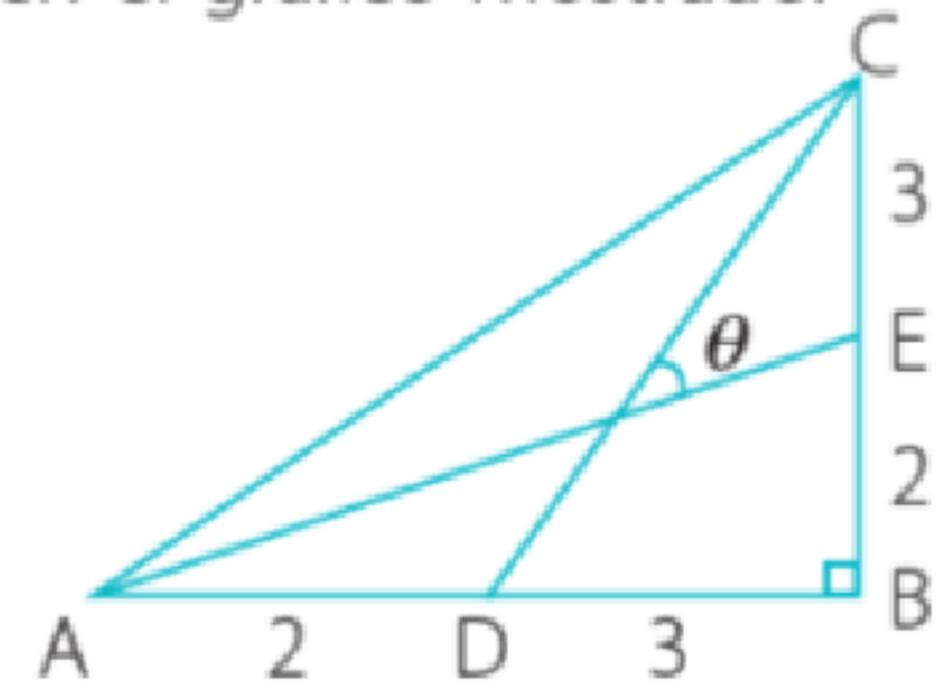
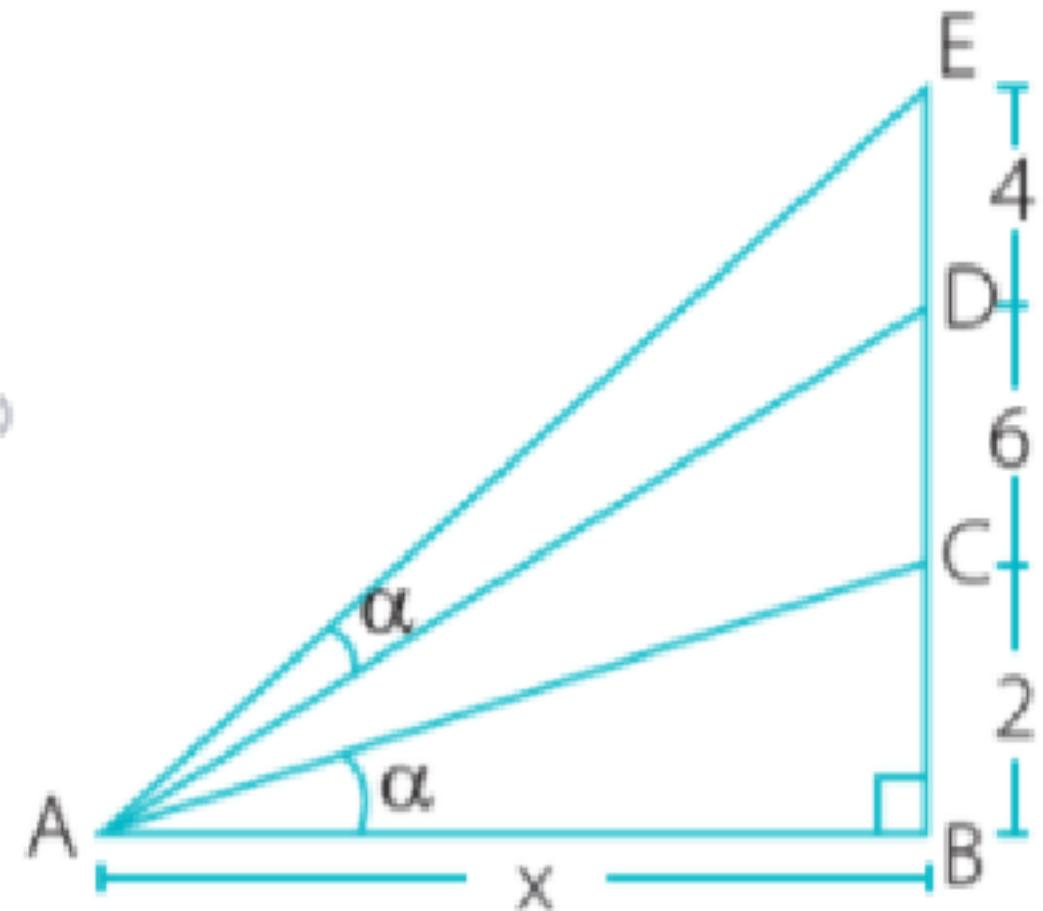


