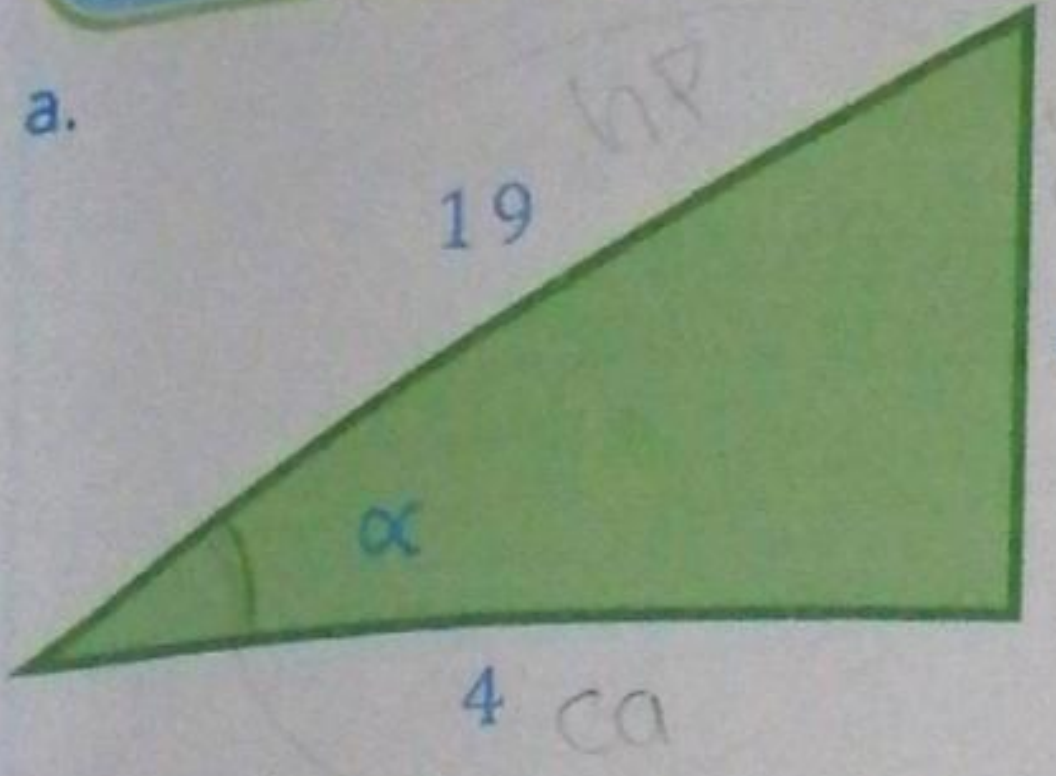


-1 = despejar angulo



1 Hallar las razones trigonométricas.



Sen $\alpha = 28,22$

Csc $\alpha = 28,28$

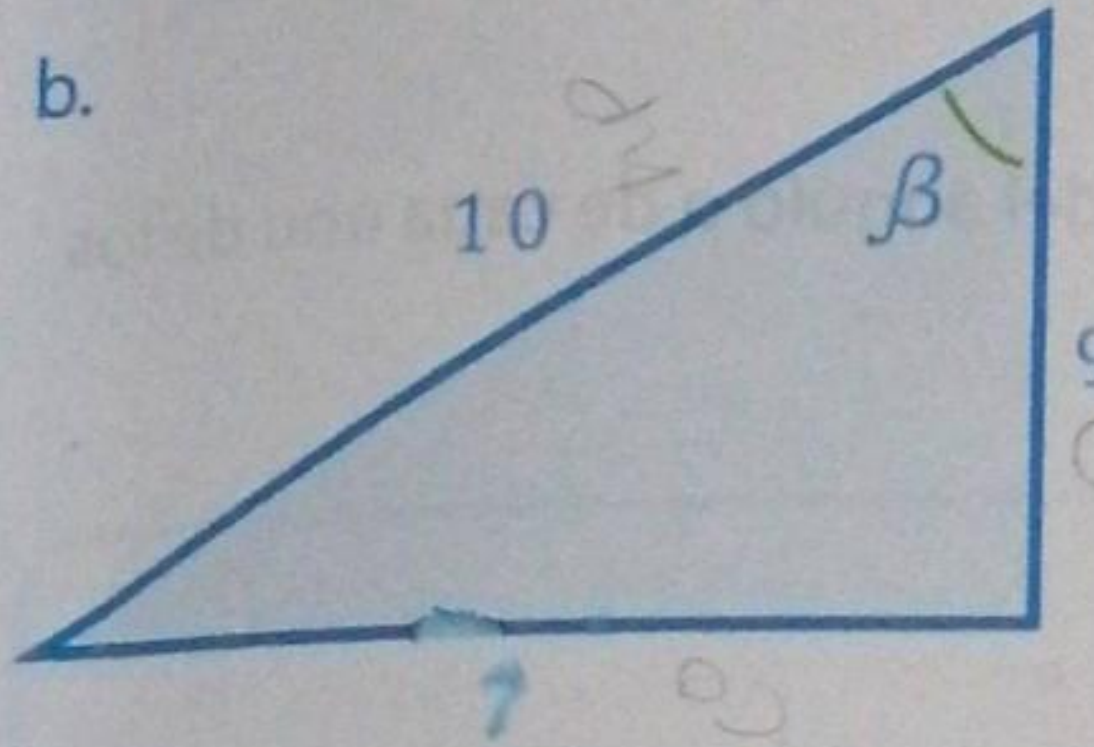
Cos $\alpha = 77,87$

Sec $\alpha = 77,84$

Tan $\alpha = 66,03$

Cot $\alpha = 66,058$

