

# Mr. B's Algebra Connections

## "Super Bear"

### Systems of Linear Equations



Fall 2005

**System of Linear Equations.** Two or more linear equations.

**Solution.** When working with a system of 2 equations in 2 variables, a solution is an ordered pair that is a solution to both equations.

#### **Substitution Method:**

1. Solve one equation for a variable
2. Substitute the expression for the variable into the other equation.
3. Solve the equation from Step 2 to find the value of one variable.
4. Substitute the value from Step 3 in either original equation to find the value of the other variable.
5. Check the solution in BOTH equations.

#### **Addition Method:**

1. Rewrite each equation in standard form,  
 $Ax + By = C$
2. Multiply one or both equations by a nonzero number so that the coefficients of a variable are opposites.
3. Add the equations.
4. Find the value of one variable by solving the resulting equation.
5. Substitute the value from Step 4 into either original equation to find the value of the other variable.
6. Check the solution in BOTH equations.