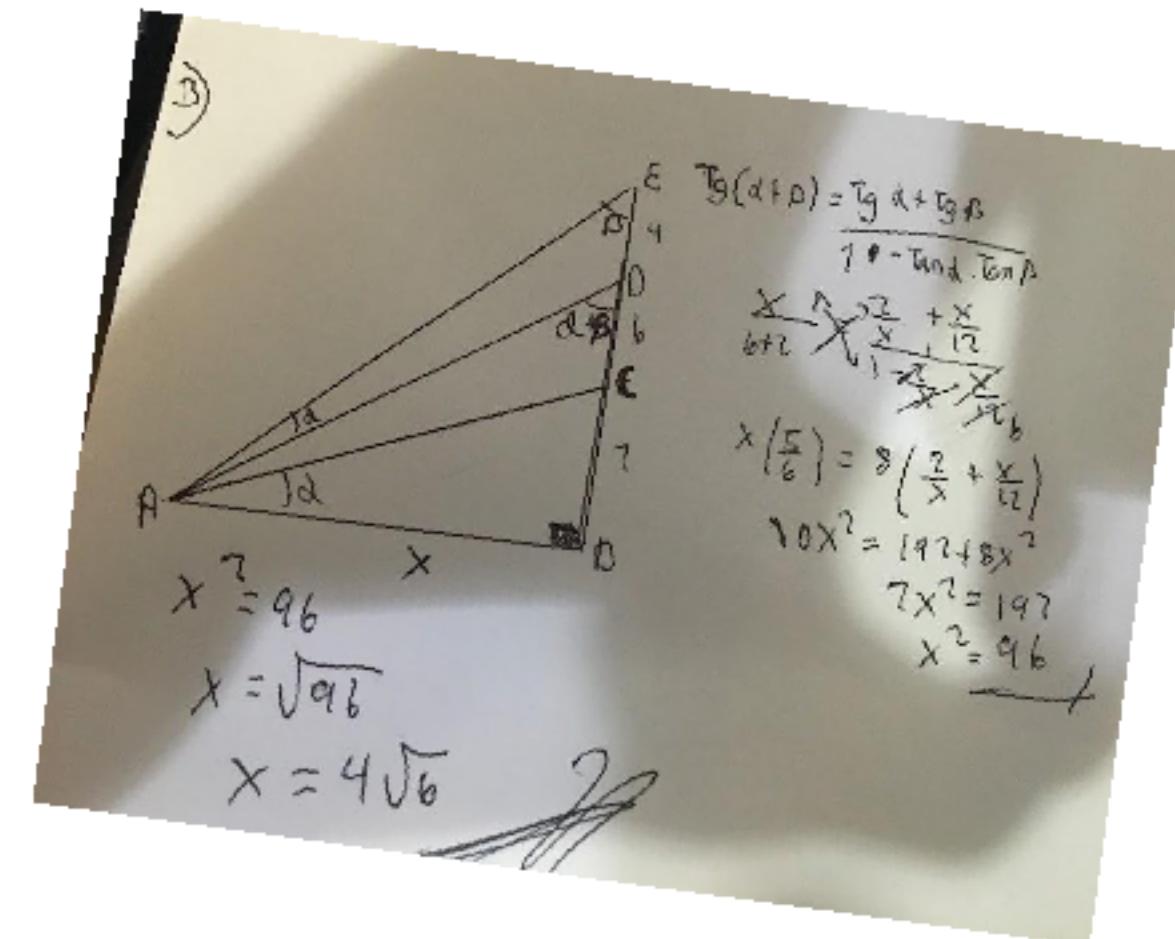
Calcula $\operatorname{tg}\theta$ en el gráfico mostrado.