ca, co, hp
 2, 3, 4
 2, 3, 4
 2, 3, 4



Sen $\beta = 44,42$

Csc $\beta = 44,7$

Cos $\beta = 25,84$

Sec $\beta = 25,83$

Tan $\beta = 37,847$

Cot $\beta = 37,897$

1 Realizar las siguientes operaciones.

a) $Cot 30^\circ + Tan 30^\circ$
 $1,73 + 0,577$
 $= 2,307$

c) $Sen 30^\circ + Cos 30^\circ$
 $0,5 + 0,86$
 $= 1,36$

e) $Cot 60^\circ + Csc 60^\circ$
 $0,577 + 1,15$
 $= 1,73$

b) $Sec 30^\circ - Cot 60^\circ$
 $1,15 - 0,57$
 $= 0,58$

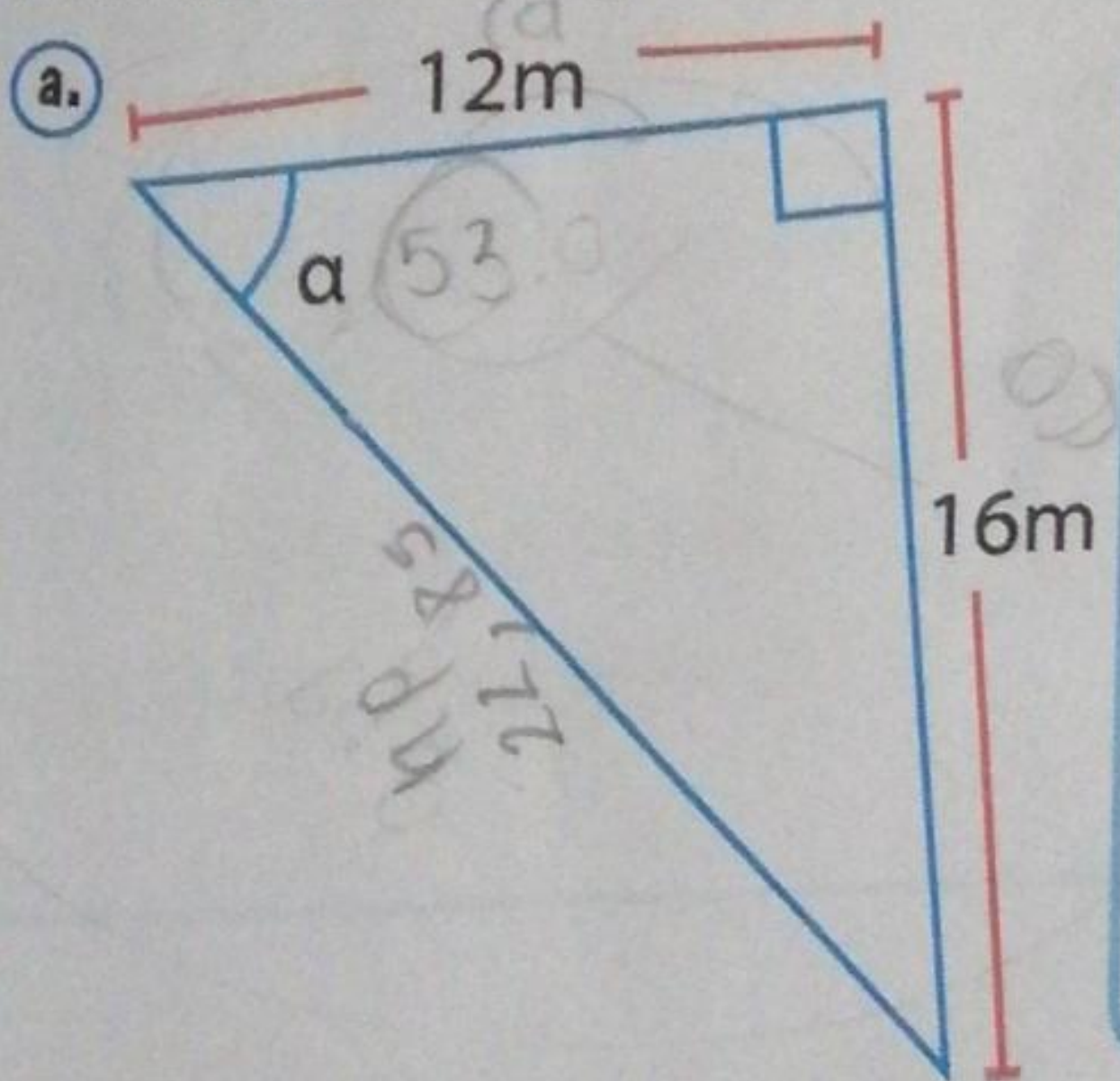
d) $Cos 60^\circ + Tan 45^\circ$
 $0,5 + 1$
 $= 1,5$

