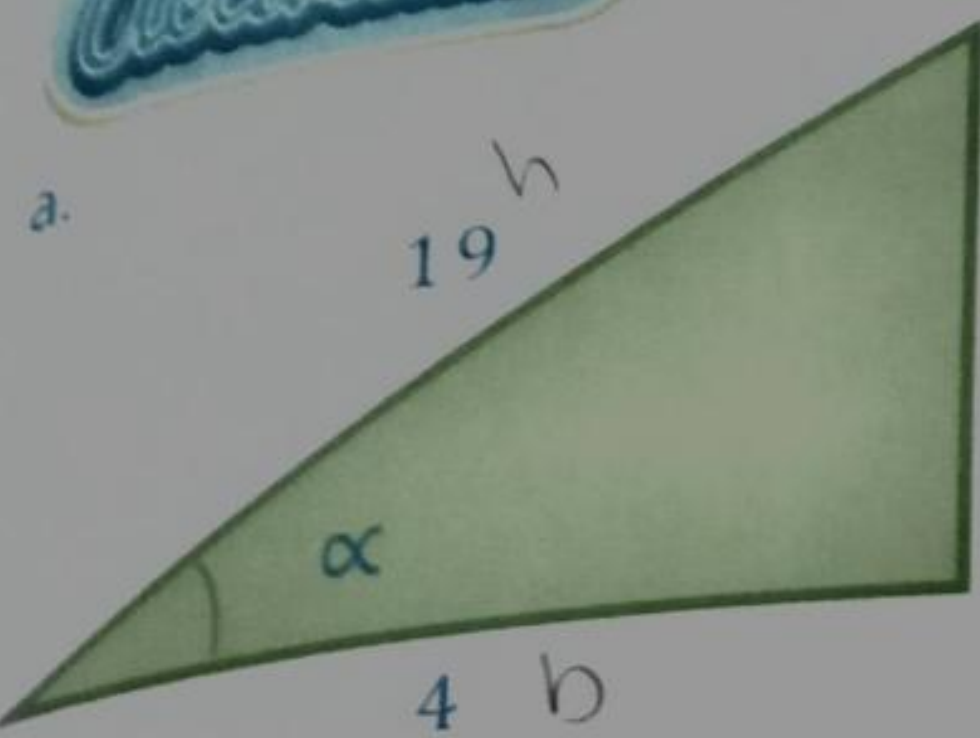


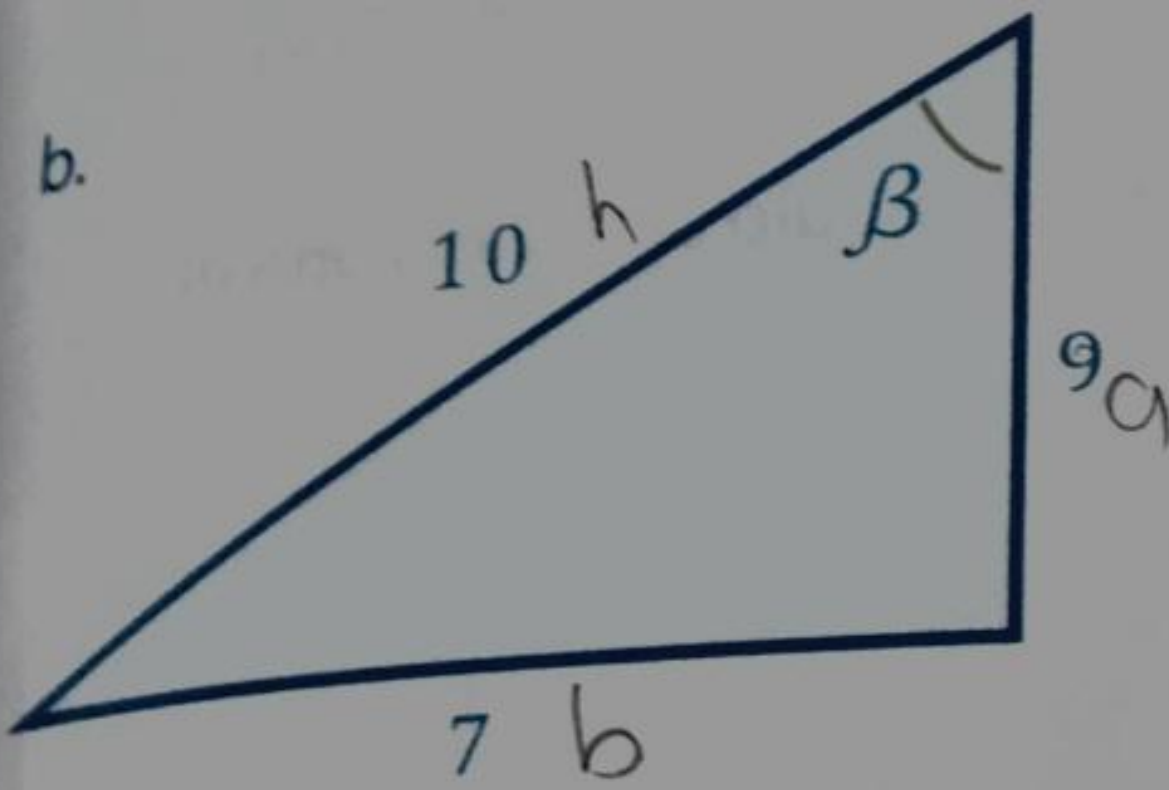
1 Hallar las razones trigonométricas.