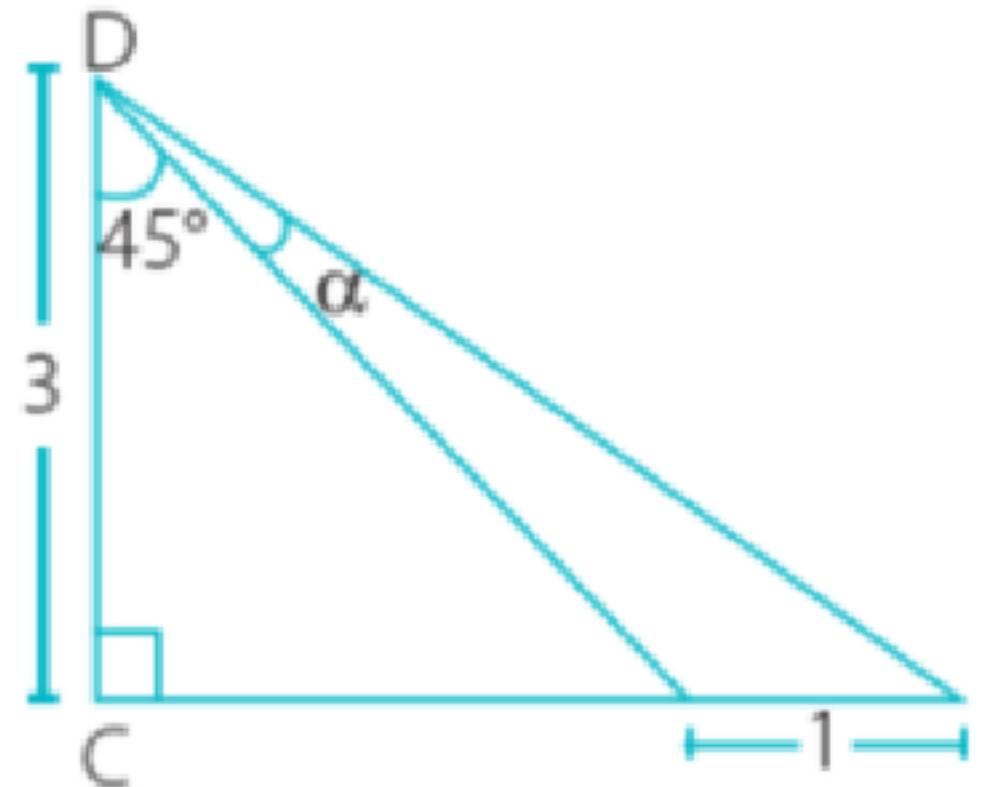
Del gráfico mostrado, calcula el valor de "x".



