# 3.2.11

EE25BTECH11065 - Yoshita.J

**Question**:
Draw an Right angle triangle $\triangle ABC$ in which $\boldsymbol{BC}$ = 12 cm, $\boldsymbol{AB}$ = 5 cm, and $\angle B = 90°$.
**Solution:**

| Variable | Value |
|---|---|
| $\boldsymbol{BC}$ | 12 cm |
| $\boldsymbol{AB}$ | 5 cm |
| $\angle$**B** | 90° |

TABLE 0

$$AB^2 = 5^2 = 25, \tag{0.1}$$
$$BC^2 = 12^2 = 144. \tag{0.2}$$

According to the Pythagorean theorem:

$$AC^2 = AB^2 + BC^2 \tag{0.3}$$

Now substituting in the values:

$$AC^2 = 25 + 144 \tag{0.4}$$
$$= 169. \tag{0.5}$$

Thus, we find:

$$AC = \sqrt{169} \tag{0.6}$$
$$= 13\,\text{cm}. \tag{0.7}$$

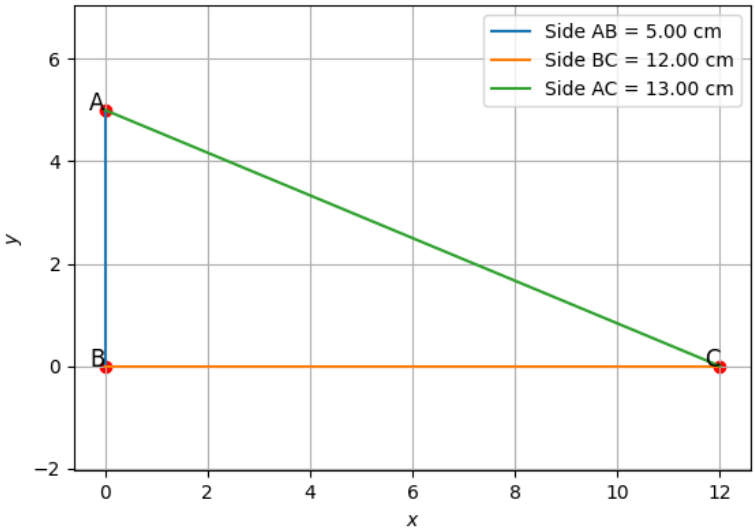
Side AB = 5.00 cm
Side BC = 12.00 cm
Side AC = 13.00 cm
A
B
C
y
x
6
4
2
0
−2
0
2
4
6
8
10
12

Fig. 0.1