3.3.1

AI25BTECH11017-SAI CHARAN

Question:
Draw a triangle $\triangle ABC$ with

$$BC = 6\,\text{cm}, \quad AB = 5\,\text{cm}, \quad \text{and } \angle ABC = 60°. \tag{0.1}$$
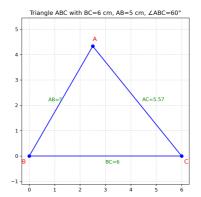
Solution:
Let us solve the given equation theoretically and then verify the solution computationally
According to the question,
Take

$$\mathbf{B} = \begin{pmatrix} 0 \\ 0 \end{pmatrix} \ \mathbf{C} = \begin{pmatrix} 6 \\ 0 \end{pmatrix} \ \mathbf{A} = \begin{pmatrix} 5\cos 60 \\ 5\sin 60 \end{pmatrix} \tag{0.2}$$

$$\mathbf{A} = \begin{pmatrix} 2.5 \\ 2.5\sqrt{3} \end{pmatrix} \tag{0.3}$$

Triangle ABC with BC=6 cm, AB=5 cm, ∠ABC=60°