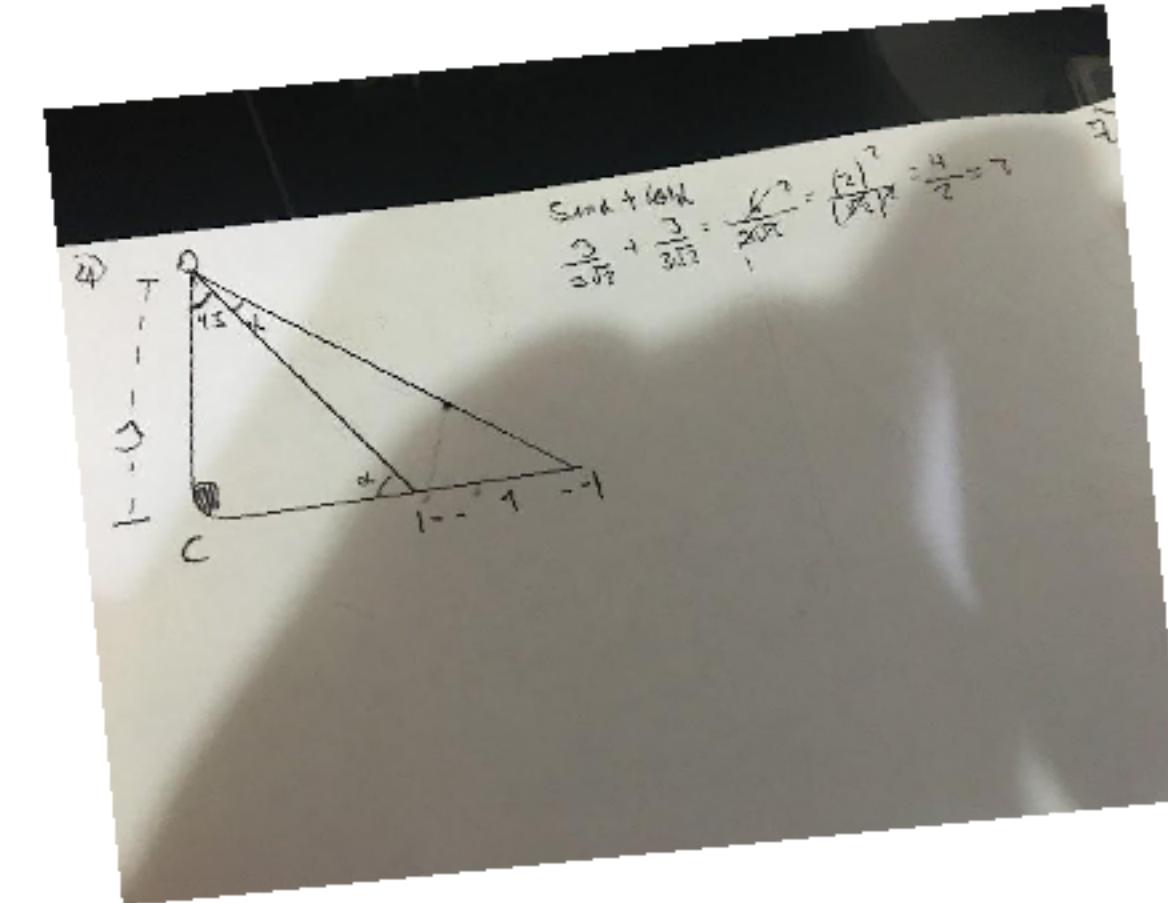
- a. $4\sqrt{3}$
- b. $4\sqrt{6}$
- c. $3\sqrt{6}$
- d. $8\sqrt{6}$
- e. $6\sqrt{3}$



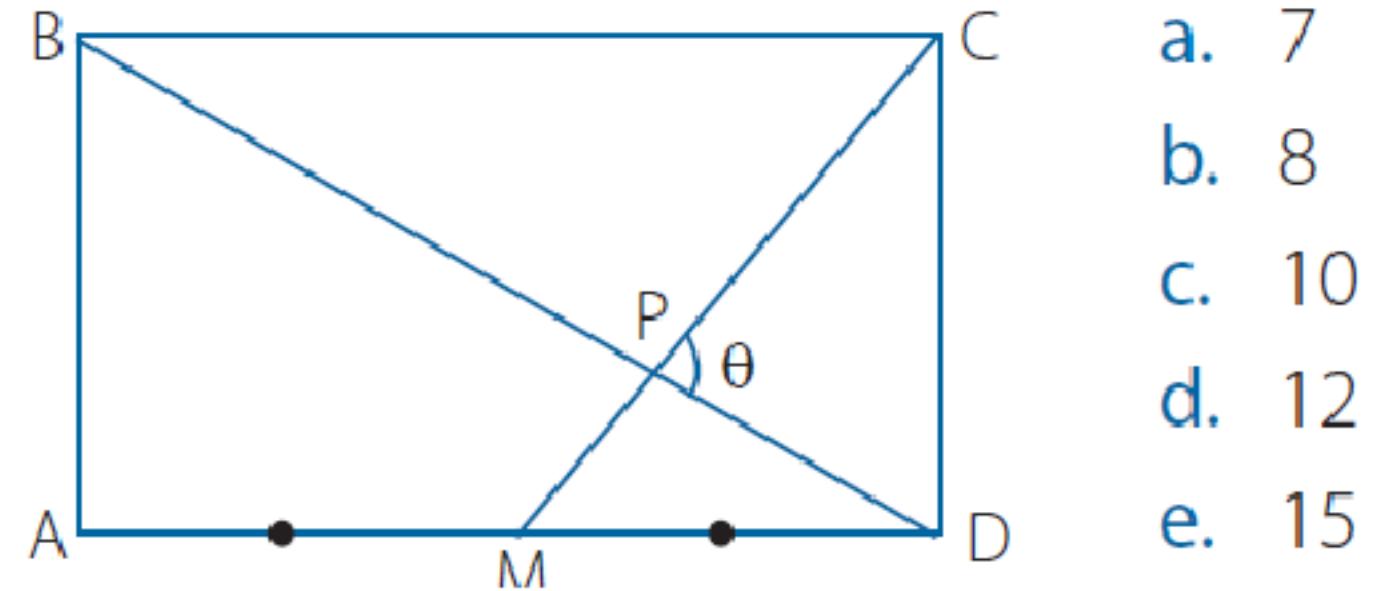
En la figura mostrada, calcula $\operatorname{sen}\alpha + \operatorname{cos}\alpha$.



