**9.2 Solving Systems of Linear Equations by Elimination**

**Goals**

* Writing equivalent equations to eliminate a variable
* Solving systems of linear equations algebraically using elimination

**Vocabulary**

1. Elimination Method

**Notes**

Solve using the Elimination Method!!!

**Examples**

1. Quinton downloaded some games and songs on his phone. The first download consisted of five games and four songs for $26. The second order consisted of three games and two songs for $15. All games cost the same amount, and all songs cost the same amount. Write a system of linear equations. Then, determine the cost of one song and one game.
2. Georgia decides to save the planet and plant some trees to offset Grace’s carbon footprint. She approaches a farmer who owns 500 ha of cropland. The farmer earns approximately $220/ha from the crops. Georgia has a grant from the government that will pay the farmer $60 for every hectare of cropland converted to forest. The farmer wants to make $90 800 that year. Using the elimination method, determine the total hectares she would need to convert to woodland, and how much cropland would be left.
3. The perimeter of a rectangular garden is 17.00 m. Triple the length is 2.46 m longer than 5 times the width. Sketch and label a diagram. Create a system of equations to determine the dimensions of the rectangle. Solve the system using elimination.

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