

Assignment 1

Abhiroop Chintalapudi - AI20BTECH11005

Download all python and latex codes from

<https://github.com/abhiroopchintalapudi03/EE3900.git>

1 PROBLEM 2.5

Check whether

$$\mathbf{A} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 6 \\ 4 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} 7 \\ -2 \end{pmatrix} \quad (1.0.1)$$

are the vertices of an isosceles triangle.

2 SOLUTION

Let,

$$\mathbf{A} = \begin{pmatrix} 5 \\ -2 \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 6 \\ 4 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} 7 \\ -2 \end{pmatrix} \quad (2.0.1)$$

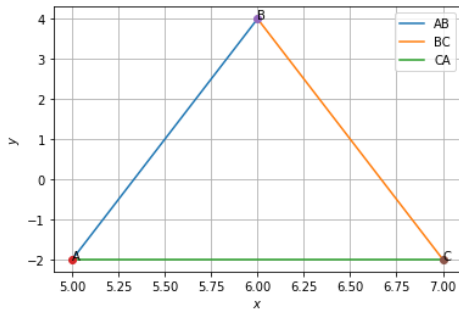


Fig. 0: $\triangle ABC$

Now,

$$AB = \sqrt{37}, BC = \sqrt{37}, AC = 2$$

Since $AB = BC$

$\Rightarrow \triangle ABC$ is an isosceles triangle.