Two variable linear systems

To solve linear equations, we can use a third method, Elimination.

Example:

 $\Rightarrow 3(1) - 2y = 7$ 3 - 2y = 7 -2y = 4 y = -2

algebraically Delimination Osubstitution

Elimination

• Multiply the equations by numbers to make the coefficients of one of the variables add to 0.

Add the two equations together.

Solve for x or y.

Back substitute to get the value of the other variable.

$$3y = 4x - 5$$
 $0 - 2(-4x + 3y = -5)$
 $-8x + 6y = 1$ $-8x + 6y = 1$

$$8x - 6y = 10$$

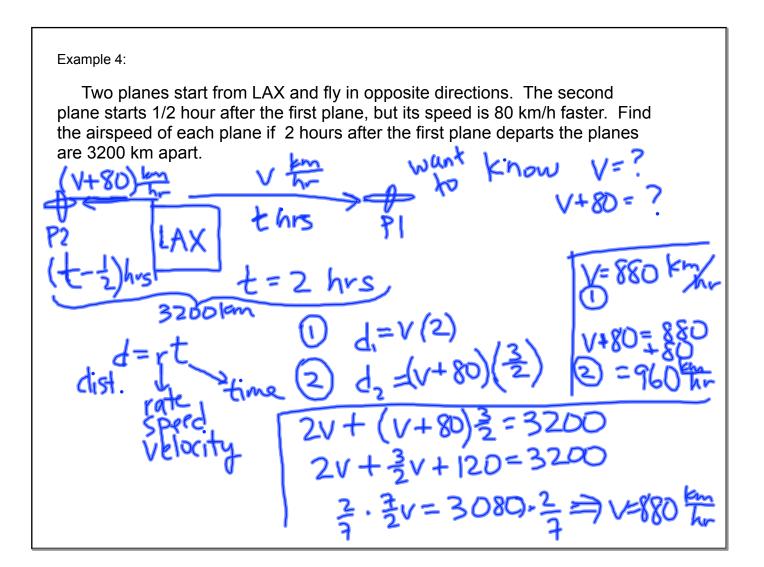
$$+ -8x + 6y = 1$$

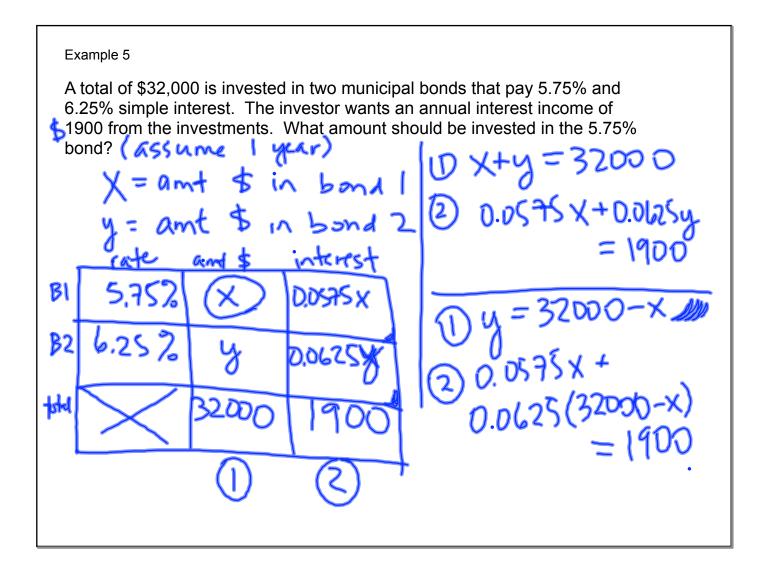
$$0 = 11 \quad \text{false}$$

$$\Rightarrow N.S.$$

Example 3:

$$2x - y = 9$$
 eliminate y





Linear systems

August 28, 2009