$$\text{Sen } \alpha = \frac{a}{h} = \frac{9}{19} = 0,47 \quad \text{Csc } \alpha = \frac{h}{a} = \frac{19}{9} = 2,11$$

$$\text{Cos } \alpha = \frac{b}{h} = \frac{4}{19} = 0,21 \quad \text{Sec } \alpha = \frac{h}{b} = \frac{19}{4} = 4,75$$

$$\text{Tan } \alpha = \frac{a}{b} = \frac{9}{4} = 2,25 \quad \text{Cot } \alpha = \frac{b}{a} = \frac{4}{9} = 0,44$$



$$\text{Sen } \beta = \frac{a}{h} = \frac{9}{10} = 0,9 \quad \text{Csc } \beta = \frac{h}{a} = \frac{10}{9} = 1,11$$

$$\text{Cos } \beta = \frac{b}{h} = \frac{7}{10} = 0,7 \quad \text{Sec } \beta = \frac{h}{b} = \frac{10}{7} = 1,42$$

$$\text{Tan } \beta = \frac{a}{b} = \frac{9}{7} = 1,28 \quad \text{Cot } \beta = \frac{b}{a} = \frac{7}{9} = 0,77$$

1 Realizar las siguientes operaciones.

a)  $\text{Cot } 30^\circ + \text{Tan } 30^\circ$   
 $\text{Cot } (30^\circ) = \sqrt{3}$   
 $\text{Tan } (30^\circ) = \frac{\sqrt{3}}{3} = \sqrt{3} + \frac{\sqrt{3}}{3}$

