The Vending Machine

Crystal was visiting her grandmother in the hospital and needed to find something for lunch. The snack room at the hospital had a vending machine with sandwiches. Crystal selected one that cost $1.65. She paid for the sandwich with exactly 19 coins. If the vending machine accepts nickels, dimes, and quarters, what combination of coins could Crystal use?

Remember to use the REACT approach:

Read

* Read the problem and determine what you are being asked
* Determine what information you are given and what missing information you need

Explore

* Consider multiple potential solution methods

Attempt

* Try to solve the problem using any of the explored strategies

Critique

* Evaluate if the attempted method solved the problem

Teach

* Explain the solution and the reasoning behind it

1. Write a system of equations.

2. Solve the system algebraically by finding a solution?

3. How do you know your solution is correct?

4. Is there more than one solution? If so what are they?

5. Use a graphing tool to find the solution(s).

6, Use a spreadsheet tool to find the solution(s).

7. Discuss any patterns observed in the table.

8. Explain the strategy you liked best and why.