1. Superman buys 4 hotdogs, 2 slices of pizza and 5 sodas for $26.73. Batman buys 4 hotdogs and 7 slices of pizza for $37.93. Ironman buys 3 hotdogs, 1 slice of pizza and 4 sodas for $18.49. Write and solve a matrix equation to find the cost of one hot dog, one slice of pizza, and one soda.

2. A theater has tickets at $6 for adults, $3.50 for students, and $2.50 for children under 12 years old. A total of 278 tickets were sold for one showing with a total revenue of $1300. If the number of adult tickets sold was 10 less than twice the number of student tickets, how many of each type of ticket were sold for the showing?