Name: _____ Solving Equations with variables on both sides of the equation.

Project#1

Direction:

So, you've never been a member of a gym before, but maybe you'd be more inspired to work out, especially in the winter, if you actually joined a gym. It looks pretty nice, sauna, bodybuilding, and aerobics.

The question is!!!

How much would it costs to join?

There are two plans at the gym.

Plan 1: $1 enrollment, plus $39.95 a month.	**Plan 2:** a $99 enrollment fee, plus $29.95 a month.

You job is to use what you have learned about solving equations with variables on both sides to find the best plan.

- ✓ **Task:** The best plan depends on how long you're going to join for.
  - You can use algebra to compare the plans.
  - Solve the equation and answer the questions below.
  - Find the numbers of months where the cost of the two plans are equal

Plan 1 written algebraically	**Plan 2 written algebraically**
1. The first special plan, plan one, cost $1 to join and $39.95 for each month after that. Algebraically: $1 + 39.95m$.	1. The second special plan, plan two, costs $99 to join and $29.95 for each month after that. Algebraically: $99 + 29.95m$.

Question:

1. If you joined for one month, how much would plan 1 and plan 2 cost you?
2. How much would it cost over a longer period of time?
3. How do we find the number of months where the cost of the two plans is equal?