Sen
 Coseno
 tangente
 secante
 cotangente

ca
 hp
 co
 ca
 co
 ca
 co

ángulo
 lados

2 Halla las razones trigonométricas del ángulo α en cada triángulo rectángulo.



$Tan \alpha = \frac{co}{ca}$

$Sen \alpha = \frac{co}{hp}$

$Tan \alpha = \frac{16}{12} = 1,33$

$Sen \alpha = \frac{16}{hp}$

$\alpha = Tan^{-1}(1,33)$

$Sen 53 = \frac{16}{hp}$

$\alpha = 53,06$

$hp = \frac{16}{Sen 53}$

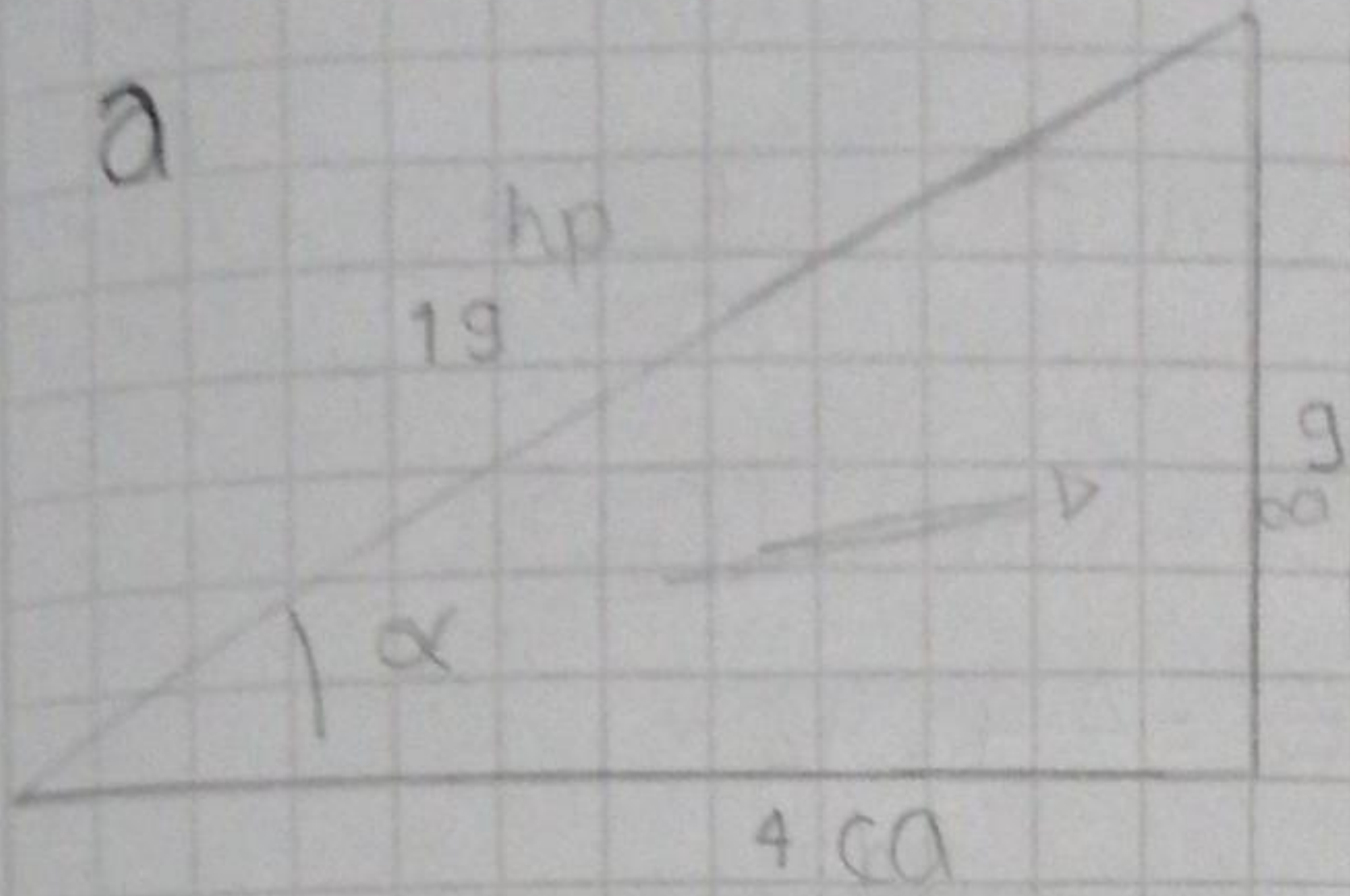
$hp = \frac{16}{0,7}$

$hp = 22,8503$

1

MODULO

a



$$\circ \text{ Sen } \alpha = \frac{\text{co}}{\text{hp}}$$

$$\text{Sen } \alpha = \frac{9}{19} = 0,473 \checkmark$$

$$\alpha = \text{Sen}^{-1}(0,473)$$

$$\alpha = 28,12 \checkmark$$

$$\circ \text{ Tan } \alpha = \frac{\text{co}}{\text{ca}}$$

$$\text{Tan } \alpha = \frac{9}{4} = 2,25 \checkmark$$

