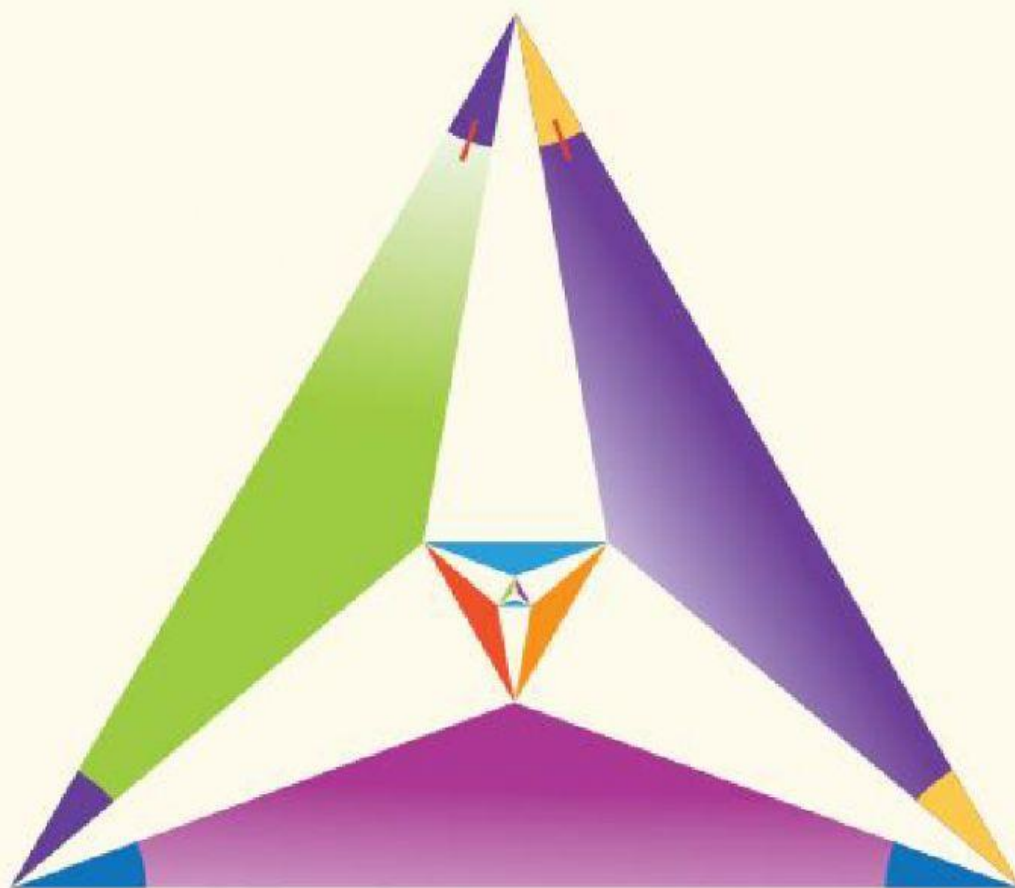




# Matemática

Primer año de bachillerato



Sugerencia Metodológica  
Tomo 2



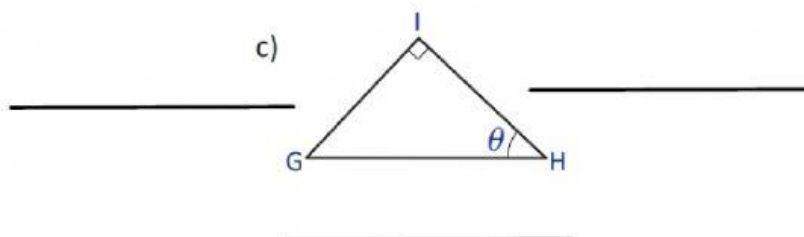
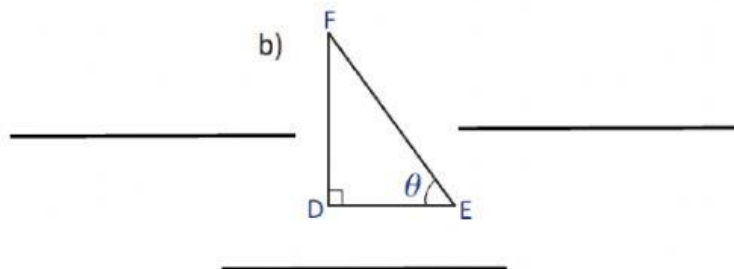
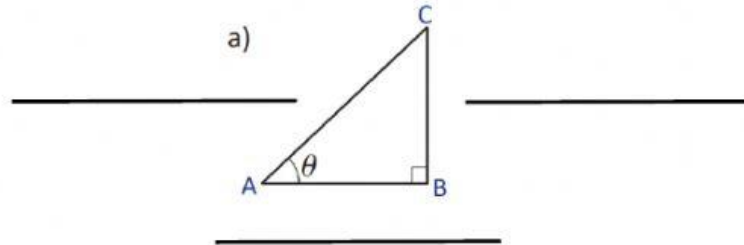
LIVEWORKSHEETS

