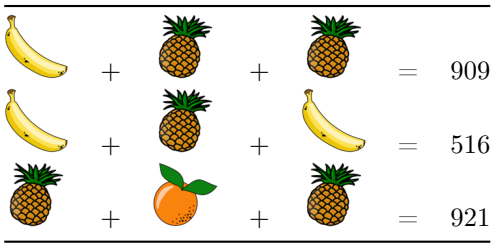
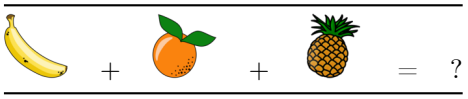
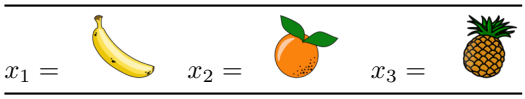
1. **Problem**
Given the following information:



Compute:



Solution
The information provided can be interpreted as the price for three fruit baskets with different combinations of the three fruits. This corresponds to a system of linear equations where the price of the three fruits is the vector of unknowns x:



The system of linear equations is then:

$$\begin{pmatrix} 1 & 0 & 2 \\ 2 & 0 & 1 \\ 0 & 1 & 2 \end{pmatrix} \cdot \begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix} = \begin{pmatrix} 909 \\ 516 \\ 921 \end{pmatrix}$$

This can be solved using any solution algorithm, e.g., elimination:

$$x_1 = 41,\ x_2 = 53,\ x_3 = 434.$$

Based on the three prices for the different fruits it is straightforward to compute the total price of the fourth fruit basket via: