25/10/2017

SOH — Sine, Opposite, Hypotenuse
CAH — Cosine, Adjacent, Hypotenuse
TOA — Tangent, Opposite, Adjacent

$\sin\theta = \frac{\text{OPPOSITE}}{\text{HYPOTENUSE}}$

$\cos\theta = \frac{\text{ADJACENT}}{\text{HYPOTENUSE}}$

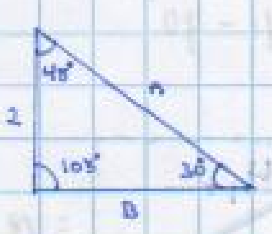
$\tan\theta = \frac{\text{OPPOSITE}}{\text{ADJACENT}}$

Se $\theta O = \theta A$: $\sin O = \sin A$

$\cos O = \cos A$

$\tan O = \tan A$

Ex.:



$180° - 45° - 30° = 105°$

$\frac{\sin 30°}{2} = \frac{\sin 105°}{a} = \frac{\sin 45°}{b}$

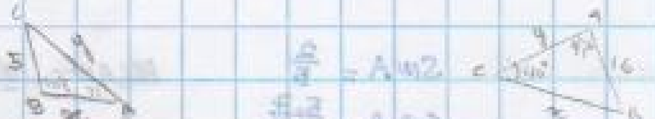
$\frac{\sin 30°}{2} = \frac{1}{4}$ $\qquad \frac{1}{4} = \frac{\sin 105°}{a}$ $\qquad \frac{1}{4} = \frac{\sin 45°}{b}$

$\frac{\sin 45°}{b} = \frac{\frac{\sqrt{2}}{2}}{b}$ $\qquad a = 4 \sin 105°$ $\qquad 4 = \frac{b}{\frac{\sqrt{2}}{2}}$

$a = 3{,}863703$

$b = 4 \cdot \frac{\sqrt{2}}{2}$

$b = 2{,}828427$



$\frac{\sin 31}{2} = \frac{\sin 108}{4} = \frac{\sin 41}{x}$ $\qquad \frac{\sin 40}{16} = \frac{\sin 91}{x} = \frac{\sin 49}{y}$

$\frac{m}{1} = \frac{\sin 108}{y}$ $\qquad \frac{m}{1} = \frac{\sin 41}{x}$ $\qquad \frac{m}{1} = \frac{\sin 91}{x}$ $\qquad \frac{m}{1} = \frac{\sin 49}{y}$

$my = \sin 108$ $\qquad mx = \sin 41$ $\qquad mx = \sin 91$ $\qquad my = \sin 49$

$y = \frac{\sin 108}{m}$ $\qquad x = \frac{\sin 41}{m}$ $\qquad x = \frac{\sin 91}{m}$ $\qquad y = \frac{\sin 49}{m}$

$y = 9{,}2326$ $\qquad x = 6{,}3690$ $\qquad x = 24{,}88$ $\qquad y = 18{,}7839$

V $\qquad$ V

2022/10/09