COLOQUE LOS NOMBRES CORRECTOS

**Problemas** 

En un triángulo rectángulo, el lado que se opone al ángulo de  $90^\circ$  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  $\theta$  y expresa las razones trigonométricas para cada caso.

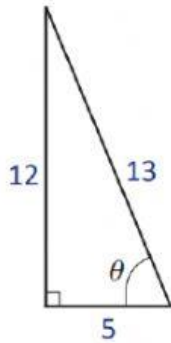


**ESCOJA LA RESPUESTA CORRECTA**

**Problemas**

1. Para cada uno de los siguientes triángulos, calcula las razones trigonométricas  $\sin \theta$ ,  $\cos \theta$ , y  $\tan \theta$ . Simplifica o racionaliza cuando sea posible.

a)



a)  $\sin \frac{\text{hip}}{\text{op}} = \frac{13}{12}$

a)  $\cos \frac{\text{ady}}{\text{op}} = \frac{5}{12}$

a)  $\tan \frac{\text{ady}}{\text{op}} = \frac{5}{12}$

b)  $\sin \frac{\text{ady}}{\text{op}} = \frac{5}{12}$

b)  $\cos \frac{\text{ady}}{\text{hip}} = \frac{5}{13}$

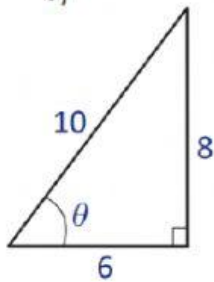
b)  $\tan \frac{\text{op}}{\text{hip}} = \frac{12}{13}$

c)  $\sin \frac{\text{op}}{\text{hip}} = \frac{12}{13}$

c)  $\cos \frac{\text{hip}}{\text{ady}} = \frac{13}{5}$

c)  $\tan \frac{\text{op}}{\text{ady}} = \frac{12}{5}$

b)



a)  $\sin \frac{\text{hip}}{\text{op}} = \frac{10}{8}$

a)  $\cos \frac{\text{ady}}{\text{hip}} = \frac{6}{10}$

a)  $\tan \frac{\text{ady}}{\text{hip}} = \frac{6}{10}$

b)  $\sin \frac{\text{op}}{\text{hip}} = \frac{8}{10}$

b)  $\cos \frac{\text{op}}{\text{hip}} = \frac{8}{10}$

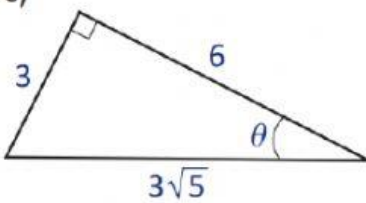
b)  $\tan \frac{\text{op}}{\text{ady}} = \frac{8}{6}$

c)  $\sin \frac{\text{op}}{\text{ady}} = \frac{8}{6}$

c)  $\cos \frac{\text{hip}}{\text{ady}} = \frac{10}{6}$

c)  $\tan \frac{\text{hip}}{\text{op}} = \frac{10}{8}$

c)



