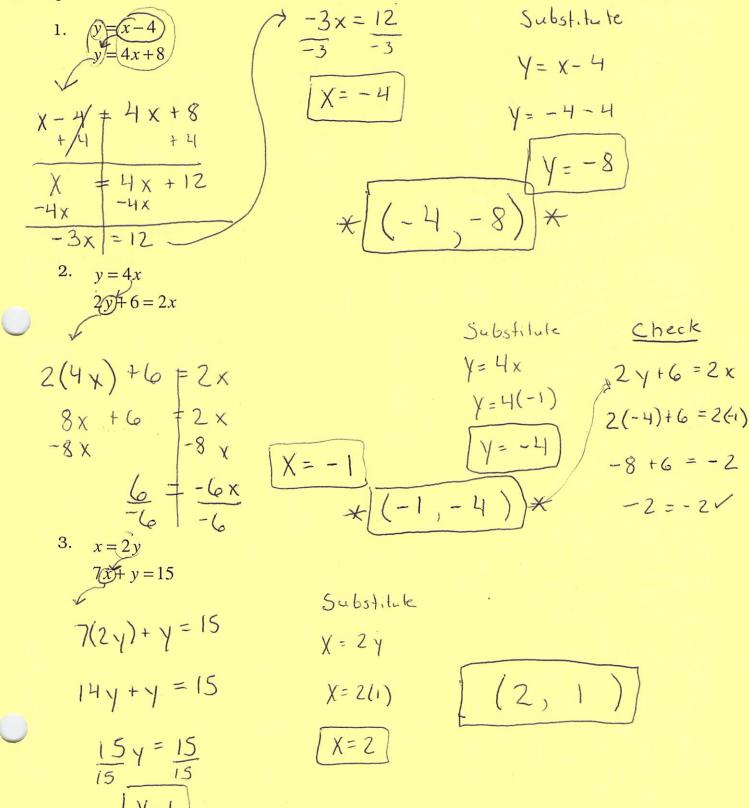
7-2 Solving Systems by Substitution

metimes, the Regents exam will tell you that you have to solve a system of equations algebraically or without the use of a graph. An algebraic method for solving systems of equations is the substitution method.

Examples:



4.
$$x = 4y - 4$$

 $-36 + 5y = -2$
 $-3(4y - 4) + 5y = -2$
 $-12y + 12 + 5y = -2$
 $-7y + 12 = -2$
 $-7y = -14$
 $-7y = -14$
Let's Try a Word Problem $y = 2$

5. A farmer grown only pumpkins and corn on her 420-acre farm. This year she wants to plant 250 more acres of corn than pumpkins. How many acres of each crop does the farmer need to plant?

$$P + C = 420$$
 $P = Acres of$
 $P = A$

rise the Substitution Method to solve each system of equations.

1.
$$y = 6x - 4$$

$$y = -2x + 28$$

$$2. \quad y = 2x$$
$$6x - y = 8$$

3.
$$y = x - 2$$
$$2x + 2y = 4$$