Name: _____ Date: _____

To fill in the blanks in this sentence: (Show all work. You will probably need additional paper.)

When you encounter any _____ _____, see if you can find common factors in the numerators and denominators to cancel.

Decode the secret message at the bottom. To decode the message, solve the following linear systems, and answer the posed questions. Then find each answer in the decoder and note the letter that corresponds with it. Then place the letter above the blank over the exercise number that went with that answer. (For instance, if you got (0, 6) for #1, then you would put a "U" over all of the blanks with 1's under them at the bottom of this page.)

(1.) $4x = 8y + 3$ $-4y + 3x = 6$	(2.) $8 = 5y - 11x$ $44 + 7y = -3x$	(3.) $28y = 8x + 12$ $6x - 21y = -8$
(4.) $2x - 5y = 6$ $4 + 3x = 6y$	(5.) $9x - 15y = 6$ $-4 = 10y - 6x$	(6.) $3x + 18 + 7y = 0$ $5y + 9x = -54$
(7.) Give a graphical interpretation of #3.	(8.) Give a graphical interpretation of #5.	(9.) Give a graphical interpretation of #6.

X	U	S	R	P	O	N	M	I	E	D	A
Infinite Solutions	(0, 6)	$\left(-\frac{56}{3}, -\frac{26}{3}\right)$	Intersection Point	Same Line	(-3, -5)	No Solution	$\left(3, \frac{9}{2}\right)$	Parallel Lines	$\left(\frac{9}{2}, \frac{15}{8}\right)$	Two Solutions	(-6, 0)

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9	6		7	2	3	6			1	5	8	9	1	4	4	7	2	3	4