1ª SÉRIE

CANAL SEDUC-PI1

PROFESSOR (A):	DISCIPLINA:	CONTEÚDO:	TEMA GERADOR:	DATA:
ALEXSANDRO KESLLER	MATEMÁTICA (OFICINA)	TRIGONOMETRIA NO TRIÂNGULO RETÂNGULO	ARTE NA ESCOLA	08.11.2019

Canal Educação
PROGRAMA DE MEDIAÇÃO TECNOLÓGICA

Arcos Notáveis

Tabela dos valores trigonométricos de ângulos notáveis.

x	$30°$	$45°$	$60°$
$sen\ x$	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$cos\ x$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
$tg\ x$	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$

$$\operatorname{sen}\alpha = \frac{CO}{HIP}$$

$$\cos\alpha = \frac{CA}{HIP}$$

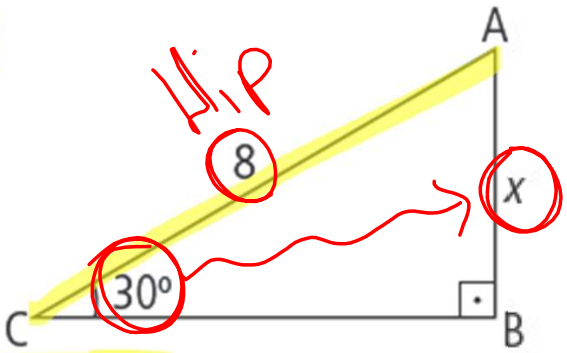
$$\operatorname{tg}\alpha = \frac{C.O}{CA}$$

Exercícios

$\sin\alpha = \frac{C.O}{HIP}$ $\cos\alpha = \frac{CA}{HIP}$ $tg\alpha = \frac{CO}{CA}$

Calcule o valor de *x em cada um dos triângulos* retângulos.

a)



HIP

CATETO OPOSTO

$\sin 30° = \frac{x}{8}$

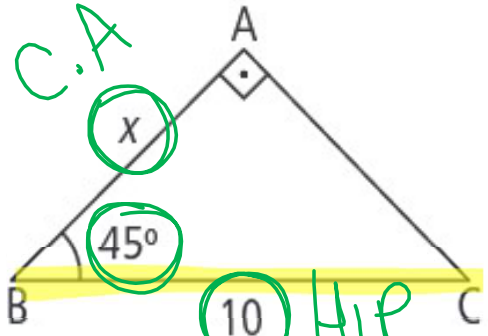
$\frac{1}{2} = \frac{x}{8}$

$2 \cdot x = 8$

$x = \frac{8}{2}$

$x = 4$

b)



C.A

HIP

$\cos 45° = \frac{x}{10}$

$\frac{\sqrt{2}}{2} = \frac{x}{10}$

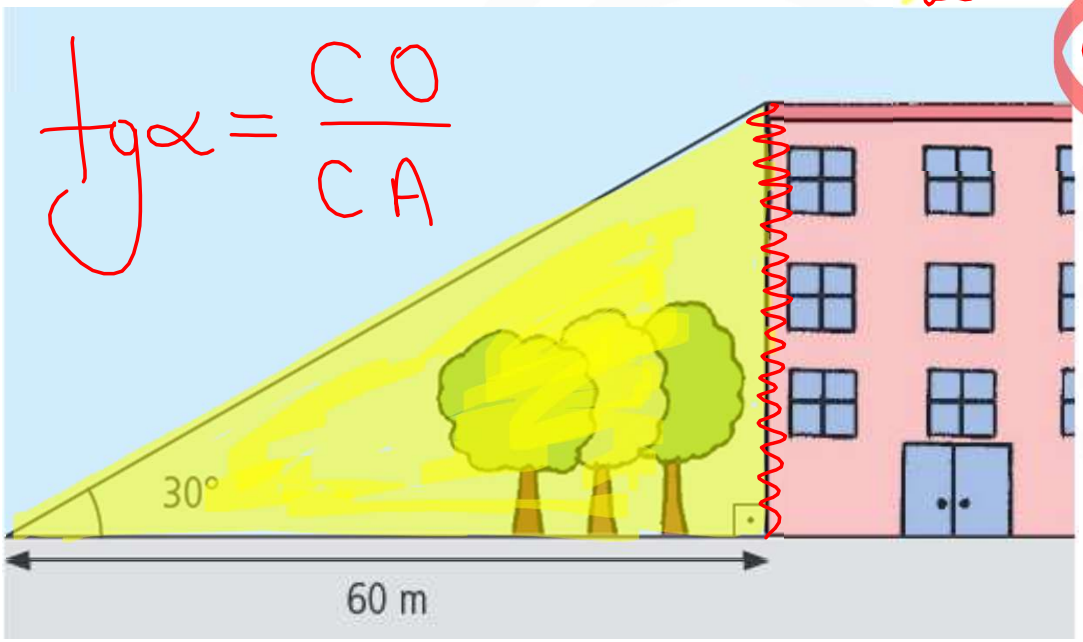
$2x = 10\sqrt{2}$

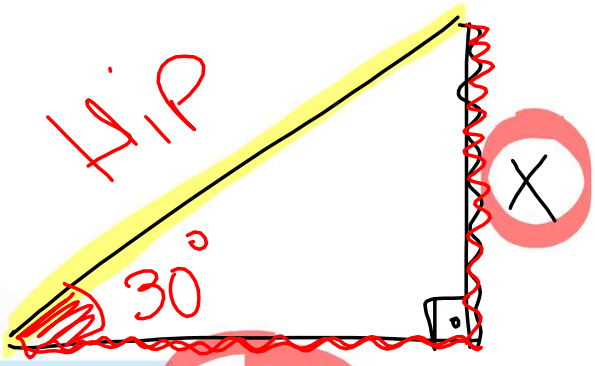
$x = \frac{10\sqrt{2}}{2}$

$x = 5\sqrt{2}$

Exercícios

Qual é a altura do prédio?.





$$tg\alpha = \frac{CO}{CA}$$

$$tg\,30^\circ = \frac{X}{60}$$

$$\frac{\sqrt{3}}{3} = \frac{X}{60}$$

$$3 \cdot X = 60\sqrt{3}$$

$$X = \frac{60\sqrt{3}}{3}$$

$$X = 20\sqrt{3}\ m$$