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

a)  $\cos \frac{\text{hip}}{\text{ady}} = \frac{3\sqrt{5}}{6}$

a)  $\tan \frac{\text{ady}}{\text{hip}} = \frac{6}{3\sqrt{5}}$

b)  $\sin \frac{\text{hip}}{\text{ady}} = \frac{3\sqrt{5}}{6}$

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

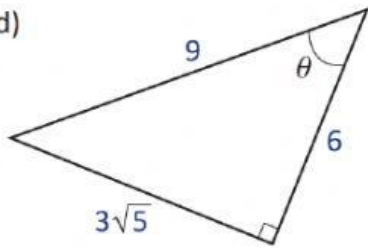
b)  $\tan \frac{\text{op}}{\text{hip}} = \frac{3}{3\sqrt{5}}$

c)  $\sin \frac{\text{op}}{\text{ady}} = \frac{3}{6}$

c)  $\cos \frac{\text{ady}}{\text{hip}} = \frac{6}{3\sqrt{5}}$

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

d)



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

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

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

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

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

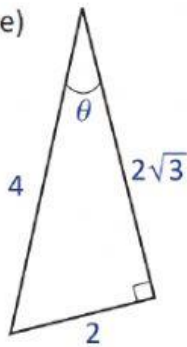
b)  $\tan \frac{op}{hip} = \frac{3\sqrt{5}}{9}$

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

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

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

e)



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

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

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

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

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

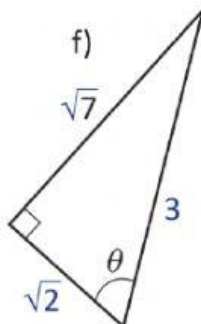
b)  $\tan \frac{op}{hip} = \frac{2}{4}$

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

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

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

f)



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

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

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

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

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

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

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

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

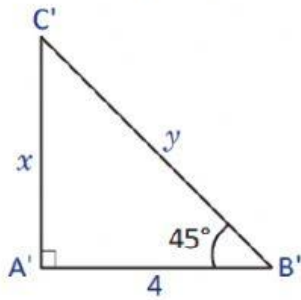
c)  $\tan \frac{hip}{ady} = \frac{3}{\sqrt{2}}$

**TRACE UNA LINEA A LA RESPUESTA CORRECTA**

**Problemas**

Encuentra el valor de  $x$  y  $y$  en cada triángulo.

a)



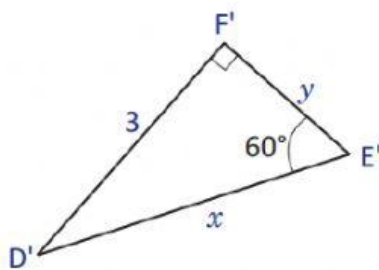
$x$  •

- 4
- 3
- 5

$y$  •

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

b)



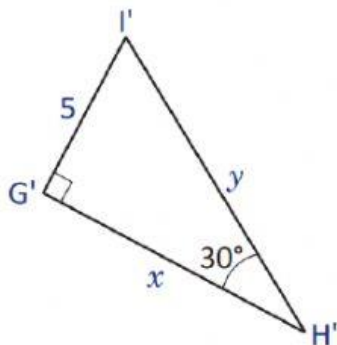
$x$  •

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

$y$  •

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

c)



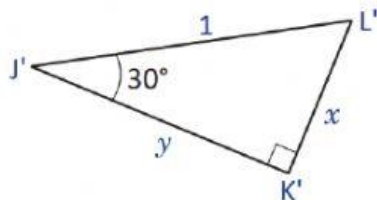
$x$  •

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

$y$  •

- 5
- 10
- 7

d)



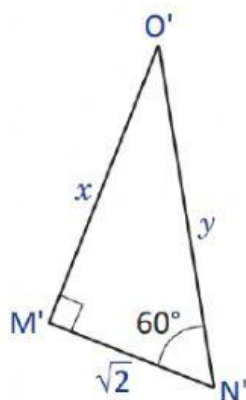
$x$  •

- 0.5
- 3.5
- 1.5

$y$  •

- 0.5
- 1
- 0.86

e)



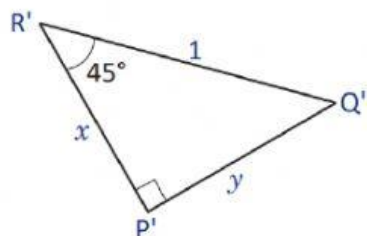
$x$  •

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

$y$  •

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

f)



$x$  •

- 0.7
- 0.9
- 0.55

$y$  •

- 0.1
- 0.7
- 0.33