L4-1b What's the Secret MP8

Name_____Date_____

From the activity "Is There A Solution" we identified the solutions for all the systems. Now, we will work on taking those equations and convert them into Standard Form (Ax + By = C). We will then create the secret formula to identifying the solution without having to truly solve the problem.

For the Infinitely many solutions and no solutions, identify a ratio for the leading coefficients. For the one solution, identify the solution using mental math.

A y = 2x – 3 y = x	B y = ½x + 1 y = ½x - 1	C y = -2x y = 3x	D y = x + 4 y = 2/2 x + 4
E y = 3x + 2 y = - 1/3 x + 2	F y = 4x +12 y = 12/3 x + 12	G y = x – 1 y = 2x - 1	H y = 7x + 8 y = 7x - 2
I y = -2x – 3 y = 3x	J y = 8 y = -8	K y = x y = -x	L x = 2 y = 1
M y = -2/3 x - 2 y = -1/3 x - 1	N y = 4/5x + 4/2 y = 20/25 x + 2	O y = -1/4 x y = 4/2 x + 3	P y = 6/3 x + 3/2 y = 2x + 3/2
Q y = 6/3 x +2 y = 2x + 2/1	R y =5x + 10 y = x + 2	S y = 8/4 x – 10/2 y = 2x – 20/4	T y = ½x - 2 y = 2/4 x - 1

Infinitely Many Solutions	One Solution	No Solution

KEY

Infinitely Many Solutions	One Solution	No Solution
D y – x = 4 2y – 2x = 8	A y – 2x = -3 y – x = 0 (3,3)	B 2y – x = 1 2y – x = -1
F y – 4x = 12 3y – 12 x = 36	C y + 2x = 0 y – 3x = 0 (0,0)	H y – 7x = 8 y – 7x = -2
N 5y – 4x = 10 25y – 20x = 50	E y – 3x = 2 3y + x = 6 (0,2)	J y = 8 y = -8
P 3y – 6x = 9/2 2y – 4x = 3	G y – x = -1 y – 2x = -1 (0,-1)	T 2y – x = -4 4y – 2x = -4
Q 3y – 6x = 6 y – 2x = 1	I y + 2x = -3 y – 3x = 0 (-0.6, -1.8)	
S 4y – 8x = 20 4y – 8x = 20	K y – x = 0 y + x = 0 (0,0)	
	L x = 2 y = 1 (2,1)	
	M 3y + 2x =-6 3y + x = -3 (-3,0)	
	O 4y + x = 0 2y – 4x = 6 (-4/3, 1/3)	

A, B, and C have a common multiple from equation 1 to equation 2.

Equations are the same with a different answer (C).