Assignment - 4

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Abstract—**This is a simple document to learn about linear forms and present it using latex, draw figures using Python, Latex.**

Download all and latex-tikz codes from

1 LINEAR FORMS
(LINEAR FORMS BY G V V SHARMA EXERCISES-Q.2.4)

1.1. Given the equation of lines passing through the point $\begin{pmatrix} 2 \\ 14 \end{pmatrix}$. How many more such lines are there, and why?

2 SOLUTION

Since the given point is $\begin{pmatrix} 2 \\ 14 \end{pmatrix}$

the, first equation is

$$\mathbf{x} + \mathbf{y} = 16 \qquad (2.1.1)$$

$$\mathbf{x} + \mathbf{y} - 16 = 0 \qquad (2.1.2)$$

Second equation is

$$\mathbf{x} - \mathbf{y} = -12 \qquad (2.1.3)$$
$$\mathbf{x} - \mathbf{y} + 12 = 0 \qquad (2.1.4)$$

Third equation is

$$\mathbf{y} = 7\mathbf{x} \qquad (2.1.5)$$

$$7\mathbf{x} - \mathbf{y} = 0 \qquad (2.1.6)$$

So, we can find infinite equations because through the one point infinite lines can pass.
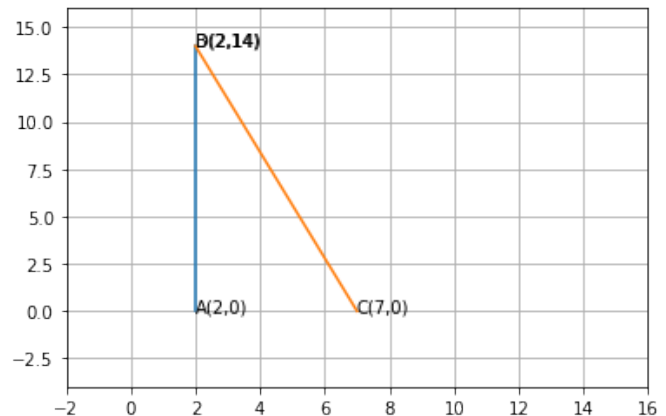

Fig. 2.1. linear forms