ASSIGNMENT-1

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written as,

$$y = z\left(\frac{\sin Y}{\sin Z}\right) \quad = 6\left(\frac{\sin 100°}{\sin 50°}\right) = 7.7134 \quad (2.0.4)$$

The vertices of $\triangle XYZ$ are

$$\mathbf{X} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \mathbf{Y} = 6\begin{pmatrix} \cos 30° \\ \sin 30° \end{pmatrix}, \mathbf{Z} = \begin{pmatrix} 7.7134 \\ 0 \end{pmatrix} \quad (2.0.5)$$

The values of X, Y and Z are substituted and the triangle is plotted as given above.

1 QUESTION NO-2.19

If $XY = 6, \angle X = 30°$ and $\angle Y = 100°$. Can you draw a triangle?

2 SOLUTION

Angle Sum Property

$$\angle Z° = \angle 180° - \angle X° + \angle Y° \quad (2.0.1)$$

$$\angle Z° = \angle 50° \quad (2.0.2)$$

To find the side y by using the formula
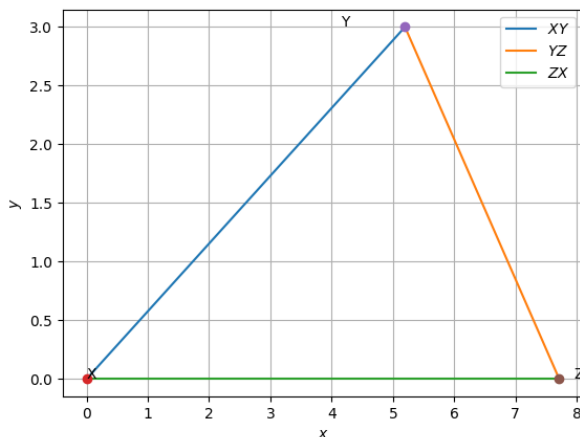
$$\frac{\sin X}{x} = \frac{\sin Y}{y} = \frac{\sin Z}{z} \quad (2.0.3)$$

Fig. 0: Constructed Triangle