$$\alpha = \text{Tan}^{-1}(2,25)$$

$$\alpha = 66,03 \checkmark$$

$$\circ \text{ Cos } \alpha = \frac{\text{ca}}{\text{hp}}$$

$$\text{Cos } \alpha = \frac{4}{19} = 0,210 \checkmark$$

$$\alpha = \text{Cos}^{-1}(0,210)$$

$$\alpha = 77,87 \checkmark$$

$$\alpha = \frac{1}{\text{Tan}(2,8)}$$

$$\circ \text{ Sec } \alpha = \frac{\text{hp}}{\text{ca}}$$

$$\text{Sec } \alpha = \frac{19}{4} = 4,75$$

$$\alpha = \text{Sen}^{-1}(4,75)$$

$$\alpha = 77,84 \checkmark$$

$$\circ \text{ Csc } \alpha = \frac{\text{hp}}{\text{co}}$$

$$\text{Csc } \alpha = \frac{19}{9} = 2,111 \checkmark$$

$$\alpha = \text{Cos}^{-1}(2,111)$$

$$\alpha = 78,28 \checkmark$$

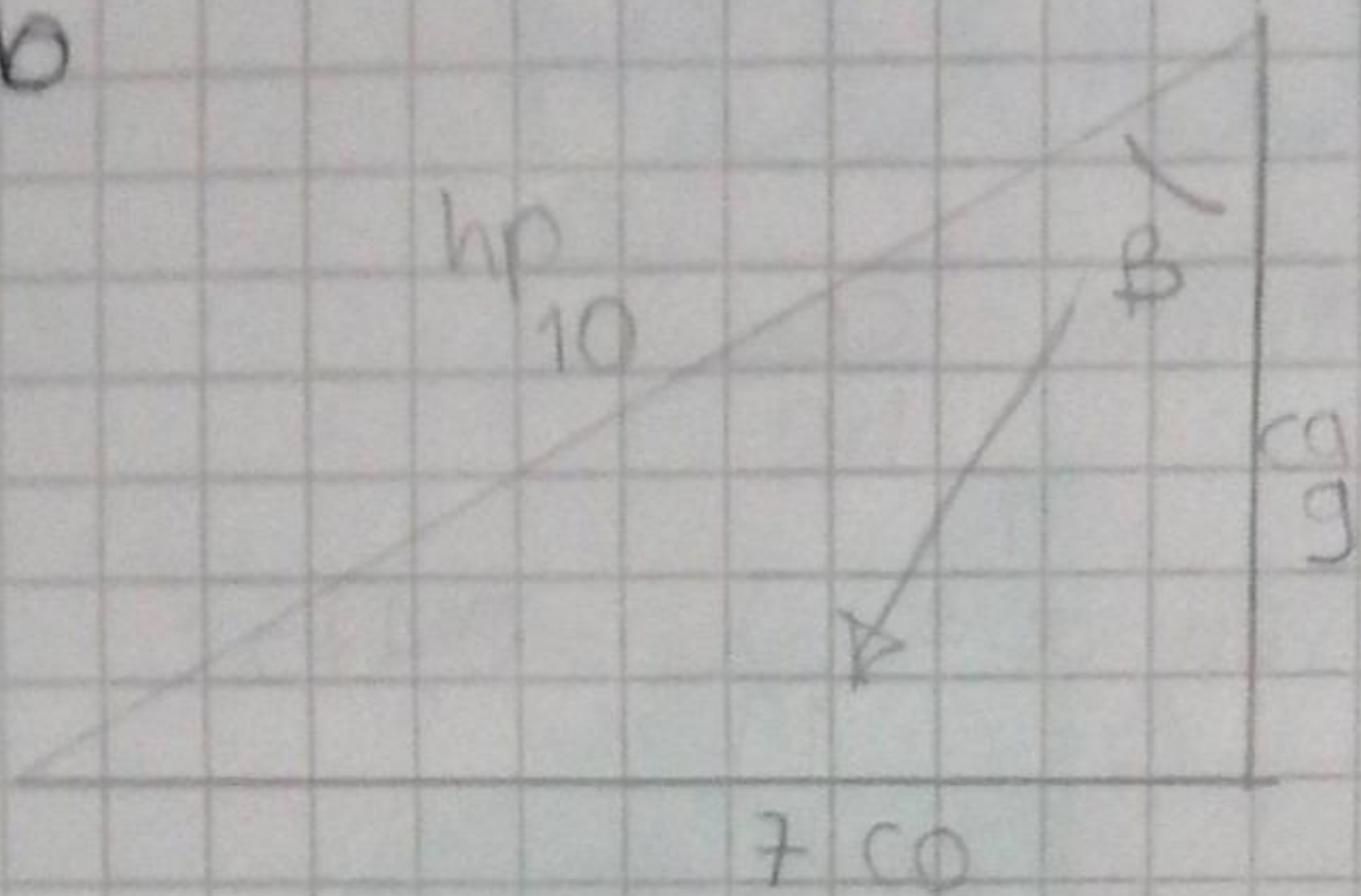
$$\circ \text{ Cot } \alpha = \frac{\text{ca}}{\text{co}}$$

