Assignment 1

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Download all python codes from

https://github.com/ooharapolu/ASSIGNMNT/Assignment1.py

and latex-tikz codes from

https://github.com/ooharapolu/ASSIGNMNT/main.tex

1 Question No.2.11

Draw an equilateral triangle of side 5.5

2 SOLUTION:

Let,

$$a = 5.5,\ b = 5.5,\ c = 5.5. \tag{2.0.1}$$

Form,
P=($a^2 + c^2 - b^2$)/2(a)
$P = (5.5^2 + 5.5^2 - 5.5^2)/2(5.5)$
$P = -8.25$
let the vertices of $\triangle ABC$ and be

$$\mathbf{A} = \begin{pmatrix} p \\ c \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \mathbf{C} = \begin{pmatrix} a \\ 0 \end{pmatrix} \tag{2.0.2}$$

Now, Vertices of given $\triangle ABC$ can be written as,

$$\mathbf{A} = \begin{pmatrix} p \\ c \end{pmatrix} = \begin{pmatrix} p \\ 5.5 \end{pmatrix}, \mathbf{B} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \mathbf{c} = \begin{pmatrix} a \\ 0 \end{pmatrix} = \begin{pmatrix} 5.5 \\ 0 \end{pmatrix} \tag{2.0.3}$$

Now, $\triangle ABC$ can be plotted using vertices AB ,BC and CA .
Plot the $\triangle ABC$:

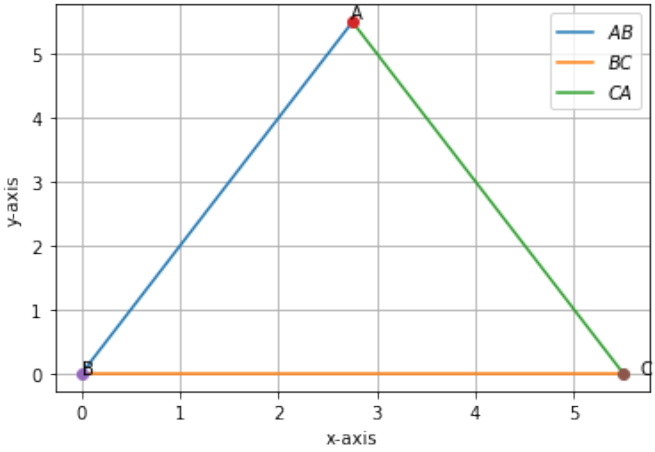

Fig. 2.1: $\triangle ABC$