

Systems group project

- Pick one of the problems in the packet
- Set up two equations for that problem
- (You can use the N-Spire to verify the answer)
- Solve the system by **graphing** both equations and seeing where they intersect
- Solve the system by **substitution** (replace one variable with its equivalent expression)
- Solve the systems by **elimination** (add the rows together to eliminate a variable)
- Your answer should be the same each time!
- On flipchart paper: Place the equations in one corner and each method in a different corner and the problem in the center (like the example)

Yesterday a total of 24 students were present in Alfred's class. There were 3 fewer girls than twice the number of boys. Write a system of equations that can be used to find g , the number of girls who were present in Alfred's class yesterday, and b , the number of boys who were present.

Mark has \$4.95 in quarters and dimes. He has 3 times as many dimes as quarters. How many dimes and how many quarters does Mark have?

The perimeter of a rectangular garden is 72 feet. Write a system of equations that can be used to find the dimensions of the garden if its length, l , is 3 times its width, w .

A truck is carrying 1500 pounds of cargo that occupies 138 cubic feet of space. A television weighs 50 pounds and occupies a space of 4 cubic feet. A microwave oven weighs 30 pounds and occupies a space of 3 cubic feet. How many televisions and how many microwaves are in the truck?

Shayna has a total of 50 music CDs in two categories. The number of her rock CDs is 8 more than twice the number of her country CDs. Write a system of equations that could be used to find how many rock CDs, r , and country CDs, c , Shayna has.

Shirley Hall is selling tickets to a concert. Adult tickets cost \$5 each and student tickets cost \$3.50 each. How many adult tickets were sold if they sold 156 tickets and raised \$669 total?

Mrs. Crabapple has around 54 algebra students. Let p be the number of students passing and f be the number of students failing. Currently, since many people will not complete or turn in their homework, the majority of her students are failing. Write an equation to show the total number of students in her classes. Write a second equation based on the fact that twice as many students are failing as opposed to passing. Use the system of equations to find out how many students are passing and how many are failing.

Haleigh has two less guppies than three times the number of neon fish that she owns. All together, she has 18 fish. How many of each does she have?

Six Flags tickets on Math and Science Day cost \$30 for students or \$8 for those who own a season pass. If Tison Junior High takes 125 students and collects \$2628, how many students paid student price and how many had season passes?