Pick a Method

Take the "systems" cards and categorize them according to which method you would use.

Graphing

Combination / Elimination
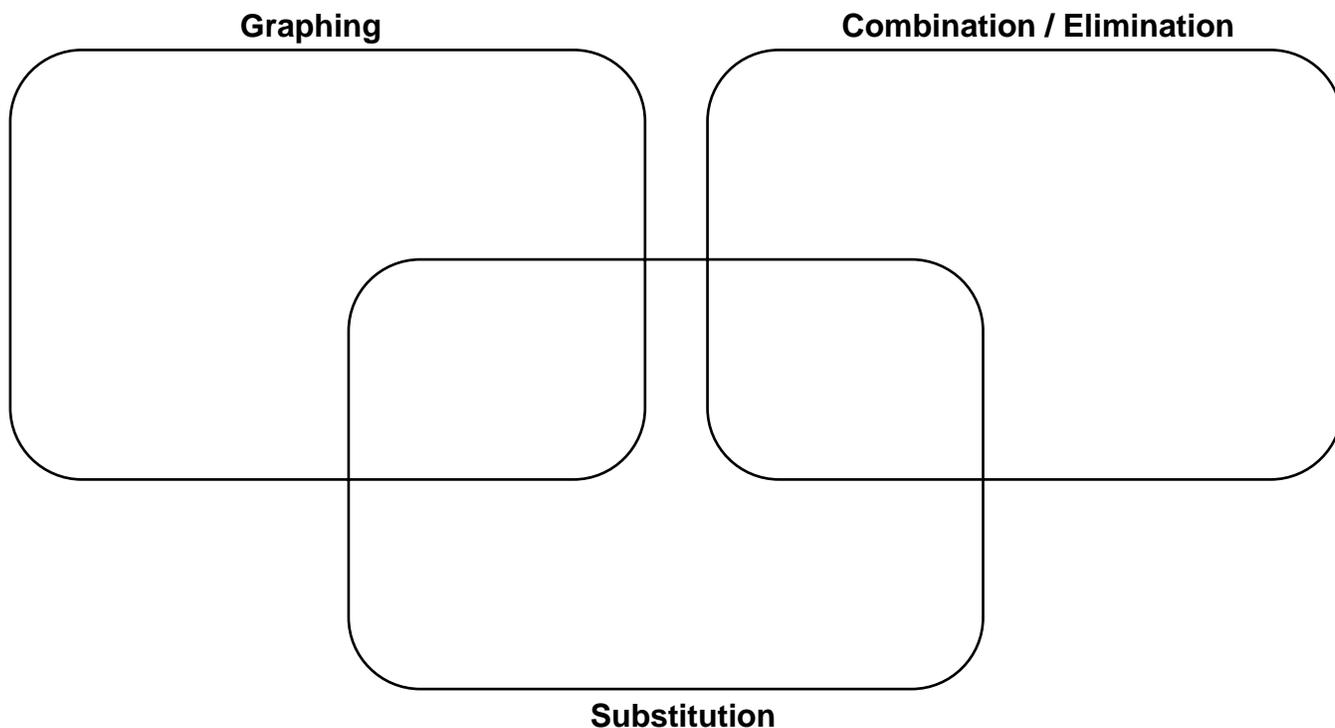
Substitution

Explain how you identify when to use each.

Graphing	Substitution	Combination/Elimination

Systems Situations (pp. 1 of 3)

For each situation, define variables and set up a system of equations. If you have trouble at first, try one of these strategies to help: 1) List possibilities, 2) Trial and error, 3) Grouping like numbers.

1. **Copies**. A teacher has to make 159 copies of a review packet for the students in her classes. When she arrives in the workroom, she starts using both copy machines (call them X and Y). During the copying, machine X runs out of paper, so it only printed half as many packets as copier Y. How many copies does each machine print?

Variables:

x = Number of copies made by Machine X

y = Number of copies made by Machine Y

System:

2. **Fast Food**. A bunch of friends went to the Snack Shack for lunch. The first family ordered 4 hamburgers and 4 orders of fries for $9.00. The next family ordered only 1 hamburger and 2 orders of fries for $3. How much would each item cost individually?

Variables:

☐ = _____

☐ = _____

System:

$$4h + 4f = 9$$

$$h + 2f = 3$$

3. **Exercise**. Several times a week, Chuck goes to the gym to run and swim. When running, Chuck burns 35 calories per minute, and when he swims he burns 30 calories per minute. He has found a way to burn 730 calories after exercising for a total of 23 minutes. How long does Chuck spend at each activity?

Variables:

☐ = _____

☐ = _____

System:

4. **Coins**. Donald has a bunch of nickels and dimes in his piggy bank. If there are 100 coins in the bank that make a total of $6.60 in change, how many of each type of coin does Donald have?

Variables:

☐ = _____

☐ = _____

System: