

Magic Technique for Systems of Linear Equations

Directions

Print this worksheet and have students solve the given problems. This worksheet specifically covers the sum-multiple method to solve for systems of linear equations.

How to Use the Magic Technique

Step 1: Set the first equation aside for later.

Step 2: Multiply each term in the 2nd equation by any factor. This factor can be your choice (2, 8, 99, -4 etc..).

Step 3: Add the first equation and the new 2nd equation.

Step 4: Use the elimination method to solve the system of equations.

Answer Key

Question 1: (-26, 22)

Question 2: Students show follow the steps given to multiply the second equation by a factor, add in the first equation, and present their new equation.

Question 3: (-26, 22) Students should find this using their new created equation from question 2.

Question 4: Students should give a explanation that shows how multiplying the equation by a factor on both sides does not affect its function, and by adding in the first equation, it allows the equations to work in the same way as the original two equations.

Grading Rubric

Traits	1- Poor	2- Partial	3- Acceptable	4- Excellent
<u>Methods/ Steps</u>	Does not use any methods or used the wrong steps	Used the correct method, but the answer was incorrect	Used the correct method and steps to find the correct answer	Used the correct method and steps in the best manner to solve the equations
<u>Math Skills</u>	Did not use any math skills to solve the problems	Used the correct skills but did not answer correctly	Used the correct skills to solve the problem correctly	Applied all skills of the lesson to correctly answer the problems
<u>Math Terms and Symbols</u>	Math terms and symbols are not used or used incorrectly	Math terms and symbols are used correctly in most cases.	Math terms and symbols were used appropriately to solve the problems	All math symbols and terms were used correctly and organized throughout the problem solving.
<u>Organization</u>	Work is not organized	Work is organized partially	Work is organized and readable	Work is well organized and easy to read
<u>Explanation</u>	Explanation does not make sense	Explanation shows some understanding	Explanation shows understanding of the concepts	Explanation shows a thorough understanding of the concepts