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| * 3.2.2-Determining the Number of Solutions-How many solutions are there?In Lesson 3.2.1, you reviewed your equation-solving skills to remember how to find a solution to an equation.  But do all equations have a solution?  And how can you tell if an equation does not have a solution?
* Today you will continue to practice solving equations and will continue to investigate the meaning of a solution.
* **3-79.** GUESS MY NUMBER
* Today you will play the “Guess My Number” game.  Your teacher will think of a number and tell you some information about that number.  You will try to figure out what your teacher’s number is, using paper and a pencil if needed.  When you think you know what the mystery number is, sit silently and do not tell anyone else.  This will give others a chance to think about it.
* **3-80.** Use the process your teacher illustrated to analyze Game #3 of “Guess My Number” algebraically.
	1. Start by writing an equation that expresses the information in the game.
	2. Solve your equation, writing down each step as you go.  When you reach a conclusion, discuss how it agrees with the answer for Game #3 you found as a class.
	3. Repeat this process to analyze Game #4 algebraically.

**3-81.** How many solutions does each equation below have?  To answer this question, solve these equations, recording all of your steps as you go along.  Check your solution, if possible.* 1. 4*x* − 5 = *x* − 5 + 3*x*
	2. − *x* − 4*x* − 7 = −2*x* + 5
	3. 3 + 5*x* − 4 − 7*x* = 2*x* − 4*x* + 1
	4. 4*x* − (− 3*x* + 2) = 7*x* − 2
	5. *x* + 3 + *x* + 3 = −(*x* + 4) + (3*x* − 2)
	6. *x* − 5 − (2 − *x*) = −3

**3-82.** Create your own “Guess My Number” game like the ones you worked with in class today.  Start it with, “I’m thinking of a number that…”  Make sure it is a game for which you actually know the answer!  Write the equation and solve it.  |