Assignment 1

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RAMSEY 1.18

Find the co ordinates of the points which divides the joining of two points $\begin{pmatrix} 2 \\ 3 \end{pmatrix}, \begin{pmatrix} -4 \\ 5 \end{pmatrix}$ externally in the ratio 2:3 and also externally in the ratio 3:2

1 SOLUTION

Let **A** be the point which divides the join in the ration 3:2 externally and **B** be the point dividing the join in the ratio 2:3 externally

$$\mathbf{A} = \frac{3\begin{pmatrix} -4 \\ 5 \end{pmatrix} - 2\begin{pmatrix} 2 \\ 3 \end{pmatrix}}{1} \quad (1.0.1)$$

$$\mathbf{A} = \begin{pmatrix} -18 \\ 9 \end{pmatrix} \quad (1.0.2)$$

$$\mathbf{B} = \frac{2\begin{pmatrix} -4 \\ 5 \end{pmatrix} - 3\begin{pmatrix} 2 \\ 3 \end{pmatrix}}{-1} \quad (1.0.3)$$
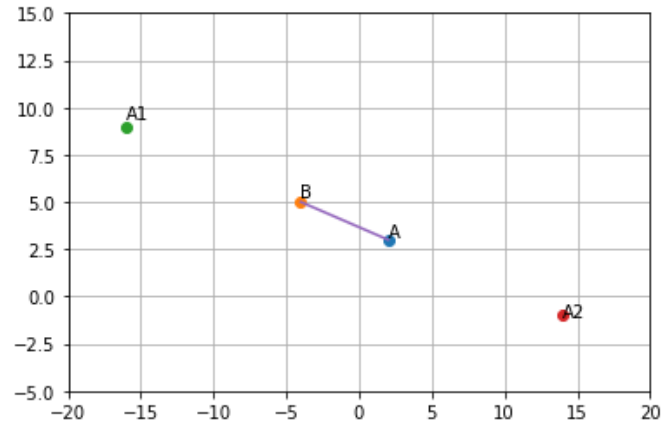
$$\mathbf{B} = \begin{pmatrix} 14 \\ -1 \end{pmatrix} \quad (1.0.4)$$

Fig. 0: Plot of the points