The admission fee at a small fair is $1.50 for children and $4.00 for adults. On a certain day, 2200 people enter the fair and $5050 is collected. How many children and how many adults attended?

number of adults: x

number of children: y

With these variables, I can create equations for the totals they've given me:

total number: x + y = 2200

total income: 4x+ 1.5y = 5050

 I will solve the first equation for one of the variables, and then [substitute](https://www.purplemath.com/modules/systlin4.htm) the result into the other equation:

*x*= 2200 – *y*

4(2200 – *y*) + 1.5*y* = 5050

8800 – 4*y* + 1.5*y* = 5050

8800 – 2.5*y* = 5050

–2.5*y*= –3750

*y* = 1500

Now I can back-solve for the value of the other variable:

*X* = 2200 – (1500) = 700

To answer the original question, there were:

1500 children and 700 adults.

A landscaping company placed two orders with a nursery. The first order was for 13 bushes and 4 trees, and totaled $487. The second order was for 6 bushes and 2 trees, and totaled $232. The bills do not list the per-item price. What were the costs of one bush and of one tree?

number of bushes: x

number of trees: y

1st order: 13x + 4y= 487

2nd order: 6x + 2y= 232

Solve for one of the variables ( hint – the 2nd order has even number coefficients )

The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of $38. The school took in $52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

number of senior tickets:

number of child tickets:

First day:

Second Day:

The state fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 8 vans and 8 buses with 240 students. High School B rented and filled 4 vans and 1 bus with 54 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus.

number of students in van: x

number of students in bus: y

High School A:

High School B:



