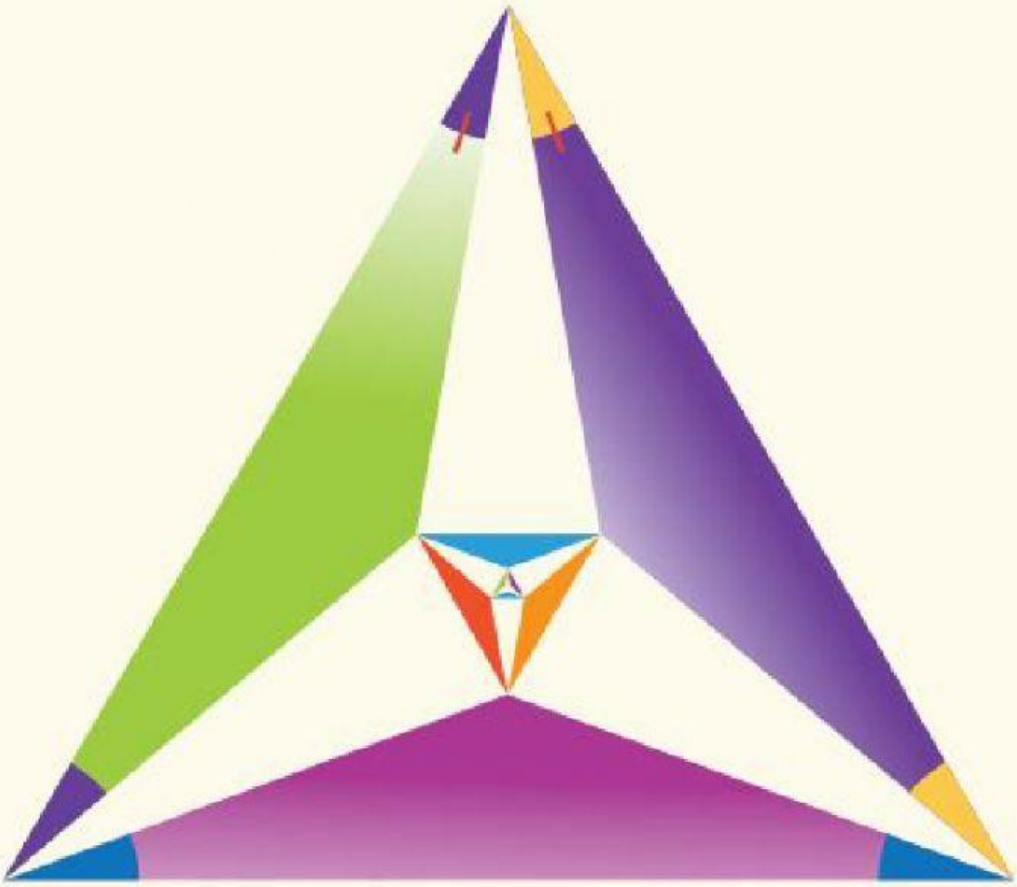
Matemática

Primer año de bachillerato



Sugerencia Metodológica
Tomo 2

ESMATE

LIVEWORKSHEETS

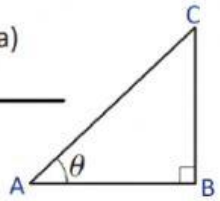
COLOQUE LOS NOMBRES CORRECTOS

Problemas

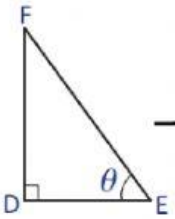
En un triángulo rectángulo, el lado que se opone al ángulo de 90° se conoce como **hipotenusa** y los dos lados que forman dicho ángulo se conocen como **catetos**. Además, la hipotenusa es el lado de mayor longitud.

Identifica la hipotenusa, el lado opuesto y adyacente del ángulo θ y expresa las razones trigonométricas para cada caso.

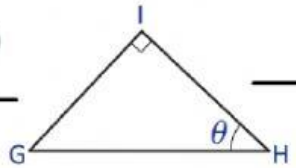
a)



b)



c)



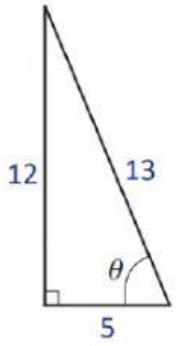
LIVEWORKSHEETS

ESCOJA LA RESPUESTA CORRECTA

Problemas

1. Para cada uno de los siguientes triángulos, calcula las razones trigonométricas sen θ, cos θ, y tan θ. Simplifica o racionaliza cuando sea posible.

a)

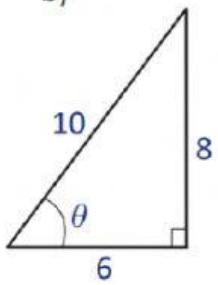


a) $\sin\frac{hip}{op} = \frac{13}{12}$ a) $\cos\frac{ady}{op} = \frac{5}{12}$ a) $\tan\frac{ady}{op} = \frac{5}{12}$

b) $\sin\frac{ady}{op} = \frac{5}{12}$ b) $\cos\frac{ady}{hip} = \frac{5}{13}$ b) $\tan\frac{op}{hip} = \frac{12}{13}$

c) $\sin\frac{op}{hip} = \frac{12}{13}$ c) $\cos\frac{hip}{ady} = \frac{13}{5}$ c) $\tan\frac{op}{ady} = \frac{12}{5}$

b)

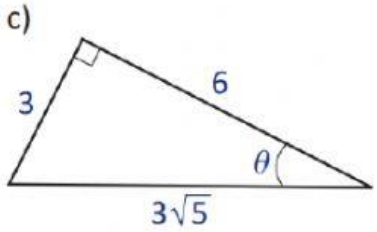


a) $\sin\frac{hip}{op} = \frac{10}{8}$ a) $\cos\frac{ady}{hip} = \frac{6}{10}$ a) $\tan\frac{ady}{hip} = \frac{6}{10}$

b) $\sin\frac{op}{hip} = \frac{8}{10}$ b) $\cos\frac{op}{hip} = \frac{8}{10}$ b) $\tan\frac{op}{ady} = \frac{8}{6}$

c) $\sin\frac{op}{ady} = \frac{8}{6}$ c) $\cos\frac{hip}{ady} = \frac{10}{6}$ c) $\tan\frac{hip}{op} = \frac{10}{8}$

c)



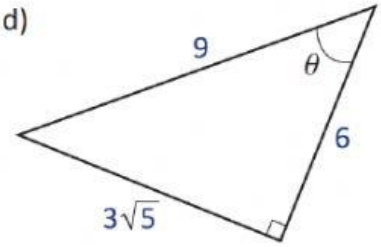
a) $\sin\frac{op}{hip} = \frac{3}{3\sqrt{5}}$ a) $\cos\frac{hip}{ady} = \frac{3\sqrt{5}}{6}$ a) $\tan\frac{ady}{hip} = \frac{6}{3\sqrt{5}}$

b) $\sin\frac{hip}{ady} = \frac{3\sqrt{5}}{6}$ b) $\cos\frac{op}{hip} = \frac{3}{3\sqrt{5}}$ b) $\tan\frac{op}{hip} = \frac{3}{3\sqrt{5}}$

c) $\sin\frac{op}{ady} = \frac{3}{6}$ c) $\cos\frac{ady}{hip} = \frac{6}{3\sqrt{5}}$ c) $\tan\frac{op}{ady} = \frac{3}{6}$

LIVEWORKSHEETS

d)



a) $\sin\frac{op}{hip} = \frac{3\sqrt{5}}{9}$

b) $\sin\frac{hip}{ady} = \frac{9}{6}$

c) $\sin\frac{ady}{hip} = \frac{6}{9}$

a) $\cos\frac{hip}{ady} = \frac{9}{6}$

b) $\cos\frac{op}{hip} = \frac{3\sqrt{5}}{9}$

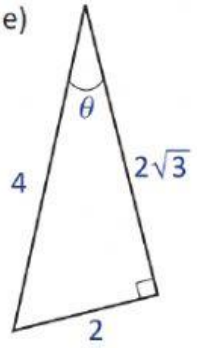
c) $\cos\frac{ady}{hip} = \frac{6}{9}$

a) $\tan\frac{ady}{hip} = \frac{6}{9}$

b) $\tan\frac{op}{hip} = \frac{3\sqrt{5}}{9}$

c) $\tan\frac{op}{ady} = \frac{3\sqrt{5}}{6}$

e)



a) $\sin\frac{ady}{hip} = \frac{2\sqrt{3}}{4}$

b) $\sin\frac{hip}{ady} = \frac{4}{2\sqrt{3}}$

c) $\sin\frac{op}{hip} = \frac{2}{4}$

a) $\cos\frac{hip}{ady} = \frac{9}{6}$

b) $\cos\frac{ady}{hip} = \frac{2\sqrt{3}}{4}$

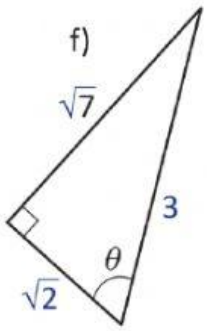
c) $\cos\frac{ady}{op} = \frac{2\sqrt{3}}{2}$

a) $\tan\frac{ady}{op} = \frac{2\sqrt{3}}{2}$

b) $\tan\frac{op}{hip} = \frac{2}{4}$

c) $\tan\frac{op}{ady} = \frac{2}{2\sqrt{3}}$

f)



a) $\sin\frac{ady}{hip} = \frac{\sqrt{2}}{3}$

b) $\sin\frac{op}{hip} = \frac{\sqrt{7}}{3}$

c) $\sin\frac{op}{ady} = \frac{\sqrt{7}}{\sqrt{2}}$

a) $\cos\frac{hip}{ady} = \frac{3}{\sqrt{2}}$

b) $\cos\frac{op}{hip} = \frac{\sqrt{7}}{3}$

c) $\cos\frac{ady}{hip} = \frac{\sqrt{2}}{3}$

a) $\tan\frac{ady}{op} = \frac{\sqrt{2}}{\sqrt{7}}$

b) $\tan\frac{op}{ady} = \frac{\sqrt{7}}{\sqrt{2}}$

c) $\tan\frac{hip}{ady} = \frac{3}{\sqrt{2}}$

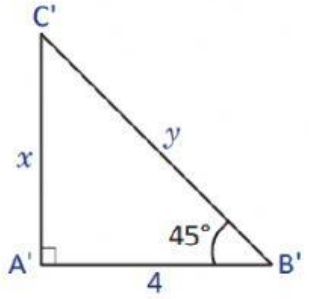
LIVEWORKSHEETS

TRACE UNA LINEA A LA RESPUESTA CORRECTA

Problemas

Encuentra el valor de x y y en cada triángulo.

a)



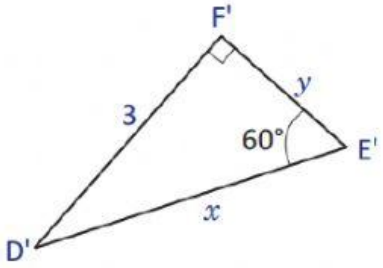
x •

- 4
- 3
- 5

y •

- $4\sqrt{2}$
- $4\sqrt{3}$
- $2\sqrt{4}$

b)



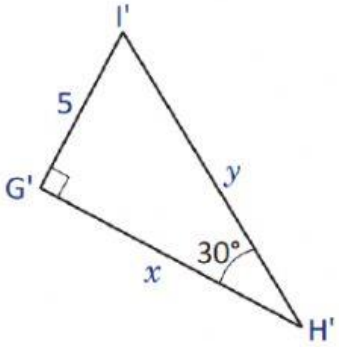
x •

- $3\sqrt{2}$
- $2\sqrt{3}$
- $2\sqrt{2}$

y •

- $\sqrt{1}$
- $\sqrt{9}$
- $\sqrt{3}$

c)



x •

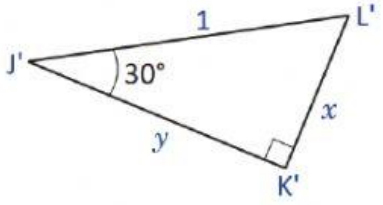
- $10\sqrt{6}$
- $3\sqrt{5}$
- $5\sqrt{3}$

y •

- 5
- 10
- 7

LIVEWORKSHEETS

d)



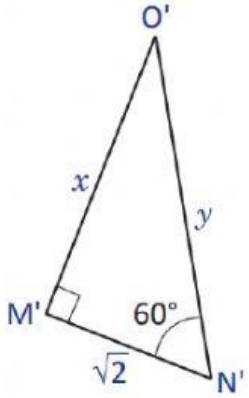
x ●

- 0.5
- 3.5
- 1.5

y ●

- 0.5
- 1
- 0.86

e)



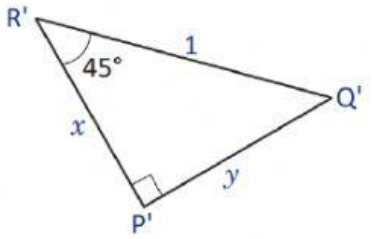
x ●

- $\sqrt{2}$
- $\sqrt{3}$
- $\sqrt{6}$

y ●

- $5\sqrt{2}$
- $2\sqrt{3}$
- $2\sqrt{2}$

f)



x ●

- 0.7
- 0.9
- 0.55

y ●

- 0.1
- 0.7
- 0.33

LIVEWORKSHEETS