Assignment-4
Latex Report

Fuzayil Bin Afzal Mir

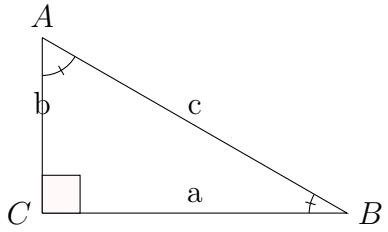
23/01/2021

- **Exercise 2.9**

1 Draw a $\triangle$ABC, given that a+b+c= 11, $\angle$B = 30° and $\angle$C = 90°

1.1 Solution

Figure of triangle ABC



It,s given that,

$$a + b + c = 11 \qquad (1)$$

Using sin rule we get

$$\frac{sinA}{a} = \frac{sinB}{b} = \frac{sinC}{c}$$

Using, $\frac{sinB}{b} = \frac{sinC}{c}$ $weget$,

$$(0)a + 2b - c = 0 \qquad (2)$$

Also,
$\text{Cos}(30°) = \frac{a}{c}$
$weget$,

$$2a + 0b - \sqrt{3}(c) = 0 \qquad (3)$$

hence from equations (1),(2) and (3) we got,

$\boxed{\text{a=4.03}}$

$\boxed{\text{b=2.32}}$

$\boxed{\text{c=4.65}}$

1.2 Figure of △ABC,

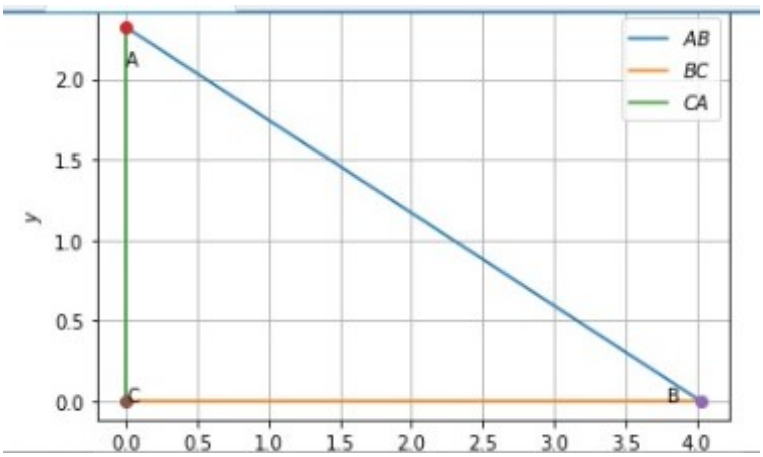


Figure 1: Fig generated using python

Download the python code used for generating the figure from here:

https://github.com/FuzayilMir/Assignment-4-Construct/blob/main/TRICODE.py