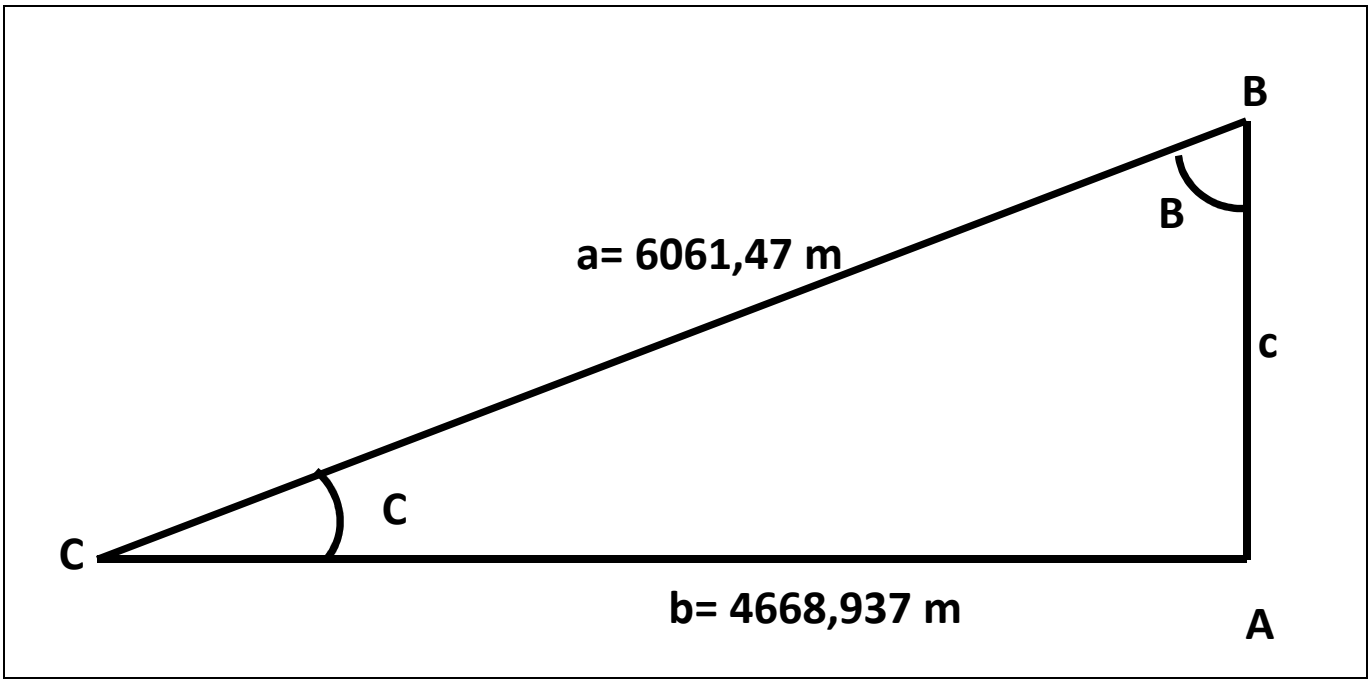
PROBLEMAS DE TRIGONOMETRÍA

Problema 53:

La hipotenusa de un triángulo rectángulo mide 6061,47m., y un cateto b= 4668,937 m. Calcular los demás elementos.

Solución Problema 53:

Hacemos el croquis:



Aplicando el teorema de Pitágoras:

$$c^2 = a^2 - b^2$$

$$\mathrm{c} = \sqrt{a^2 - b^2} = \sqrt{6061{,}47^2 - 4668{,}937^2}$$

$$\mathrm{c} = \sqrt{36.741.418{,}5609 - 21.798.972{,}709969} = \sqrt{14.942.445{,}850931}$$

$$\mathbf{c = 3.865{,}546\ m}$$

$$tg\ B = \frac{b}{c} = \frac{4668{,}937}{3.865{,}546} = 1{,}2078$$

$$\boldsymbol{B} = \mathrm{arctg}\ 1{,}2078 = \mathbf{50º{,}3776} = \mathbf{50º22´39´´{,}36}$$

$$\boldsymbol{C} = 90º - 50º{,}3776 = 39º{,}6223 = \mathbf{39º37´20´´{,}28}$$