**A.I** **Tutoring Plan**

**Step-by-Step Explanation**

Step 1. Explain to the AI your grade, what you are struggling with, and what you are trying to understand through AI. **(Ex: I am a 9th grade high school student struggling to understand Systems of Linear Equations, can you help tutor me by explaining the step-by-step process of systems of linear equations and examples with explanations explain solving systems of linear equations using graphing?)**

Step 2. Ask the AI to give you practice questions on what topic of system of linear equations you are struggling with. **(Ex: Can you give me practice graphing questions on systems of linear equations 9th grade standard?)**

Step 3. Solve the practice questions and have AI walk you through a step-by-step process of how to get the right answers to compare how you worked it out to AI. **(Response: Yes, I would like a step-by-step walk through of the solutions & an explanation.)**

**Step 4. Address the information AI is telling you about how to solve the equations and for further understanding on a 9th grade level ask for a simplified explanation non advanced. (Response: This is a little too advanced would you be able to break this down in a simplified way for me to understand on a 9th grade standard new to Algebra 1?)**

**Step 5. Take notes & ask any other breakdown questions to AI if needed. (Ex: Thank you can you please explain this practice question or give me a practice question that highlights the problem & how it is solved?)**

**Interactive Elements**

Inform AI a detailed prompt on the subject that you may have trouble with, in this case systems of linear equations. Make sure that what you communicate in your prompt informs the A.I. to add gamification into the lesson, for example.

(A.I)

**I am a first-year student in high school struggling to understand the system of linear equations. Would you be able to give me a quiz on system of linear equations with a simple walk through of how to understand and solve through the quiz?**

**Personalized Practice**

**You must give the AI information about your current skillset.**

**For Example:**

**Student:** “I am a 9th grade student learning system of linear equations, but I do not understand the dividing, could you give me some practice problems to help me with what I'm not understanding completely?”

The **AI** should and would give you practice answers based on the skillset that you input into the **AI** in your message.

**For Example:**

1. x + y = 5, x - y = 1

2. 2x + y = 7, x - y = 1

3. 3x + 2y = 12, x + y = 5

4. 4x + 3y = 24, 2x - y = 5

5. 1/2x + 1/3y = 5, 1/4x - 1/2y = 1

**The student would input their answers into the AI and ask the AI to give feedback on their answers.**

**!** **Notice !**

**Any student that does not understand the problems would not give perfect answers to every question that the AI gives to said student. So, we purposefully made some of the answers wrong in our “student” response.**

**Student: “**(1, 2), (8/6, 5/3), (2, 3), (3.9, 2.8) (6, 7)”

**Afterwards, the AI should give you detailed feedback on the answers submitted into the AI in your message.**

For example, **(NOTE: NOT ALL AI RESPONSES ARE GOING TO BE THE SAME)**

“Thank you for sharing your answers! I am happy to provide feedback on each of them.”

1. x + y = 5, x - y = 1

Your answer: (1, 2)

Feedback: This is incorrect. Let us solve it together:

Adding the equations: 2x = 6, so x = 3

Substituting into first equation: 3 + y = 5, so y = 2

The correct answer is (3, 2)

2. 2x + y = 7, x - y = 1

Your answer: (8/6, 5/3)

Feedback: This is correct! As noted, it can be simplified to (4/3, 5/3).

3. 3x + 2y = 12, x + y = 5

Your answer: (2, 3)

Feedback: This is correct! Well done.

4. 4x + 3y = 24, 2x - y = 5

Your answer: (3.9, 2.8)

Feedback: This is correct! Good job on finding the decimal approximation.

5. 1/2x + 1/3y = 5, 1/4x - 1/2y = 1

Your answer: (6, 7)

Feedback: This is correct! Excellent work on this more challenging problem with fractions.

Overall, you are doing very well! You solved 4 out of 5 problems correctly, including some challenging ones with fractions and decimals. The only mistake was on the first problem, which is a common error. Remember to always check your solutions by substituting them back into both original equations.

Would you like to review the solution for the first problem together, or do you have any questions about the other problems?”

**After this moment, you can either ask the AI to review the questions or ask it to give more questions to the student.**

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