- a. 3
- b. 4
- c. 2
- d. $5\sqrt{2}/3$
- e. $2\sqrt{2}/3$



Calcula el valor de $\operatorname{tg} \theta$ en la figura mostrada.



- a. 7
- b. 8
- c. 10
- d. 12
- e. 15

Calcula:

$$\frac{\tan 65^\circ - \tan 25^\circ}{\tan 40^\circ}$$

b)

$$\frac{\tan 65^\circ - \tan 25^\circ}{\tan 40^\circ} = \frac{\tan(65^\circ - 25^\circ)}{\tan 40^\circ} = \frac{a}{b}$$

a) $\frac{\tan 65^\circ - \tan 75^\circ}{1 + \tan 65^\circ \cdot \tan 75^\circ}$

b) $= \tan 40^\circ$

$\tan 40^\circ = \frac{\tan 65^\circ - \tan 75^\circ}{1 + \tan 65^\circ \cdot \tan 75^\circ}$

$\frac{1}{1 + \tan 65^\circ \cdot \tan 75^\circ} = \frac{\tan 65^\circ - \tan 75^\circ}{\tan 40^\circ}$

$2 = \frac{\tan 65^\circ - \tan 75^\circ}{\tan 40^\circ}$

2) $\tan(2+3) = \frac{\tan 2 + \tan 3}{1 - \tan 2 \cdot \tan 3} \rightarrow$ angular computation

$1 = \frac{\tan 2 + \frac{2}{3}}{1 - \frac{2}{3} \tan 2}$

$1 - \frac{2}{3} \tan 2 = \tan 2 + \frac{2}{3}$

$\frac{1}{3} = \frac{5}{3} \tan 2$

$\frac{1}{5} = \tan 2$

i) $\dots - a$

En un triángulo ABC:

