Feb 5-9   Week

Monday:

       Objective: Use substitution Method to solve a system of equations.

       Activity: Review Friday's assignment of 7 problems.

       Discuss these problems with a little context to an application problem

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Problem 1: The Money Jars

Let x be the number of \$5 bills in Jar A and y be the number of \$10 bills in Jar B.

Equations:

$$5x + 10y = 120 \quad \text{(total amount)}$$
$$x = 3y \quad \text{(number of } 5 bills is three times the 10 \text{ bills)}$$

Solve the system of equations to find x and y.

Problem 2: The Age Puzzle

Let t be Tom's age and j be Jane's age.

Equations:

$$t + j = 50 \quad \text{(sum of their ages)}$$
$$t = j + 5 \quad \text{(Tom is 5 years older than Jane)}$$

Solve the system of equations to find t and j.

Tuesday:

       Continue Objective: Use substitution Method to solve a system of equations.

       Activity: Write application problems such as mixtures

Problem 4: The Coffee Mix

Let x be the pounds of Coffee A and y be the pounds of Coffee B.

Equations:

$$8x + 12y = 10 \quad \text{(cost per pound)}$$
$$x + y = 5 \quad \text{(total pounds)}$$

Solve the system of equations to find x and y.

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14. A biology test is worth 100 points and has 36 questions.

    a. Multiple-choice questions are worth 2 points each and essay questions are worth 6 points each. How many questions of each type are on the test?

    b. Your friend says that it is possible for the multiple-choice questions to be worth 4 points each. Is your friend correct? Explain.

Wednesday
        Continue Objective: Solve by substitution
        Activity: QUIZ

Thursday
        Objective: Use Elimination Method to solve a system of equations
        Activity: Take notes from 2 Edpuzzles on process

Friday:
        Objective: Use Elimination Method to solve a system of equations
        Activity: Apply this setup for elimination method as a quicker way than substitution method

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Work with a partner. You purchase a drink and a sandwich for $4.50. Your friend purchases a drink and five sandwiches for $16.50. You want to determine the price of a drink and the price of a sandwich.

    a. Let x represent the price (in dollars) of one drink. Let y represent the price (in dollars) of one sandwich. Write a system of equations for the situation. Use the following verbal model.

Number of drinks	$\bullet$	Price per drink	$+$	Number of sandwiches	$\bullet$	Price per sandwich	$=$	Total price

    Label one of the equations Equation 1 and the other equation Equation 2.

Solve by elimination method: The first step for setting up method is already completed

Is the solution the same using both methods? Which method do you prefer?

    a. $3x - y = 6$ **b.** $2x + y = 6$ **c.** $x - 2y = -7$
          $3x + y = 0$ $2x - y = 2$ $x + 2y = 5$

Solve by elimination method: The first step NEEDS to be done to create an eliminated variable.

$2x + y = 7$ Equation 1
$x + 5y = 17$ Equation 2