#154

Name _____ Date _____

8A; Algebra 1 Period _____

How Do We Solve A System Of Linear Equations Algebraically?
Part II: Substitution Method

* The substitution method is used to eliminate one of the variables by replacement.

Procedure:

1) Make sure one variable is alone (ex x = ... ,y = ..., a =... etc)
2) Substitute (replace) that variable's equivalent expression into the other equation (using parenthesis) so that we have one equation with one variable.
3) Solve for the variable
4) Substitute that value back into either original equation and solve for the second variable.
5) Check both answers back into both equations.

Solve each system of linear equations using the substitution method and check your answer.

1) $a = -2b$
$5a - 3b = 13$

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2) $2x - y = 5$
$y = 7 - x$

3) $y = 3x - 1$
$7x + 2y = 37$

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4) $4x + 3y = 27$
$y = 2x - 1$

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5) $3x - 4y = 26$
$x + 2y = 2$

6) $x = -6y - 7$
$3x + y = 13$

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7) $x + y = 1$
$x = 9 - 3y$

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8) $y = \frac{1}{3}x - 3$
$2x - y = 8$