$$\frac{\tan A}{2} = \frac{\tan B}{3} = \frac{\tan C}{4}$$

$$\text{Calcula: } L = \sqrt{6} \tan A + 3$$

③ $\frac{\tan A}{2k} = \frac{\tan B}{3k} = \frac{\tan C}{4k} \Leftrightarrow$

$\tan A + \tan B + \tan C \neq \tan A \cdot \tan B \cdot \tan C$

$2k + 3k + 4k = 2k \cdot 3k \cdot 4k$

$9k = 24k^3$

$9 = 24k^2$

$24k^2 = 9$

$8k^2 = 3$

$k^2 = \frac{3}{8}$

$k = \sqrt{\frac{3}{8}}$

$L = \frac{3}{2}, 2+3$

$L = \frac{6}{\pi} + 3$

$L = \frac{6+b}{2}$

$b = 12 = 6 \sqrt{1}$

$L = \sqrt{6 \cdot \frac{3}{8}} \cdot 2+3$

$L = \sqrt{\frac{9}{8}} \cdot 2+3$

$L = \sqrt{\frac{9}{8}} \cdot 2+3$

$L = \sqrt{6} \tan A + 3$

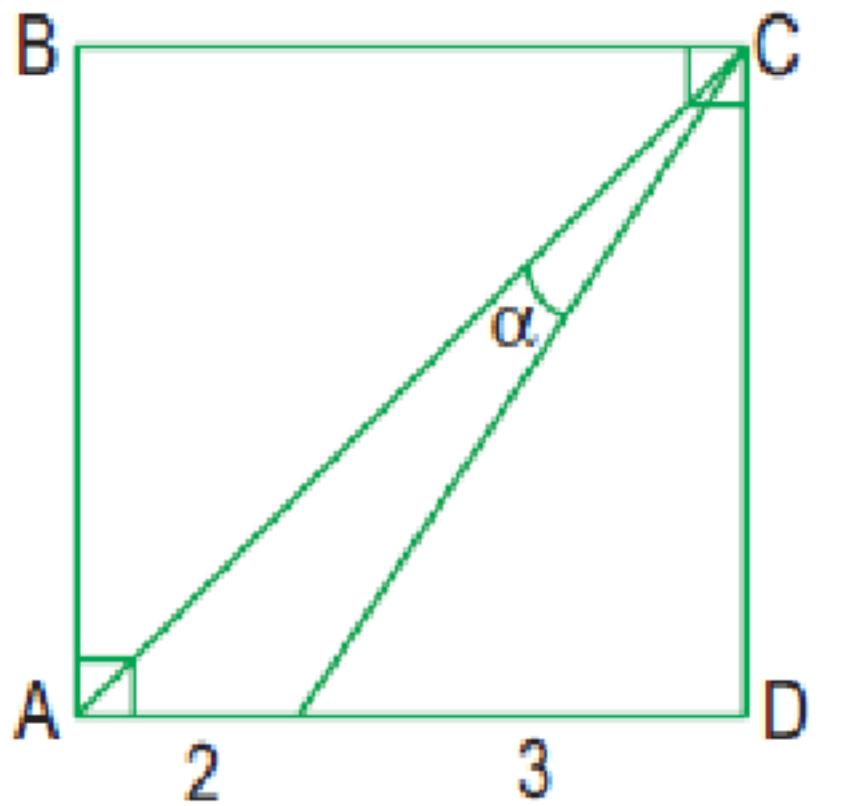
$L = \sqrt{6} \cdot 2k + 3$

$L = \sqrt{6} \cdot 2 \left(\frac{\sqrt{3}}{\sqrt{8}} + 3 \right)$

$L = \sqrt{6} \cdot \frac{\sqrt{3}}{\sqrt{8}} \cdot 2 + 3$

Si ABCD es un cuadrado, calcula: $\tan \alpha$

- A) $1/8$
- B) $1/2$
- C) $1/3$
- D) $1/4$
- E) $1/5$



Reduce:

$$E = \cos 10^\circ - \sqrt{3} \sin 10^\circ$$

a) $E = \cos 10^\circ - \sqrt{3} \sin 10^\circ$

$$\frac{1}{2} E = \frac{1}{2} \cos 10^\circ - \frac{\sqrt{3}}{2} \sin 10^\circ$$
$$\frac{1}{2} E = \cos 60^\circ \cdot \cos 10^\circ - \sin 60^\circ \cdot \sin 10^\circ$$
$$\frac{1}{2} E = \cos (60 + 10)$$
$$\frac{1}{2} E = \cos 70^\circ$$
$$E = 2 \cos 70^\circ$$

$$\text{Si: } \tan x = \frac{3}{4}; \sec y = \frac{13}{5}; (x, y \in \text{IC})$$

Calcula $\sin(x+y)$.

The image shows two right-angled triangles. Triangle x has a horizontal leg of length 3, a vertical leg of length 4, and a hypotenuse of length 5. An angle α is marked at the vertex where the vertical leg meets the hypotenuse. Triangle y has a horizontal leg of length 5, a vertical leg of length 12, and a hypotenuse of length 13. An angle β is marked at the vertex where the vertical leg meets the hypotenuse.

$\tan x = \frac{3}{4}$

$\sec y = \frac{13}{5}$

* $x, y \in \text{IC}$

$$\begin{aligned}\sin(x+y) &= \sin x \cdot \cos y + \cos x \cdot \sin y \\ &= \frac{3}{5} \cdot \frac{5}{13} + \frac{4}{5} \cdot \frac{12}{13} \\ &= \frac{15}{65} + \frac{48}{65} = \frac{63}{65}\end{aligned}$$