Assignment 3

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1 QUESTION No. 2.47

Draw a Rhombus who diagonals are 5.2 and 6.4

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2 SOLUTION

Let the vertices of the rhombus $ABCD$ be **A,B,C**
and **D**.
Given AC and BD are the diagonals. AC = 5.2 and
BD = 6.4
And O is the midpoint of rhombus.
OA = OC = 1/2*(AC)
OA = OC = 1/2*(5.2) = 2.6
OD = OB = 1/2*(BD) = 1/2*(6.4) = 3.2

We obtain the vertices of the rhombus as follows

$$\mathbf{A} = \begin{pmatrix} -2.6 \\ 0 \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 0 \\ -3.2 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} 2.6 \\ 0 \end{pmatrix}, \mathbf{D} = \begin{pmatrix} 0 \\ 3.2 \end{pmatrix}$$
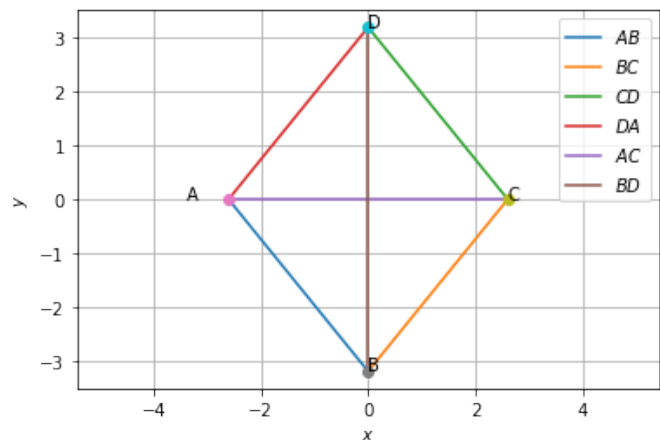
(2.0.1)

Plot the Rhombus $ABCD$ is as follows:

Fig. 2.1: Rhombus ABCD