1.1.6.13

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Question:
The points $(0,5)$,$(0,-9)$ and $(3,6)$ are not collinear.
Solution:

point	Name
$(0,5)$	Point A
$(0,-9)$	Point B
$(3,6)$	Point C

TABLE 0: Variables Used

The collinearity matrix is given by (1)

$$\begin{pmatrix}\mathbf{B}-\mathbf{A} & \mathbf{C}-\mathbf{A}\end{pmatrix}^{T} = \begin{pmatrix}0 & -14\\ 3 & 1\end{pmatrix} \tag{2}$$

(3)

3 points are collinear if the rank of collinearity matrix is 1.but for above matrix by applying any row reduction also we can't create zero rows in matrix.
$\implies$ given 3 points A,B,C are not collinear and they form a triangle.

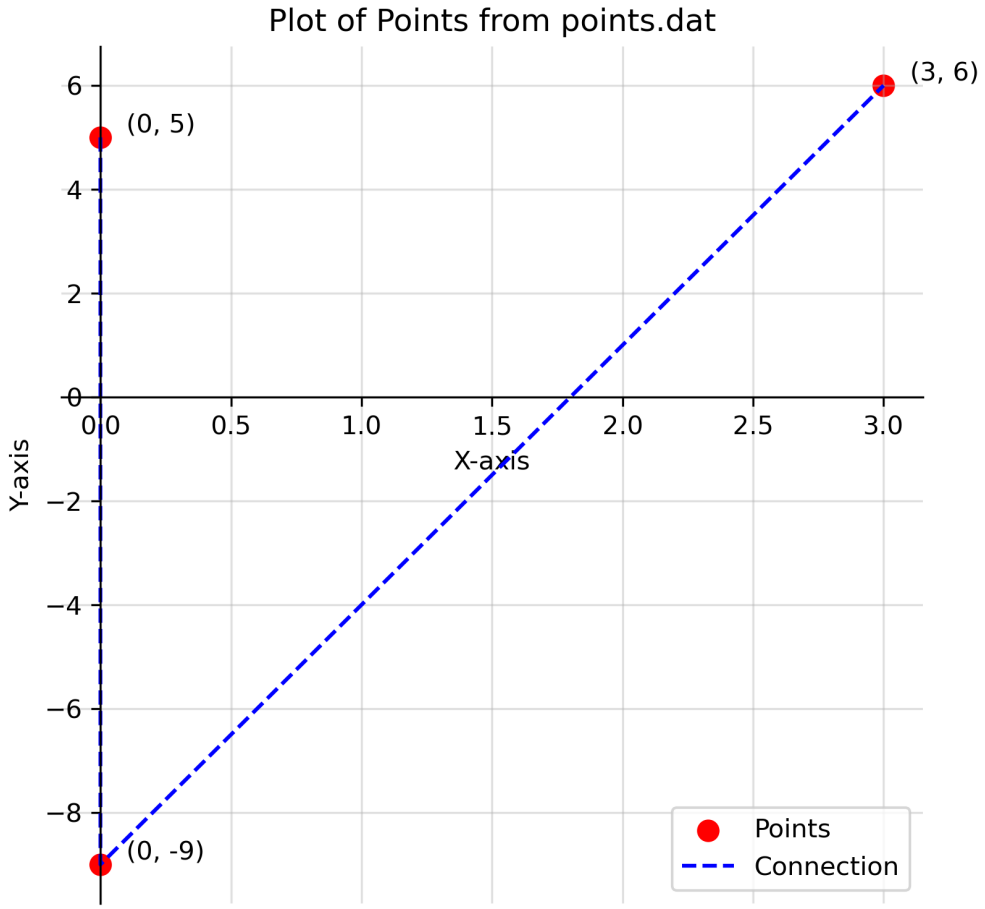

Fig. 0: A,B,C are not collinear