$$\text{Cot } \alpha = \frac{4}{9} = 0,444 \checkmark$$

$$\alpha = \text{Tan}^{-1}(0,444)$$

$$\alpha = 66,058 \checkmark$$

b



$$\circ \text{Sen } \beta = \frac{\text{co}}{\text{hp}}$$

$$\text{Sen } \beta = \frac{7}{10} = 0,7 \checkmark$$

$$\beta = \text{Sen}^{-1}(0,7)$$

$$\beta = 44,42 \checkmark$$

$$\circ \text{Tan } \beta = \frac{\text{co}}{\text{ca}}$$

$$\text{Tan } \beta = \frac{7}{9} = 0,777 \checkmark$$

$$\beta = \text{Tan}^{-1}(0,777)$$

$$\beta = 37,847 \checkmark$$

$$\circ \text{Cos } \beta = \frac{\text{ca}}{\text{hp}}$$

$$\text{Cos } \beta = \frac{9}{10} = 0,9 \checkmark$$

$$\beta = \text{Cos}^{-1}(0,9)$$

$$\beta = 25,84 \checkmark$$

$$\circ \text{Sec } \beta = \frac{\text{hp}}{\text{ca}}$$

$$\text{Sec } \beta = \frac{10}{9} = 1,111 \checkmark$$

$$\beta = \text{Sec}^{-1}(1,111)$$

$$\beta = 25,83 \checkmark$$

$$\circ \text{Csc } \beta = \frac{\text{hp}}{\text{co}}$$

$$\text{Csc } \beta = \frac{10}{7} = 1,42 \checkmark$$

$$\beta = \text{Csc}^{-1}(1,42)$$

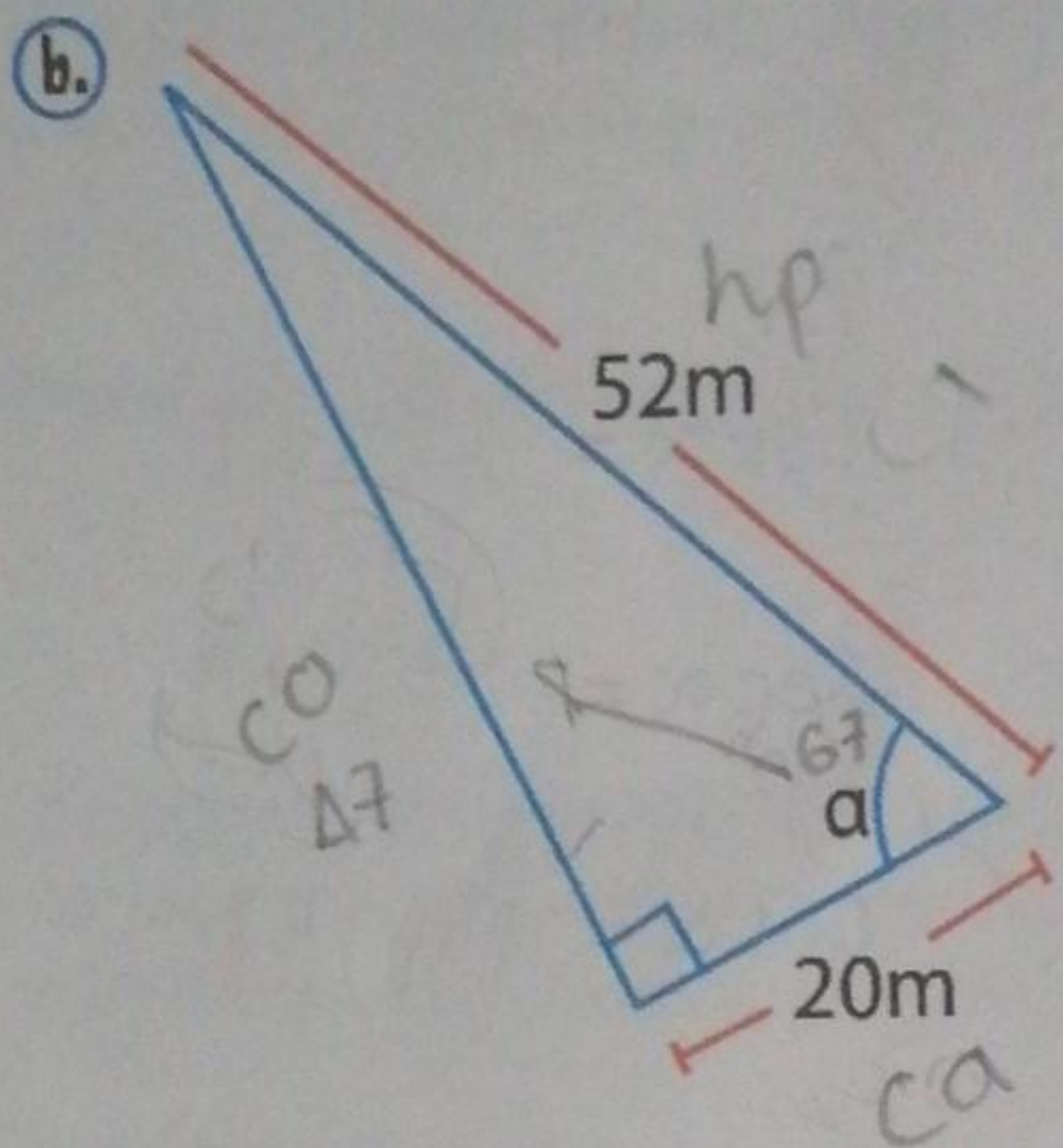
$$\beta = 44,7 \checkmark$$

$$\circ \text{Cot } \beta = \frac{\text{ca}}{\text{co}}$$

$$\beta = 37,897 \checkmark$$

$$\text{Cot } \beta = \frac{9}{7} = 1,285 \checkmark$$

$$\beta = \text{Cot}^{-1}(1,285)$$



$$\cos \alpha = \frac{ca}{hp}$$

$$\tan \alpha = \frac{co}{ca}$$

