

Linear Equations in Two Variables

Pranav Koushik(venkatapranavkoushik.malla@sriprakashschools.com@sripraka

August 10, 2023

10th Maths - Chapter 3

This is Problem-3 from Exercise 3.1

1. The cost of 2 kg of apples and 1kg of grapes on a day was found to be ‘ 160. After a month, the cost of 4 kg of apples and 2 kg of grapes is ‘ 300. Represent the situation algebraically and geometrically.

Solution:

given

$$2x+y=160$$

$$4x+2y=300$$

This can also be written as:

$$\begin{pmatrix} 2 & 1 & 160 \\ 4 & 2 & 300 \end{pmatrix} \quad (1)$$

now,Making $R_2 \rightarrow R_2 - 2R_1$

we get,

$$\begin{pmatrix} 2 & 1 & 160 \\ 0 & 0 & -20 \end{pmatrix} \quad (2)$$

Thus there is no solution for the above equation