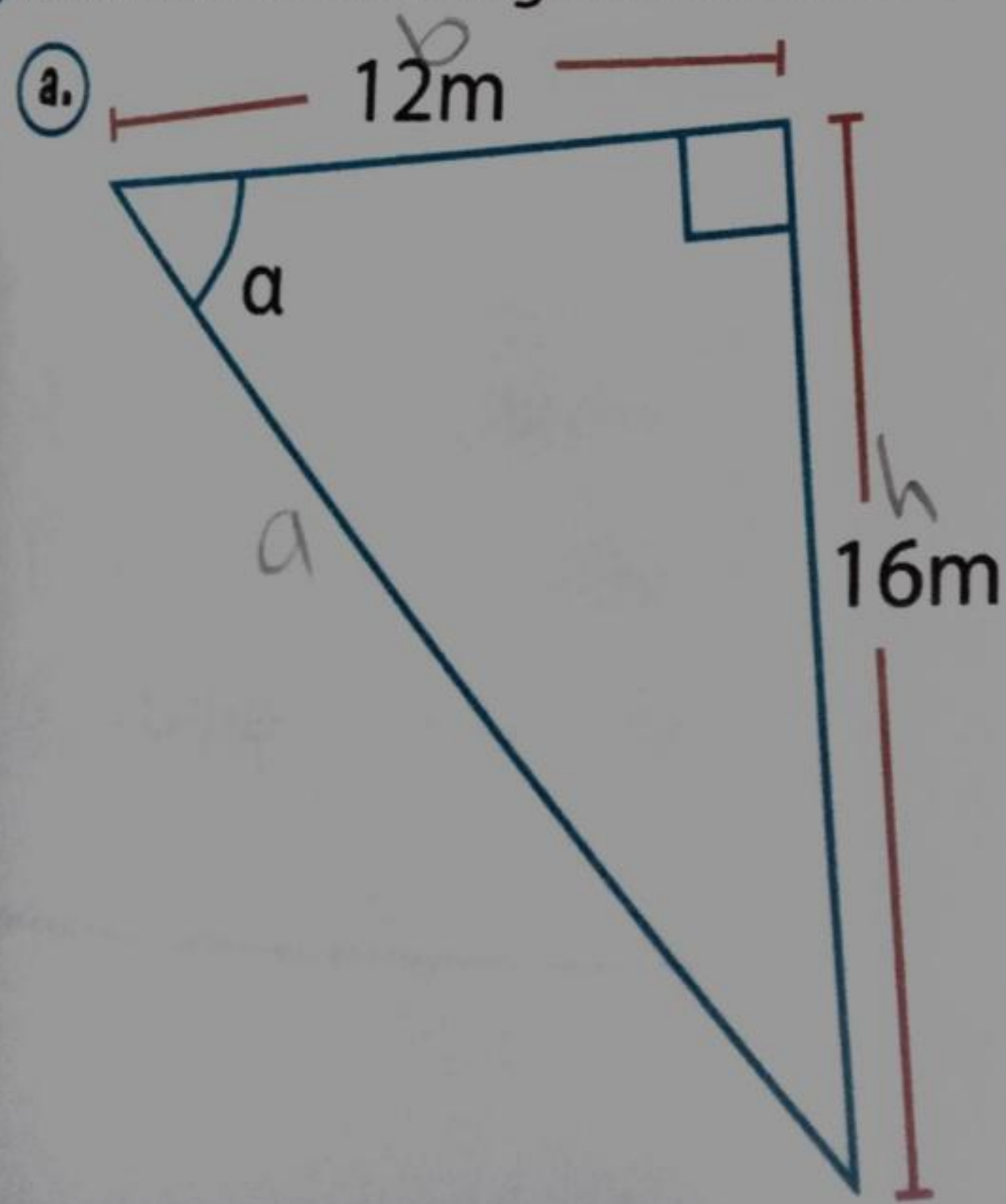
c)  $\text{Sen } 30^\circ + \text{Cos } 30^\circ$   
 $\text{Sen } (30^\circ) = \frac{1}{2}$   
 $\text{Cos } (30^\circ) = \frac{\sqrt{3}}{2} = \frac{1}{2} + \frac{\sqrt{3}}{2}$

e)  $\text{Cot } 60^\circ + \text{Csc } 60^\circ$   
 $\text{Cot } (60^\circ) = \frac{\sqrt{3}}{3}$   
 $\text{Csc } (60^\circ) = \frac{\sqrt{3}}{2}$

b)  $\text{Sec } 30^\circ - \text{Cot } 60^\circ$   
 $\text{Sec } (30^\circ) = \frac{\sqrt{3}}{2}$   
 $\text{Cot } (60^\circ) = \frac{\sqrt{3}}{3} = \frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{3}$

d)  $\text{Cos } 60^\circ + \text{Tan } 45^\circ$   
 $\text{Cos } (60^\circ) = \frac{1}{2}$   
 $\text{Tan } (45^\circ) = 1 = \frac{1}{2} + 1$

