of positive integer solutions: 3  
Number of integer solutions: 16

$$(a-9)(b+9) = -40 = -2^3 \times 5^1$$

$$ab + 6a + 7b = 93$$

Number of positive integer solutions: 2  
Number of integer solutions: 16

$$(a+7)(b+6) = 135 = 5 \times 3^3$$

$$ab - a - 6b = 23$$

Number of positive integer solutions: 2  
Number of integer solutions: 4

$$(a-6)(b-1) = 29$$

$$ab + 5a = 74$$

Number of positive integer solutions: 2
Number of integer solutions: 8

$$a(b+5)=74$$

$$ab - 4a - 1b = 56$$

Number of positive integer solutions: 12
Number of integer solutions: 24

$$(a-1)(b-4) = 60 = 2^2 \times 3^1 \times 5^1$$

$$ab - 4a + 9b = 12$$

Number of positive integer solutions: 2
Number of integer solutions: 16

$$(a+9)(b-4) = -24 = -3^1 \times 2^3$$

$$ab + 9a - 7b = 83$$

Number of positive integer solutions: 2
Number of integer solutions: 12

$$(a-7)(b+9) = 20$$

$$ab + 6a - 7b = 8$$

Number of positive integer solutions: 2
Number of integer solutions: 8

$$(a-7)(b+6) = -34$$

$$ab + 4a - 7b = 5$$

Number of positive integer solutions: 1
Number of integer solutions: 4

$$(a-7)(b+4) = -23$$

$$ab + 9a + 8b = 3$$

Number of positive integer solutions: 0  
Number of integer solutions: 12

$$(a+8)(b+9)=75$$

$$ab + 6a + 7b = 81$$

Number of positive integer solutions: 0  
Number of integer solutions: 8

$$(a+7)(b+6)=123=3\times41$$

$$ab + 4a - 5b = 38$$

Number of positive integer solutions: 3  
Number of integer solutions: 12

$$(a-5)(b+4)=18$$

$$ab - 3a - 6b = 54$$

Number of positive integer solutions: 12  
Number of integer solutions: 24

$$(a-6)(b-3)=72=2^3\times3^2$$

$$ab - 9a - 5b = 89$$

Number of positive integer solutions: 4  
Number of integer solutions: 8

$$(a-5)(b-9)=134=67\times2$$

$$ab + 9a - 5b = 33$$

Number of positive integer solutions: 1  
Number of integer solutions: 12

$$(a-5)(b+9)=-12$$

$$ab + 5a + 3b = 19$$

Number of positive integer solutions: 0  
Number of integer solutions: 8

$$(a+3)(b+5) = 34$$

$$ab - 7a + 2b = 60$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a+2)(b-7) = 46$$

$$ab + 4a - 3b = 46$$

Number of positive integer solutions: 2  
Number of integer solutions: 8

$$(a-3)(b+4) = 34$$

$$ab + 7a + 7b = 95$$

Number of positive integer solutions: 5  
Number of integer solutions: 30

$$(a+7)(b+7) = 144 = 2^4 \times 3^2$$