

Assignment 1

Mirha Sidheek

Download all python codes from

<https://github.com/mirhasidheek7213/Internship2021/blob/main/Assignment%20-%201/Codes/assignment1.py>

and latex-tikz codes from

<https://github.com/mirhasidheek7213/Internship2021/blob/main/Assignment%20-%201/Assignment1.tex>

The vertex A can be expressed in polar coordinate form as:

$$\mathbf{A} = b \begin{pmatrix} \cos C \\ \sin C \end{pmatrix}, \mathbf{B} = \begin{pmatrix} a \\ 0 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad (2.0.3)$$

This can be written as,

$$\mathbf{A} = 5 \begin{pmatrix} \cos 60^\circ \\ \sin 60^\circ \end{pmatrix} = \begin{pmatrix} 2.5 \\ 2.5\sqrt{3} \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 7.5 \\ 0 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad (2.0.4)$$

1 QUESTION No. 2.17

Construct $\triangle ABC$ with $BC = 7.5$, $AC = 5$ and $\angle C = 60^\circ$

2 SOLUTION

$$\text{Given, } BC = 7.5, AC = 5, \angle C = 60^\circ \quad (2.0.1)$$

$$\text{Let, } BC = a, AC = b \quad (2.0.2)$$

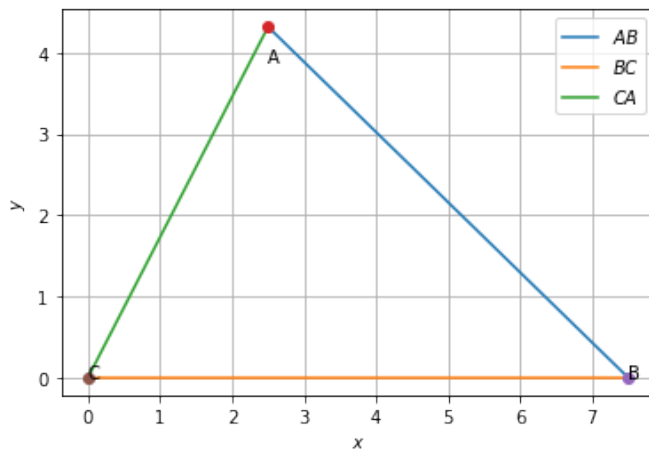


Fig. 0: The Constructed triangle

The values of A, B and C are substituted and the triangle is plotted as given above.