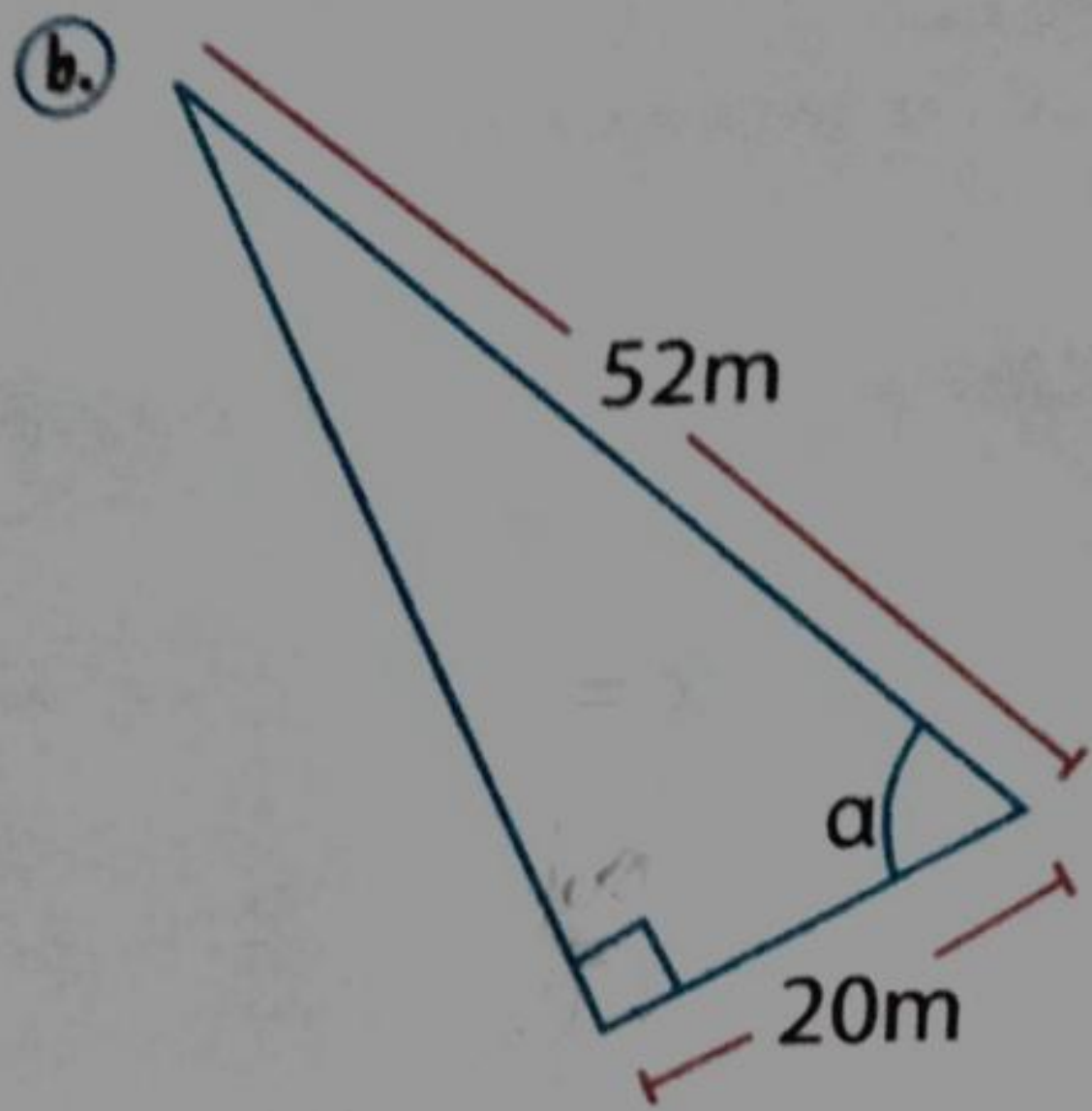
Halla las razones trigonométricas del ángulo alpha en cada triángulo rectángulo.



