

Linear Equations in Two Variables

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10th Maths - Chapter 3

This is Problem-2 from Exercise 3.1

1. The coach of a cricket team buys 3 bats and 6 balls for ‘ 3900. Later, she buys another bat and 3 more balls of the same kind for ‘ 1300. Represent this situation algebraically and geometrically

Solution:

Given Data:

$$3x+6y=3900$$

$$1x+3y=1300$$

This can also be written as:

$$\begin{pmatrix} 3 & 6 & 3900 \\ 1 & 3 & 1300 \end{pmatrix} \quad (1)$$

now, Making $R_1 \rightarrow R1 = R1 - 2R2$

we get, $\begin{pmatrix} 1 \\ 0 \\ 1300 \end{pmatrix}$ next step,

$$\begin{pmatrix} 1 & 0 & 1300 \\ 1 & 3 & 1300 \end{pmatrix} \quad (2)$$

now, Making $R_1 \rightarrow R_2 = R_2 - R_1$
we get,

$$\begin{pmatrix} 1 & 0 & 1300 \\ 0 & 3 & 0 \end{pmatrix} \quad (3)$$