$$\cos \alpha = \frac{20}{52} = 0,38$$

$$\tan \alpha = \frac{co}{20}$$

$$\alpha = \cos^{-1}(0,38)$$

$$\tan 67 = \frac{co}{20}$$

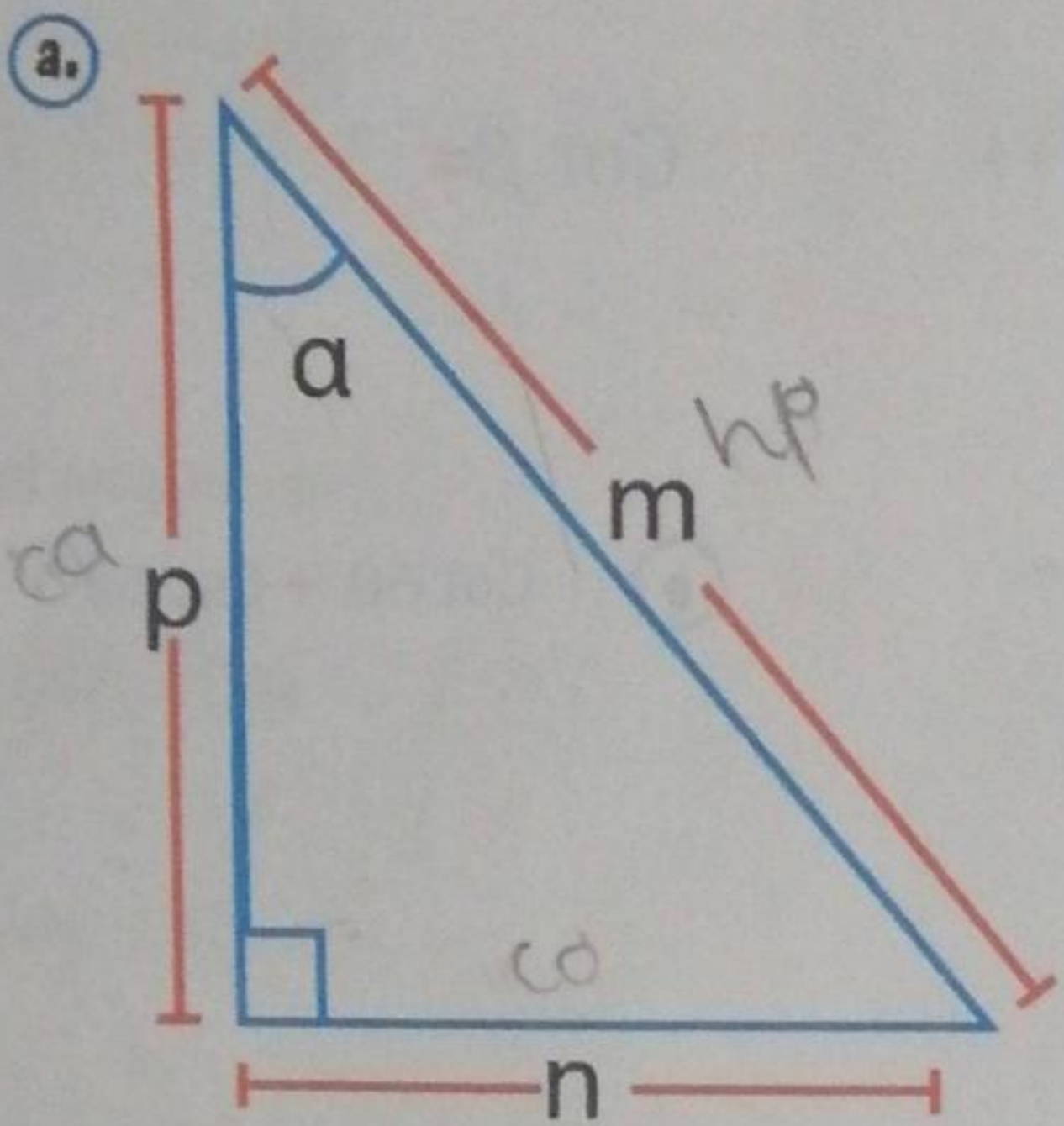
$$\alpha = 67,66$$

$$20 \cdot \tan 67 = co$$

$$20 \cdot 2,35 = co$$

$$co = 47$$

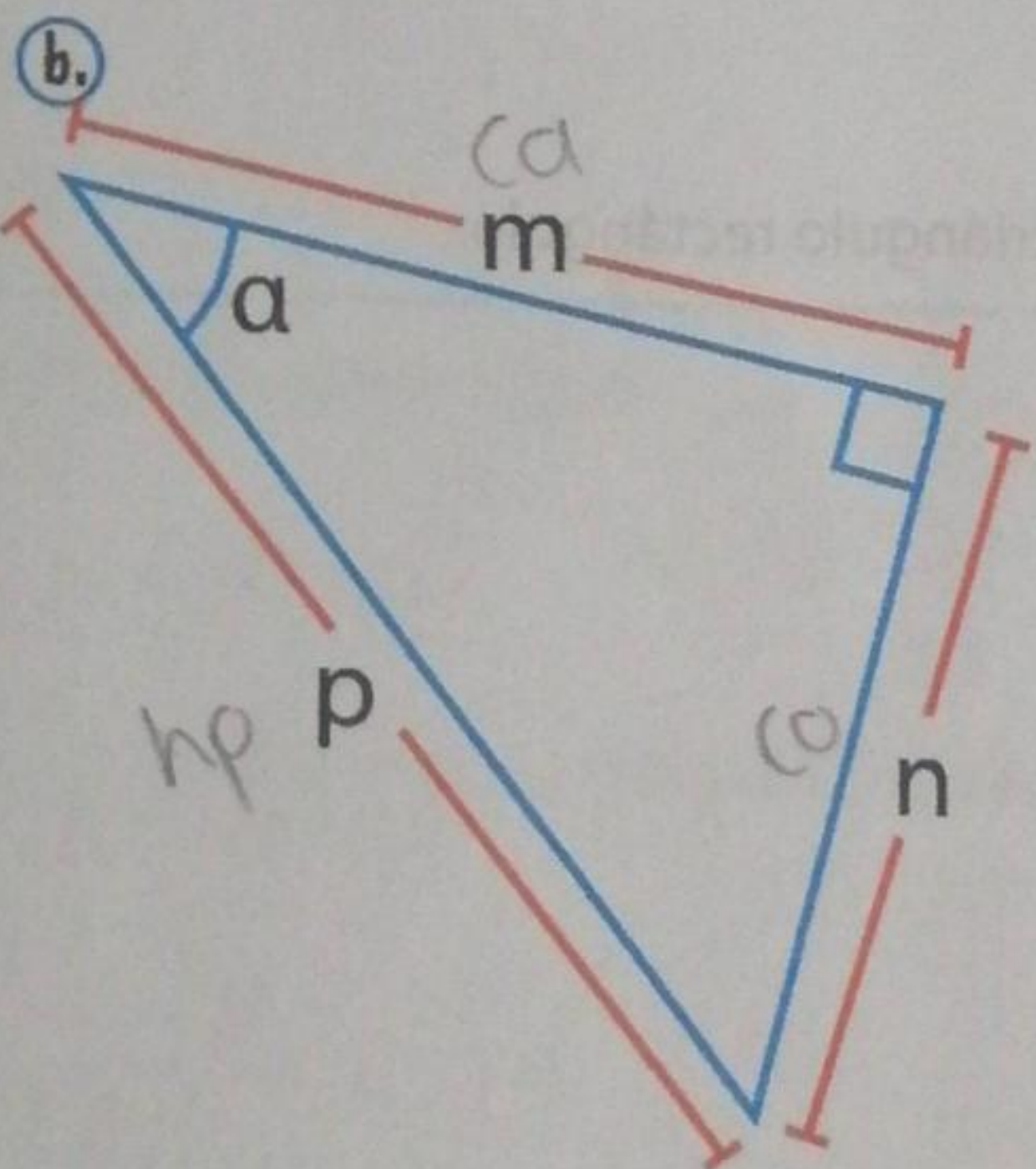
3 Escribe, en función de m, n y p, el seno, el coseno y la tangente del ángulo α de cada uno de los triángulos rectángulos que se muestran a continuación.



$$\text{Sen } \alpha = \frac{n}{m}$$

$$\cos \alpha = \frac{p}{m}$$

$$\tan \alpha = \frac{n}{p}$$



$$\text{Sen } \alpha = \frac{n}{m}$$

$$\cos \alpha = \frac{p}{m}$$

$$\tan \alpha = \frac{n}{p}$$