Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

**5.3B Solving Systems of Linear Equations by Elimination Method\_Classwork**

*Objective: solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. CCSS: 8.EE.8b*

*HW: 5.3B worksheet*

Use elimination method when both equations are in STANDARD FORM (Ax + By) = C.

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| **Lesson Starter:**  Fill in the blanks    What is the lowest common multiple of 3 and 6 \_\_\_\_\_\_\_  What is the lowest common multiple of 6 and 8 \_\_\_\_\_\_\_  What is the lowest common multiple of 7 and 3 \_\_\_\_\_\_\_ |

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| Look at each system and identify which variable you would eliminate first.   |  |  | | --- | --- | | 1)  Eliminate the \_\_\_\_ variable. I would multiply the  \_\_\_\_\_\_ equation by \_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 2)  Eliminate the \_\_\_\_ variable. I would multiply the  \_\_\_\_\_\_ equation by \_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

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| **THINKING PROBLEM:** Which value(s) of “a” can you replace in order to solve the system by elimination without multiplying first? Explain. |

**EXAMPLE PROBLEMS**

Solve using the elimination method

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| 1. 3x + 2y = 46 **ELIMINATE “x”**   x + 5y = 11 | 1. 3x + 2y = 46 **ELIMINATE “y”**   x + 5y = 11 |
| 2. 3x + 5y – 1 = 0  -6x – 10y = 14 | 3. 7x + 3y = 0  14x + 6y = 0 |

**PRACTICE PROBLEMS**

Directions: Solve each systems of equations using the ELIMINATION METHOD

|  |  |
| --- | --- |
| 1. 3x – y = 2  -2x + 4y = 2 | 2. x = 2y + 4  -3x + 5y = -3 |
| 3. –3x + 4y –3 = 0  -12x + 16y = 8 | 4. -16x – 20y = 12  -8x – 10y = 6 |
| 5. 2x – 4y = 6  3x + 7y = 9 | |
| Solutions: 1. (1,1) 2. (-14,-9) 3. No Solution 4. IMS 5. (3, 0) | |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math Intervention (ELIMINATION METHOD)

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| *Example 1 (eliminate “x”)*  3x + 2y = 46  x + 5y = 11 | *Example 2 (eliminate “y”)*  3x + 2y = 46  x + 5y = 11 |
| 1. *(FROM 5.3B NOTES)*   3x – y = 2  -2x + 4y = 2 | 1. *(FROM 5.3B NOTES)*   . x = 2y + 4  -3x + 5y = -3 |