

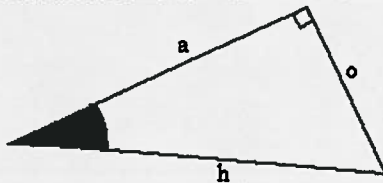
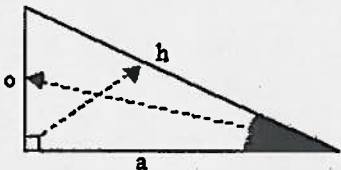
Mevü

Quiz (9 minutes)

SOH CAH TOA

TRIGONOMETRY - LABELLING SIDES

Notes:



- h - hypotenuse** : the side opposite the right angle
- o - opposite** : the side opposite the marked angle
- a - adjacent** : the side next to the marked angle

The following trigonometric ratios, sine (sin), cosine (cos) and tangent (tan) apply to right angled triangles.

$$\sin x = \frac{\text{length of opposite side}}{\text{length of hypotenuse}}$$

$$= \frac{o}{h}$$

$$\cos x = \frac{\text{length of adjacent side}}{\text{length of hypotenuse}}$$

$$= \frac{a}{h}$$

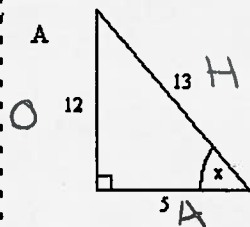
$$\tan x = \frac{\text{length of opposite side}}{\text{length of adjacent side}}$$

$$= \frac{o}{a}$$

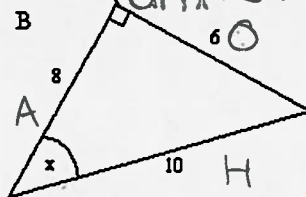


Exercises

- For the triangles below state:
- the length of the hypotenuse
 - the length of the side opposite x
 - the length of the side adjacent to x
 - sin x
 - cos x
 - tan x



H = 13
o = 12
A = 5
sin x = 67°
cos x = 67°
tan x = 67°



H = 16
o = 8
A = 10
sin x = 37°
cos x = 37°
tan x = 37°

A)

$$\sin x = \frac{12}{13}$$

$$\sin x = 0.92$$

$$\sin x^{-1} = 67^\circ$$

$$\cos x = \frac{5}{13}$$

$$\cos x = 0.38$$

$$\cos x^{-1} = 67^\circ$$

$$\tan x = \frac{12}{5}$$

$$\tan x = 2.4$$

$$\tan x^{-1} = 67^\circ$$

B) $\sin x = \frac{6}{10}$

$$\sin x^{-1} = 37^\circ$$

$$\cos x = \frac{8}{10}$$

$$\cos x^{-1} = 37^\circ$$

$$\tan x = \frac{6}{8}$$

$$\tan x^{-1} = 37^\circ$$

$$x = 37^\circ$$

- when done copy overhead