$$\text{Cos} = \frac{b}{h} = \frac{12}{16} = \frac{3}{4}$$

$$\text{Sec} = \frac{h}{b} = \frac{16}{12} = \frac{1}{\text{Cos}(\frac{4}{3})}$$

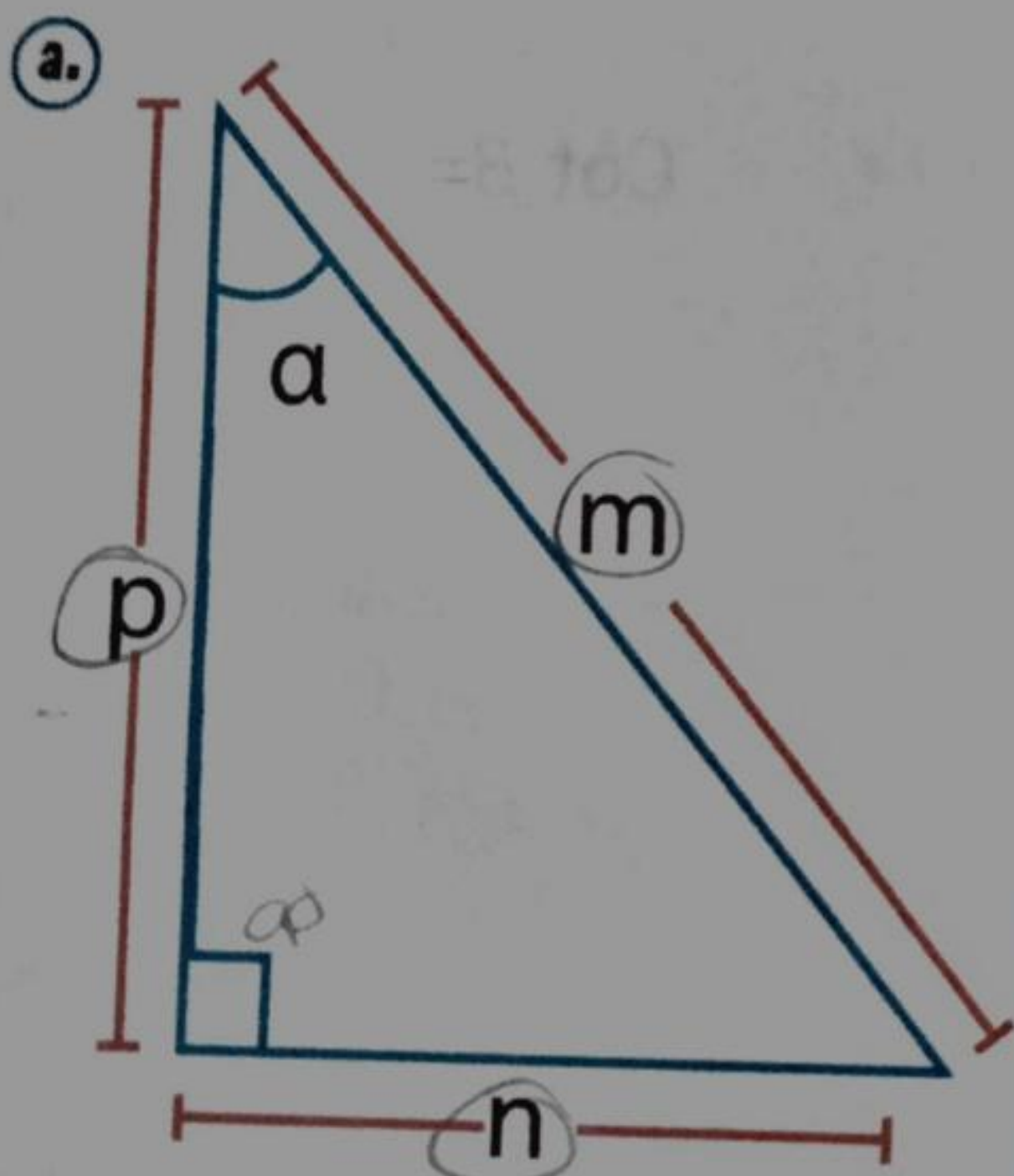




$$\cos \frac{b}{h} = \frac{13}{5}$$

$$\sec = \frac{h}{b} = \frac{5}{13}$$

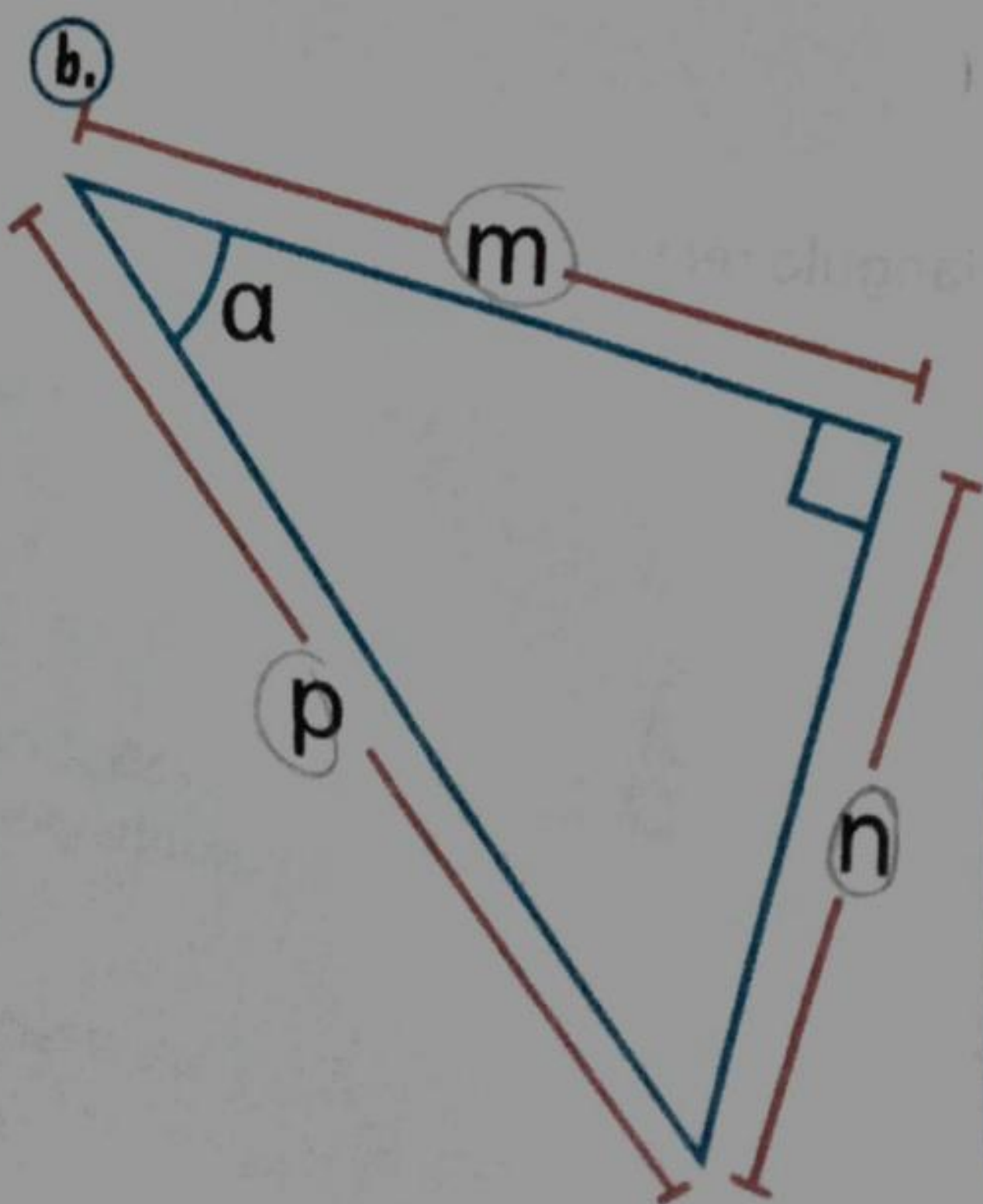
3 Escribe, en función de m, n y p, el seno, el coseno y la tangente del ángulo  $\alpha$  de cada uno de los triángulos rectángulos que se muestran a continuación.



$$\cos(\alpha) = p/m$$

$$\text{Sen}(\alpha) = n/m$$

$$\tan(\alpha) = n/p$$



$$\cos(\alpha) = m/p$$

$$\text{Sen}(\alpha) = n/p$$

$$\tan(\alpha) = n/m$$